

Category : Health and Allied Sciences

1001 KNOWLEDGE, ATTITUDE AND PRACTICE RELATED TO UNIVERSAL PRECAUTION AMONG IIUM NURSING AND MEDICAL STUDENTS#

laith Issa Yassin, *Basic Medical Sciences, Kulliyah of Nursing*
MUHAMMAD HARIZ MOHD SARIMAN, , *Kulliyah of Nursing*

Exhibitor : laith Issa Yassin, Basic Medical Sciences, Kulliyah of Nursing

A good practice of universal precaution (UP) is a powerful tool to reduce the risk of contacting nosocomial infections in clinical settings. The knowledge level of UP affects the positive attitude and good practice of universal precaution. Objectives: The aim of the study is to identify knowledge, attitudes and practice related to UP among nursing and medical students of International Islamic University Malaysia (IIUM). This study was done to investigate the relationship of socio-demographic data (age, gender, course taken and clinical experience) towards knowledge, attitude and practice of UP also to determine source of info related to UP. Method: A cross-sectional study was conducted at IIUM Kuantan Campus. Convenience sampling method was used to select the sample. 276 respondents involved in this study and the data was collected using self-administered questionnaire modified from a valid and reliable measure. The data had been analyzed by using PASW Statistics Version 18.0 in terms of descriptive statistics, Spearman Correlation Coefficient, Mann-Whitney U test and Kruskal-Wallis test were carried out for significant test. Results: The result showed that IIUM Nursing and medical students have a good knowledge level, positive attitude and good practice of universal precaution with all three domains scored more than 75% above total population score. Age, gender, course taken and clinical experience certainly have effect towards the knowledge, attitude and practice of UP. Various sources of info noted from respondents. Conclusion: In conclusion, IIUM nursing and medical students have good knowledge, attitude and practice of UP. Age, gender, course taken and clinical experience has their own effect towards knowledge, attitude and practice of UP. Curriculum was the main source of info of UP.

Keywords : *Knowledge, Attitude, Practice, Universal Precaution*

Category : Health and Allied Sciences

**1002 FOODBORNE DISEASE: A STUDY ON KNOWLEDGE AND ATTITUDE AMONG
 PEOPLE ATTENDING THREE SELECTED PUBLIC AREAS IN KUANTAN#**

laith Issa Yassin, *Basic Medical Sciences, Kulliyah of Nursing*
SHADIA SHEIKH MOHAMED, , *Kulliyah of Nursing*

Exhibitor : laith Issa Yassin, Basic Medical Sciences, Kulliyah of Nursing

Foodborne illnesses are syndromes that are acquired as a result of eating foods that contain sufficient quantities of poisonous substances or pathogens. Most of us today had an increased risk for food borne illnesses resulting from improper food handling, preparation, and storage. Objective: To assess the knowledge and attitude of foodborne disease among community in Kuantan. Methodology: Data were collected from February until the end of March by using self-administered questionnaire, which was distributed to 360 people attending three selected public areas in Kuantan. A cross-sectional study survey was consisting of 21 questions on knowledge and attitude about foodborne disease, and respondent demographical data. The data had been analyzed by using SPSS Version 16.0 in terms of descriptive statistic, Mann-Whitney, Kruskal-Wallis and Spearman Correlation test as carried out for significant test. Results: The results showed that overall participants have a moderate level of knowledge with mean 7.65 out of 12 questions, and a moderate level of attitude with mean 6.31 out of 9 questions. The sociodemographic influencing knowledge are age, education level and income, while for attitude are gender and education level. There are positive weak relationship between knowledge and attitude. Conclusion: The level of education influenced the level of knowledge and attitude towards foodborne disease among community in Kuantan where the higher the level of education, the better the knowledge and attitude. There was significance positive correlation between knowledge and attitude towards foodborne disease among community in Kuantan.

Keywords : *Knowledge, Attitude, Foodborne Disease, Community, Kuantan*

Category : Health and Allied Sciences

**1005 PREDICTORS OF IN-HOSPITAL MORTALITY IN PRIMARY INTRACEREBRAL HAEMORRHAGE
IN EAST COAST OF MALAYSIA#**

MOHAMMAD YOUSUF RATHOR, *Internal Medicine, Kulliyah of Medicine*
Mohammad Fauzi Abdul Rani, *Internal Medicine, Kulliyah of Medicine*
Abdul Rehman Jamalludin, *Community Medicine, Kulliyah of Medicine*
Soon H How, *Internal Medicine, Kulliyah of Medicine*
Mohammad Amran Rashid, *Radiology, Kulliyah of Medicine*
Shahrin Tilmizi, *Internal Medicine, Kulliyah of Medicine*
Ahmad Marzuki Bin Omar, *Internal Medicine, Kulliyah of Medicine*
Anis Shah, *Internal Medicine, Kulliyah of Medicine*

Exhibitor : MOHAMMAD YOUSUF RATHOR, *Internal Medicine, Kulliyah of Medicine*

Background and objective: Despite much medical progress, stroke remains a leading cause of death and disability. Physicians are faced with the task of predicting the likely outcome. The aim of our study was to analyze the frequency of various risk factors and determine predictors of in-hospital mortality among primary intracerebral hemorrhage (PICH) patients, thus providing insight in developing therapeutic strategies to improve the outcome. Methods: A prospective study conducted at a tertiary care hospital. Results: A total of 160 patients (108 male and 52 female) were evaluated. Their ages ranged from 25 to 85 years (mean age was 58.30 ± 11.44 years). Hypertension was the commonest risk factor (74.4%), followed by diabetes mellitus (18.8%) and cigarette smoking (36.3%). The commonest location of ICH was lobar (43.8%) followed by basal ganglia / internal capsule (28.1 %) and multilobar (13.1%). The overall in-hospital mortality was 32.5 %. About one third (32.7%) of the deaths occurred within first 24 hours, this rose to 38.5% within first 2 days and 84.6% within one week. The significant independent predictors of acute in- hospital mortality were Glasgow Coma Scale (GCS) on admission, posterior fossa bleed (OR 11.01; 95% CI 3.21 to 37.81), hematoma volume $>60\text{ml}$ (OR 4.72; 95% CI 1.34 to 16.64), mid line shift (OR 3.32; 95% CI 1.05 to 10.50) and intraventricular extension of haemorrhage (OR 5.69; 95% CI 2.24 to 14.47). Conclusion: Neuroimaging features along with GCS score on admission can help the clinicians in clinical decision-making as well as in assessing patient prognosis.

Keywords : *Primary intracerebral haemorrhage, Clinical profile, Outcome, Glasgow coma scale, computed tomography, Malaysia.*

Category : Health and Allied Sciences

1006 ALCOHOL CONSUMPTION AND ITS EFFECT ON TESTICULAR STRUCTURE AND ON SPERM COUNT AND MOTILITY IN PARENT#

Imad Al-Ani, *Basic Medical Science, Kulliyyah of Medicine*

Exhibitor : Imad Al-Ani, Basic Medical Science, Kulliyyah of Medicine

Objective: The goal of the present study was to examine the effect of alcohol consumption on sperm count and motility and the morphological changes in the seminiferous tubules of parent mice and their offspring. **Materials and Methods:** Animals were divided into two groups, Group 1 (alcohol group) of twelve male and twelve female mice, were given a daily dose of (3 g/kg body weight as 25%, v/v) ethanol by gastric gavage for four and eight weeks. Group 2 (control group) also of twelve male and twelve female mice; received normal access of food and water. After four weeks of treatment, the males and females in each group were allowed to mate and ethanol treatment continued for up to another four weeks. Twelve male offspring from group 1 and twelve male offspring from group 2 were selected randomly and allowed to become mature. Male parent mice were killed at the 4th and 8th weeks of treatment, and their male offspring were killed when they reached maturity age. **Results:** Physiological examination of the sperm solution showed that there was a significant decrease in sperm count and motility after 4 and 8 weeks of ethanol treatment in parent male mice, but this decrease was not significant in their adult offspring. Furthermore, histological investigations indicated testicular lesions in the parent male mice and their adult male offspring. **Conclusion:** Alcohol abuse has deleterious effects on the testes structure and on the sperm count and motility of the epididymal spermatozoa of both parent mice and their offspring.

Keywords : *Alcohol, Offspring, Tests, Sperm count, Sperm motility*

Category : Health and Allied Sciences

1007 ANTIDIABETIC ACTIVITY OF MURRAYA KOENIGII LEAVES ON GLUCOSE LEVEL, KIDNEY AND ISLETS OF LANGERHANS IN STREPTOZOTOCIN INDUCED DIABETES IN RATS#

Imad Al-Ani, *Basic Medical Sciences, Kulliyah of Medicine*
Rahajoe Santosa, *Basic Medical Sciences, Kulliyah of Medicine*
Anil Saxena, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Imad Al-Ani, Basic Medical Sciences, Kulliyah of Medicine

Curry leaves, *Murraya koenigii* (MK), is traditionally used for the treatment of diabetes and its renal complications. In the present study, in addition to 30 days antihyperglycaemic effect of MK aqueous extract, we also examined its possible effects on the Islets of Langerhans and nephroprotective potential in diabetic rats. Male Sprague Dawley rats received a single dose of streptozotocin (STZ, 70 mg/kg) intraperitoneally to induce experimental diabetes. Rats were randomized into five groups (n=6) of normal control, diabetic control (non-treated), and diabetic treated with MK aqueous leaf extract. The fresh leaves of MK was extracted with distilled water and freeze-dried to get a powder. Blood glucose levels and body weight were monitored gravimetrically. The animals were killed on the 30th day, kidney and the pancreatic tissues were harvested, and the tissue specimens were fixed in 10% formal saline for 48hrs, and processed for histological studies. Diabetic rats treated with aqueous extract showed significant ($p < 0.001$) improvement in blood glucose levels and body weight gain. The MK extract also caused significant improvement in tissue injury induced by STZ. Thus, these findings highlighted the beneficial effects of MK aqueous extract against cellular oxidative damage and may exert anti-hyperglycemic action via kidney and islet cell induced regeneration in diabetic rats.

Keywords : *Blood glucose, Body weight, MK, Islet of Langerhans, Kidney*

Category : Health and Allied Sciences

1011 PRESERVATION OF HIPPOCAMPAL ULTRASTRUCTURAL CONSTITUENTS WITH NIGELLA SATIVA OIL TREATMENT TO RATS CHALLENGED BY GLOBAL CEREBRAL OLIGEMIA#

Marwan Azzubaidi, *Basic Medical Sciences, Kulliyah of Pharmacy*

Norlelawati Talib, *Basic Medical Sciences, Kulliyah of Medicine*

Anil Saxena, *Basic Medical Sciences, Kulliyah of Medicine*

Qamar Ahmed, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*

Imad Al-Ani, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Marwan Azzubaidi, Basic Medical Sciences, Kulliyah of Pharmacy

The oil extract of *Nigella sativa* seeds (NSO) was found to preserve viability of cerebellar neurons in vitro. Recent in vivo experimental study proved that NSO daily oral treatment was able to prevent memory and learning deterioration in a murine model of mild global cerebral ischemia (MGCI) that was created with permanent bilateral occlusion of the common carotid arteries (2VO) in rats. The current study's objective was to assess the effect of NSO treatment on pyramidal and other neighboring neurons within CA1 hippocampal subfield of rats with MGCI that was achieved through 2VO procedure. The assessment was ultrastructural using transmission electron microscopy (TEM). Nine rats were equally divided into three groups: sham control, untreated 2VO and NSO treated group (2VO with daily oral NSO treatment). By the end of the 10th postoperative week coronal sections of the hippocampus were collected and processed for transmission electron microscopy (TEM). The neurodegenerative changes observed in pyramidal cells, astrocytes, endothelial basement membrane and axoplasms of CA1 hippocampal region of 2VO group were completely absent in sham operated control group. Meanwhile, NSO treated groups were almost free of ultrastructural neurodegenerative changes as those detected in untreated 2VO group. This adds another supporting evidence of the promising neuroprotective activity provided by NSO treatment to prevent age related neurodegenerative diseases especially those associated with chronic global cerebral hypoperfusion such as Alzheimer's disease.

Keywords : *neurodegeneration, 2VO, hippocampus, Nigella sativa, neuroprotection, rat*

Category : Health and Allied Sciences

1012 CA1 HIPPOCAMPAL NEURONAL RESPONSES TO CURRY LEAVES EXTRACT TREATMENT IN RATS SUBJECTED TO CHRONIC CEREBRAL HYPOPERFUSION: A BEHAVIORAL AND HISTOPATHOLOGICAL STUDY#

Marwan Saad Azzubaidi, *Basic Medical Sciences, Kulliyah of Pharmacy*
Noriah Mohd Noor, *Basic Medical Sciences, Kulliyah of Pharmacy*
Anil Kumar Saxena, *Basic Medical Sciences, Kulliyah of Medicine*
Imad Matloub Al-Ani, *Basic Medical Sciences, Kulliyah of Medicine*
Qamar U. Ahmed, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*
Norlelawati Talib, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Marwan Saad Azzubaidi, Basic Medical Sciences, Kulliyah of Pharmacy

Curry leaves VIZ. *Murraya koenigii* leaves (MKL) extract was found to possess robust antioxidant and anticholinesterase activities. Its memory enhancing effect in preclinical studies has also been reported in an animal model of drug induced amnesia. Alzheimer's disease (AD) in its vascular hypothesis has been linked to chronic decrease in cerebral blood flow when it attains significantly sub-threshold levels, a condition referred to as chronic cerebral hypoperfusion (CCH). The current study was designed to evaluate the possible neuroprotective potential of MKL methanolic extract in a two vessel occlusion (2VO) rat model of CCH. Rats were divided into memory and learning groups. Each of which was subdivided into sham control, untreated 2VO and MKL treated 2VO subgroups. Morris water maze test was implemented to assess the rats' cognitive function at the 10th postoperative week. Harvested brain samples were processed for histopathological examination of CA1 hippocampal region using cresyl violet stain. Water maze test findings showed that MKL positively improved 2VO induced memory and learning impairments. However, this relatively improved performance for the MKL treated group was still significantly inferior to that of the control group. Additionally, MKL treated group exhibited insignificant difference in the number of viable hippocampal CA1 pyramidal neurons from that of untreated 2VO group, whereas both MKL treated and untreated 2VO groups showed significantly less viable neurons when compared with control group. It can be concluded that long-term oral MKL treatment did not exert neuroprotective effect to the CA1 hippocampal subfield in the experimental model of neurodegeneration that was induced through CCH.

Keywords : *Alzheimer, chronic cerebral hypoperfusion, neurodegeneration, curry leaves, neuroprotection, memory and learning, hippocampus, rats*

Category : Health and Allied Sciences

1013 A STUDY OF LOW DENSITY LIPOPROTEIN CHOLESTEROL IN METABOLIC SYNDROME#

Lwin Htite, *Basic Medical Science, Kulliyah of Pharmacy*
Aye Win, *Biochemistry,*

Exhibitor : Lwin Htite, Basic Medical Science, Kulliyah of Pharmacy

Background review Metabolic syndrome is a collection of signs and/or symptoms occurring in a single person and it are constellation of individual risk factors that in aggregate raise the risk for coronary heart disease (CHD). The metabolic risk factors such as high triglycerides (TG), high small low density lipoprotein (LDL) particles, low high density lipoprotein cholesterol (HDL-C), high blood pressure and high blood glucose taken in aggregate the development of atherosclerosis. LDL cholesterol (LDL-C) is also one of the major independent risk factor that must be present before the other components of the metabolic syndrome can come into play as atherogenic factors. Objective The objectives of this study were to determine serum concentrations of LDL-C in metabolic syndrome patients and to find out the association of serum LDL-C level and metabolic syndrome patients. Methods This was a cross-sectional, hospital based, descriptive study. This study included 60 metabolic syndrome patients (22 males and 38 females), age between 40-70 years. In addition to measure LDL-C, base line characteristics (demographic and personal characteristics) data were also collected and components of International Diabetes Federation (IDF) criteria (Waist circumference, TG, HDL-C, blood pressure, fasting blood glucose) to identify metabolic syndrome were also measured. LDL-C is estimated by two methods such as calculation method by using Friedewald formula and direct enzymatic method. Results & Conclusion The mean values of Direct LDL and Calculated LDL in male were 158.23 ± 24.61 mg/dl and 153.50 ± 26.64 mg/dl respectively and in females were 160.84 ± 53.86 mg/dl and 156.21 ± 53.11 mg/dl respectively. LDL-C (both Direct and Calculated LDL) in males and females were not significantly difference ($P > 0.05$). Statistically there was also no difference between Calculated LDL and Direct LDL level ($P > 0.05$) in metabolic syndrome patients. Calculated LDL and Direct LDL levels were positively correlated ($r = 0.322$, $p < 0.05$) and it was also statistically significant. In a multivariable analysis, both Calculated LDL and Direct LDL level was positively correlated with Atherogenic index in metabolic syndrome patients. When analyzed according to two categories of Atherogenic index (AI), the patients with AI value more than 3 were statistically increased in calculated LDL level ($p < 0.001$) and direct LDL level ($p < 0.001$) than that of metabolic syndrome patients with AI value ≤ 3 . There was also statistically significant positive association of AI and Calculated LDL level and direct LDL level ($p < 0.001$). The increased component of IDF criteria has statistically positive association with increased LDL level (calculated and direct) and was statistically significant. In conclusion, the present study reported that increase in component of identifying criteria among individuals need for screening LDL-C and the risk of CHD associated with atherogenic index vary substantially with LDL-C level.

Keywords : *Metabolic syndrome, low-density lipoprotein cholesterol, and risk of cardiovascular disease: A population-based study*

Category : Health and Allied Sciences

1015 POSTPRANDIAL BLOOD GLUCOSE AND CARDIOVASCULAR RESPONSES IN YOUNG AND MIDDLE AGED#

Thida Cho, *basic Medical Science, Kulliyah of Dentistry*
Nyunt Wai, *Human Biology Division, IMU, Kuala Lumpur, Malaysia,*
Myat Thandar, *Head of Physiology department, Institute of Medicine 1, Yangon, Myanmar,*

Exhibitor : Thida Cho, Basic Medical Sciences, Kulliyah of Dentistry

Background review The incidence and prevalence of diabetes mellitus were highest in old age. The oral glucose tolerance test has been employed to investigate the effect of age on the disposal of a glucose challenge. The aim of this study was to investigate the postprandial blood glucose and cardiovascular responses in the young (20-25 years) and middle aged (45-55 years Myanmar subjects). Objectives 1. To study the blood glucose and cardiovascular responses to standard oral glucose load in young and middle age groups 2. To study the blood glucose and cardiovascular responses to a test meal in above two age groups Methods Apparently normal healthy male subjects in two age groups (n=30 in each groups) Experiments began at 6:00AM. Having fasted for 10 hours. Resting blood pressures were determined. Venous blood was taken for fasting and two-hour postprandial blood glucose determination. Blood pressure were taken at 15, 45 and 75 minutes after glucose (75g of glucose dissolved in about 200 ml of water) and test meal (typical Myanmar breakfast (which is isocaloric to 75 g glucose). Results and Conclusion In both age groups (n=30 each) the mean fasting and two hour blood glucose values after the test meal and 75g oral glucose within normal limits. Two-hour blood glucose value after test meal, however, was significantly higher than that after 75g glucose value in both age groups ($P < 0.05$). The mean fasting and two-hour postprandial blood glucose values in middle age group were significantly higher than those in the young age group ($P < 0.05$). Both age groups showed a normal response to oral glucose load but, blood glucose values in middle age group were in all time points compared with those of young age group, significantly so at 60 minutes ($P < 0.05$) suggesting that glucose tolerance was diminished in the middle age group. In the middle age group, both the systolic and diastolic blood pressures declined after test meal as well as after 75g oral glucose. In younger age group, a postprandial falling trend in systolic and diastolic was observed only after the oral glucose load and not after test meal. Blood pressure changes 15 minutes after test meal were significantly different ($P < 0.05$) between two age groups. Higher fasting and two-hour postprandial blood glucose values and consistently greater postprandial decreases in blood pressure in the middle age group compared with those of the young age group should be taken into consideration in interpreting the blood glucose values and the results of routine measurements of blood pressure.

Keywords : *Postprandial, test-meal, fasting, Two-hour postprandial,*

Category : Health and Allied Sciences

1016 **ATTITUDES TOWARDS EUTHANASIA AND PHYSICIAN-ASSISTED SUICIDE AMONG PHYSICIANS AND PATIENTS IN A MULTI-CULTURAL SOCIETY OF MALAYSIA#**

Mohammad yousuf Rathor, *Internal Medicine, Kulliyah of Medicine*
Mohammad Fauzi Abdul Rani, *Internal Medicine, Kulliyah of Medicine*
Mohammad Arif Shahar, *Internal Medicine, Kulliyah of Medicine*
AR Jamalludin, *Community Medicine, Kulliyah of Medicine*
TCA Shahrin, *Internal Medicine, Kulliyah of Medicine*
Ahmad Marzuki Bin Omar, *Internal Medicine, Kulliyah of Medicine*
Azarisman Shah Bin Mohamad Shah, *Internal Medicine, Kulliyah of Medicine*

Exhibitor : Mohammad yousuf Rathor, Internal Medicine, Kulliyah of Medicine

Introduction: Due to globalization and changes in the health care delivery system, there has been a gradual change in the attitude of the medical community as well as the lay public towards greater acceptance of euthanasia as an option for terminally ill and dying patients. Physicians in developing countries come across situations where such issues are raised with increasing frequency. As euthanasia has gained worldwide prominence, we aim to explore the beliefs and attitude of our patients and physicians towards it and related issues. Methods: Questionnaire based survey among consenting patients and physicians. In this survey euthanasia was defined as “deliberate action undertaken by a physician to end the patient's life at his request and with patient’s full informed consent in order to relieve his pain and suffering.” This study was approved by the pertinent ethical committees of Faculty of Medicine, and Hospitals. The patient categories included cancer patients on palliative care, HIV and AIDS, end stage renal failure on chronic haemodialysis, severe chronic obstructive pulmonary disease, diabetics with obvious medical complications and stroke victims. Data from 922 respondents (727 patients and 195 physicians) was collected during 2010-2011 and analysed using the Statistical Package for Social Sciences version 17.0 (SPSS Inc, Chicago, IL, USA). Chi-square χ^2 test was performed to compare the proportions between the physicians and patients and a p-value of less than 0.05 was taken as statistically significant. Results: The majority of our physicians and patients did not support euthanasia or PAS (EAS), no matter what the circumstances may be $p < 0.001$. Both opposed to its legalization $p < 0.001$. Just 15% of physicians reported that they were asked by patients to assist in dying. Sixty two% of our patients and 70% of physicians were in favour of withholding or discontinuing artificial life support to a patient with no chances of survival or when the burdens outweighed the benefits. About 64% of physicians agreed that pain medication should be given to relieve suffering even if it would hasten the patient’s death and 62% agreed that providing comfort was the primary objective rather than prolonging the life of a terminally ill patient. Conclusion: Only a minority of the physicians support EAS. Most of our patients did not favour it and still had a hope of cure. A clear association could be made with regard to the physicians and patients religiosity and opposition to EAS $p < 0.001$. Under current prevailing conditions the practice of Medicine must not be guided by economic and political forces, but by the ethics that is internal to the Medicine. It is hoped that future debates about legalisation can proceed with this evidence in mind.

Keywords : *euthanasia, physician-assisted suicide, attitudes, legalisation, Multicultural*

Category : Health and Allied Sciences

1021 INVENTING AND VALIDATING QUESTIONNAIRES MUSLIM DOCTOR QUESTIONNAIRE (MDQ) AND MUSLIM MEDICAL STUDENT QUESTIONNAIRE (MMSQ) AMONG THE POPULATION OF MUSLIM DOCTORS AND STUDENTS IN MALAYSIA.#

Ramli Musa, *Department of Psychiatry, Kulliyah of Medicine*
Mohammad Fauzi Abdul Rani, *Internal Medicine, Kulliyah of Medicine*
Aminudin Che Ahmad, *Orthopedic, Kulliyah of Medicine*
Zamzil Amin Asha'ari, *ENT, Kulliyah of Medicine*

Exhibitor : Ramli Musa, Department of Psychiatry, Kulliyah of Medicine

Background: International Islamic University Malaysia has pioneered the model of Islamic Input into Medical Program (IIMP). This is part of the main objective to enhance the affective domain in our curriculum. In order to evaluate the effectiveness of IIMP programme, it is important to an assessment tool. Once Kulliyah is able to prove the effectiveness of IIMP, it is hope IIUM Kulliyah of Medicine would be a role model in development of Islamic Medical Curriculum. At the moment there is not a single medical Islamic scale available. This we hope will be the pioneer of all. Objectives: 1) To invent new questionnaires called MDQ & MMSQ that will be reliable and validated for the Muslim doctors and medical students respectively. 2) To assess the good Muslim values in various academic year. 3) To assess pre- and post- input of Islamic curriculum Knowledge, Attitude, & Practice aspects on these domains; 1. Religiosity, Aqidah – (knowledge, practice) 2. Knowledge of Relevant Medical Fiqh (knowledge), Ibadah (Rukhsah) 3. Communication Skill – (attitude, practice) 4. Behavior 5. Professionalism 6. Clinical Competence. 7. Islamic Ethics, Islamic Medical Jurisprudence, 8. Outward Manifestation 9. Sincerity, Akhlak 10. Morality, Confidentiality MEASUREMENT The questionnaires will be constructed to reflect the following flow and the administration was done among IIUM medical students and medical doctors. Results; A total of 468 participants among students;. Reliability; Cronbach's alpha of 0.91 and 8 domains were identified by using explanatory factor analysis with Varimax rotation. Validity; From items, 75% had good factor loading (>0.4). Therefore these 2 questionnaires are valid and reliable.

Keywords : *Muslim, doctor, questionnaire, knowledge, attitude, practice*

Category : Health and Allied Sciences

1022 EVALUATION OF PSYCHOLOGICAL PROFILE AND QUALITY OF LIFE OF DIALYSIS PATIENTS IN MALAYSIA#

Ramli Musa, *Department of Psychiatry, Kulliyah of Medicine*

Exhibitor : Ramli Musa, Department of Psychiatry, Kulliyah of Medicine

Introduction: The existence of multiple psychiatric comorbid illnesses is an important public health problem in dialysis population. Depression has long been identified as the primary mental health problem of end stage renal disease in other countries (ESRD). According to the 18th report of the Malaysian Dialysis & Renal Transplant Registry 2010, there were 23403 haemodialysis (HD) and 2360 continuous ambulatory peritoneal dialysis (CAPD) patients. The extent of psycho-pathology in dialysis population and its impact on quality of life (QOL) is largely unknown. Primary objectives: 1. To determine the prevalence of depression, anxiety and stress among dialysis patients 2. To measure the QOL of dialysis patients in Malaysia. 3. To analyze the association between psychological profiles and QOL. Secondary objectives: To identify significant demographic determinants to their psychological profile and QOL To compare psychological profiles and QOL with different modality of renal replacement therapy (HD versus CAPD) Study population: A total of 15 HD centres and 6 CAPD centres involved in this study with target study population of 1470 patients. Stratified sampling was used to select the hospitals or dialysis centres. No. HD centres Sector 1. Kuala Lumpur Hospital (Unit 1), HD Unit MOH 2. Sultanah Aminah Hospital, HD Unit MOH 3. Tengku Ampuan Rahimah Hospital, HD Unit MOH 4. Selayang Hospital, HD Unit MOH 5. Tuanku Ja'afar Hospital, HD Unit MOH 6. Charis-NKF Dialysis Centre, HD Unit NGO 7. Yayasan Kebajikan SSL, HD Unit NGO 8. Yayasan Kebajikan SSL Puchong, HD Unit NGO 9. KPJ Ampang Puteri Specialist Hospital, HD Unit Private 10. Seremban Specialist Hospital, HD Unit Private 11. University Malaya Medical Centre, HD Unit University 12. University Malaya Specialist Centre, HD Unit University 13. Universiti Kebangsaan Malaysia Bangi, HD Unit University 14. Pusat Perubatan Premier HUKM, HD Unit University 15. Pusat Perubatan Universiti Kebangsaan Malaysia, HD Unit University No. CAPD Centres Sector State 1. Kuala Lumpur Hospital, CAPD Unit, MOH, Wilayah Persekutuan 2. Tengku Ampuan Rahimah Hospital, CAPD Unit, MOH Selangor 3. Tuanku Ja'afar Hospital, CAPD Unit MOH, Negeri Sembilan 4. Sultanah Aminah Hospital, CAPD Unit MOH Johor 5. Pusat Perubatan Universiti Kebangsaan Malaysia, CAPD Unit, MOH, Selangor 6. University Malaya Medical Centre, CAPD Unit University, Selangor Results Gender; Male 51.3%, Female 48.7% Age 52 year-old (mean) Race Malays 50.6%, Chinese 37.0%, Indian and others 12.6% 1. From 1312 subjects, 317 subject (24.2%) were depressed, 475 subjects (36.1%), and 154 subjects (11.7%) were having anxiety. 2. There is strong negative correlation between QOL and DASS ($r^2 = -0.52$). Which means those with high level of depression, anxiety and stress would have poor quality of life. 3. Depression is related to poor financial support, poor family support, females and low education ($p < 0.001$).

Keywords : *Depression, anxiety, stress, quality of life, kidney failure*

Category : Health and Allied Sciences

1039 PORTABLE GLO GERM BOX: HANDWASHING TRAINING#

NORAZLANSHAH HAZALI, *NUTRITION SCIENCES, Kulliyah of Allied Health Sciences*

Exhibitor : NORAZLANSHAH HAZALI, Nutrition Sciences, Kulliyah of Allied Health Sciences

Portable Glo Germ Box is a product that helps you teach handwashing according to the seven handwashing steps recommended by Ministry of Health Malaysia. You can now conduct handwashing demonstrations everywhere even in bright light surroundings. The product is designed to block ambient light to give a vivid display of artificial germs. This product is made up owing to the many type of infectious diseases spread worldwide due to the improper handwashing. Thus, this product stands out as an effective way to demonstrate to your students, staff and even yourself just how easy it is to overlook proper handwashing. It gives a visual demonstration to show when improper handwashing has taken place. It is a big mistake to assume that all people understand the necessity of proper handwashing, we have to teach them to avoid infections from being spread.

Keywords : *Portable, Glo Germ Box, Handwashing Training.*

Category : Health and Allied Sciences

1051 A SCANNING ELECTRON MICROSCOPIC STUDY ON THE TRANSITIONAL MUCOSA OF THE DISTAL COLORECTAL CARCINOMA#

Ye Tun, Basic Medical Sciences, Kulliyah of Medicine
Yi Myint, Basic Medical Sciences, Kulliyah of Medicine
Azmi Nor, Department of Surgery, Kulliyah of Medicine

Exhibitor : Ye Tun, Basic Medical Sciences, Kulliyah of Medicine

Colorectal cancer was ranked the most common cancer among males and second most common cancer among females in Peninsular Malaysia (Malaysian cancer statistics, 2006). The transitional mucosa (TM) was apparently normal in histological section but abnormal in mucin histochemistry of large intestinal mucosa immediately adjacent to colorectal adenocarcinoma (Filipe, 1969). The aim of this study was to determine the length of transitional mucosa (cut-off score) in Malaysian with distal colorectal cancer. The distal colon comprises of the descending colon, sigmoid colon and the rectum. The study group included ten normal control patients and ten patients with rectosigmoid tumor. Three samples were taken from each resected rectosigmoid carcinoma specimen (2, 5, and 10 cms from the proximal margin of the carcinoma). Forty specimen were processed and viewed the mucosal surface under scanning electron microscope (SEM). The mean length of TM was 7.6cm. There was no statistically significant association between age, gender, race, site of tumor, differentiation of tumor and clinical staging with that of the TM changes (p value \Rightarrow 0.05). In conclusion there was longer length of TM changes in this study.

Keywords : *transitional mucosa, colorectal carcinoma, site of tumour, differentiation of tumor, clinical staging and scanning electron microscope.*

Category : Health and Allied Sciences

1052 **ASSESSMENT OF IBUPROFEN, NON-SELECTIVE COX INHIBITOR, AS A NEUROPROTECTIVE AGENT IN ALZHEIMER'S MODEL OF RATS.#**

Anil Kumar Saxena, *Basic Medical Sciences, Kulliyah of Medicine*
Mohd Fadly Mohd Noor, *Basic Medical Sciences, Kulliyah of Medicine*
Norlelawati A. Talib, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Anil Kumar Saxena, Basic Medical Sciences, Kulliyah of Medicine

Aging related reduction in cerebral blood flow (CBF) has been associated with neurodegenerative disorders including Alzheimer's disease and dementia. Experimentally, a condition of chronic cerebral hypoperfusion due to reduced CBF can be induced by permanent bilateral occlusion of common carotid arteries (2-vessel occlusion, 2VO) in rats. Since neuroinflammation, leading to neuronal apoptosis and death, is one of the mechanisms which is thought to play a significant role in chronic degenerative neurological disorders, the present study was planned to assess the neuroprotective role of ibuprofen in chronic cerebral hypoperfusion-induced neurodegeneration. After acclimatization, fifteen Sprague Dawley rats weighing 200-250 g were equally divided into three groups. Group A – sham control, Group B – 2VO, and Group C – 2VO-I (treated daily with ibuprofen, 50 mg/kg, orally following 2VO). On 8th week, all the rats were euthanized and the hippocampi were isolated. Viable neuronal cell count in the hippocampal CA-1 region, hippocampal COX-2 mRNA expression and prostaglandin E2 (PGE-2) levels were estimated. There was a significant difference in neuronal cell death, increase in COX-2 mRNA expression and PGE-2 levels in 2VO group as compared to sham control group. In ibuprofen-treated 2VO (2VO-I) rats, the viable neuronal cell count of the hippocampal CA-1 region was significantly higher as compared to the untreated 2VO group. For the hippocampal COX-2 mRNA expression, the value in the ibuprofen treated group showed insignificant difference when compared to the untreated 2VO group. However, hippocampal PGE-2 levels were found to be significantly lower in the ibuprofen treated 2VO rats as compared to untreated 2VO rats. These results clearly indicate that ibuprofen is an effective neuroprotective agent in chronic cerebral hypoperfusion-induced neurodegeneration in rats and can be fruitfully utilized in the management of Alzheimer's disease.

Keywords : *Ibuprofen, chronic cerebral hypoperfusion, neurodegeneration, Alzheimer's disease, 2VO rats.*

Category : Health and Allied Sciences

1053 **ASSESSMENT OF CELECOXIB, A SELECTIVE COX-2 INHIBITOR, AS A NEUROPROTECTIVE AGENT IN ALZHEIMER'S MODEL OF RATS.#**

Anil Kumar Saxena, *Basic Medical Sciences, Kulliyah of Medicine*
Mohd Fadly Mohd Noor, *Basic Medical Sciences, Kulliyah of Medicine*
Norlelawati A. Talib, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Anil Kumar Saxena, Basic Medical Sciences, Kulliyah of Medicine

Reduced cerebral blood flow (CBF) has been associated with neurodegenerative disorders including Alzheimer's disease. Experimentally, a condition of chronic cerebral hypoperfusion due to reduced CBF can be induced by permanent bilateral occlusion of common carotid arteries (2-vessel occlusion, 2VO) in rats. Neuroinflammation has been suggested to play a crucial role in the development and progression of many neurodegenerative diseases. The neuroinflammatory response induces activation of microglia and release of inflammatory mediators such as prostaglandins, leukotrienes, and cytokines. The sustained release of inflammatory mediators works to perpetuate the inflammatory cycle and leads to apoptosis and neuronal cell death. Since neuroinflammation, leading to neuronal apoptosis and death, is one of the mechanisms which is thought to play a significant role in chronic degenerative neurological disorders like Alzheimer's disease, the present study was planned to assess the neuroprotective role of celecoxib, a selective COX-2 inhibitor, in Alzheimer's model of rats (2VO). After one week of acclimatization, fifteen Sprague Dawley rats weighing 200-250 g were equally divided into three groups. Group A served as – sham control, Group B – 2VO, and Group C – 2VO-C (treated daily with celecoxib 50 mg/kg, orally following 2VO). On 8th week, all the rats were euthanized and the hippocampi were isolated. Viable neuronal cells in the hippocampal CA-1 region were counted and hippocampal COX-2 mRNA expression and prostaglandin E2 (PGE-2) levels were estimated. There was a significant difference in neuronal cell death, increase in COX-2 mRNA expression and PGE-2 levels in 2VO group as compared to sham control group. In celecoxib-treated 2VO (2VO-C) rats, the viable neuronal cell count of the hippocampal CA-1 region was significantly higher as compared to the untreated 2VO group. The hippocampal COX-2 mRNA expression and hippocampal PGE-2 levels were found to be significantly lower in the celecoxib-treated 2VO rats as compared to untreated 2VO rats. The results clearly point out that celecoxib is an effective neuroprotective agent in Alzheimer's model of rats and can be successfully used in the management of Alzheimer's disease.

Keywords : *Celecoxib, neuroinflammation, neurodegeneration, Alzheimer's disease, 2VO rats.*

Category : Health and Allied Sciences

1054 **KNOWLEDGE, ATTITUDE AND PRACTICE (KAP) OF ASTHMA FOOD TABOOS AMONG ASTHMATIC PATIENT#**

MUZAITUL AKMA MUSTAPA KAMAL BASHA, , *Kulliyah of Nursing*

Exhibitor : MUZAITUL AKMA MUSTAPA KAMAL BASHA, , Kulliyah of Nursing

KNOWLEDGE, ATTITUDE AND PRACTICE (KAP) OF ASTHMA FOOD TABOOS AMONG ASTHMATIC PATIENT Background: Misconceptions and outdated beliefs such as food taboos are commonly practiced among asthmatic patients especially in Asia. It will somehow affect the effectiveness of medical treatment of asthma. Objective: The objectives of this study are to estimate the prevalence of practice of asthma food taboos and identify factors associated of KAP of asthma food taboos among asthmatic patient. Material and Methods: A cross sectional study was conducted in a primary health care clinic at Bandar Kuantan, Pahang. There were 400 asthmatic patients participated in this study by using convenience sampling method. The questionnaire comprised of 4 parts; socio-demography, knowledge, attitudes and practice towards asthma food taboos. Data was analyzed by using IBM Statistical Package Social Science (SPSS) 19. Result: 46% out of asthmatic patients were practicing of asthma food taboos. Among factors studied, practice of food taboos had shown significant association with ethnicity ($P=0.001$), level of education ($P=0.011$) and exposure to health publicity ($P =0.045$). The results also showed significant association between attitude and practice ($P<0.000$). No significant difference in the frequency of asthmatic attack between the practice and non-practice group ($P=0.356$, $Z= -0.923$). Multivariate analysis shown the age, high educational level, positive attitude had shown as predictors of practicing asthma food taboos. Conclusion: Prevalence of practice of asthma food taboos is high. Education and health publicity seems to be beneficial in promoting changes of practice and attitudes of these taboos.

Keywords : *Key words: Asthma, food taboos, knowledge, attitudes, practice.*

Category : Health and Allied Sciences

1057 **HISTOMORPHOMETRIC ANALYSIS OF THE ENDOTHELIAL CELL IN SKIN
MICROVASCULATURE AMONG DIABETIC FOOT ULCER PATIENTS#**

Hazulin Mohd Radzuan, *Basic Medical Sciences, Kulliyah of Medicine*

Yi Yi Myint, *Basic Medical Sciences, Kulliyah of Medicine*

Ye Tun, *Basic Medical Sciences, Kulliyah of Medicine*

Ahmad Hafiz Zulkifly, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Yi Yi Myint, Basic Medical Sciences, Kulliyah of Medicine

Introduction This study was conducted to described the histological changes occurred in skin microvessels of diabetic foot patients who were categorized as having neuropathic and neuroischemic ulcer, particularly the character of the endothelial cells, with regards to its number and thickness. **Methods** The study involved 3 groups with 10 subjects in each category, which is the control, the neuropathic ulcer diabetic foot patients and the neuroischemic ulcer diabetic foot patients. They were examine for the quality of peripheral pulses, ankle-brachial index measurement and fulfilled the criteria for The Neuropathy Symptoms Score and The Modified Neuropathy Disability Score. The specimens were taken using skin punch biopsy and were routinely processed for light microscopy. Then, 3 arterioles were identified for each slide of every patient. The mean endothelial cell count (ECC) was performed by calculating all the endothelial cells of the 3 arterioles and the mean endothelial cell thicknesses (ECT) of all endothelia in these selected arterioles were measured by the image analyzer. **Statistical Analysis** Data were analyzed using the SPSS version 18. The difference in mean ECC and ECT among neuropathic and neuroischemic ulcer patients with controls were tested using Kruskal Wallis test. p-value of less than 0.05 was taken as statistically significant. **Results** Histomorphometric analysis on light microscopy showed there was a significant difference between the ECC and ECT in between the control, neuropathic and neuroischemic group ($p < 0.05$). Furthermore, the mean ranks for ECC among control subjects was significantly two times higher than the other groups and the mean ranks for ECT for the diseased groups were more than two times higher than the control. **Conclusion** The decrement of ECC and the increment of ECT among diabetic foot patients in general as compared to controls subject could be due to the alteration in the endothelial cell function and structure as the results of the metabolic disease. Induction of endothelial cell apoptosis and reduction in stimulation of vascular endothelial growth factor are just some of the example consequences initiated by oxidative stress.

Keywords : *diabetic foot ulcer, skin microcirculation, endothelial cell count (ECC), endothelial cell thicknesses (ECT)*

Category : Health and Allied Sciences

1063 CROSS-SECTIONAL DESCRIPTIVE STUDY OF MANAGEMENT MODALITIES, CHALLENGING IN DECISION MAKING AND (QUALITY OF LIFE) OF SURGICAL PATIENTS IN PALLIATIVE CARE UNIT#

Yan Naing Soe, *Surgery, Kulliyah of Medicine*
Nasser Mohammad Amjad, *Surgery, Kulliyah of Medicine*
Kartina Abdul Karim, *Surgery, Kulliyah of Medicine*

Exhibitor : Yan Naing Soe, Surgery, Kulliyah of Medicine

Cross-sectional descriptive study of management modalities, challenging in decision making and (Quality of life) of surgical patients in palliative care unit Yan Naing Soe1, Nasser Mohammad Amjad1, Kartina Abdul Karim 2 Department of Surgery, Faculty of Medicine, International Islamic University Malaysia (IIUM), Department of Surgery, Hospital Tengku Ampuan Afza (HTAA), Kuantan, Pahang. Abstract Background : To palliate: pallium (Latin) “affording relief, not cure . . . to reduce the severity of” . The goal of palliative care surgery is the achievement of the best quality of life (QOL) for patients and their families to encounter following common challenging emergency measures to be taken by means of open surgery, minimal access surgery, endoscopy, as a part of the interventional radiology as well as various types of supportive treatment in palliative care unit. Methods: We designed a Cross-sectional Descriptive Study of surgical patients in palliative care units in teaching hospital, Kuantan, Malaysia. Objectives of this study are: to study the demographic characteristics and indications for admission of surgical patients in palliative care unit, to study options of treatment modalities and complications, to identify the barriers in decision making in surgical treatment, to find out the quality of life of the patient in the palliative care unit by using QUALITY OF LIFE (WHOQOL) –BREF – questionnaires. Results: One hundred and one eligible patients (53%) male, (47%) female of mean age (55), majority of Malay and Chinese patients were included in the study. Diagnosis of (30%) Cancer Breast, (24%) Lower GI, (18%) upper GI, (15%) hepato-biliary, and (7%) pancreatic cancers. (32%) of emergency treatment and (68%) of supportive treatment were given. Regarding barriers in decision making (51%) patient factors, (12%) disease factors and (15%) limitation of care and (22%) unknown prognostic factor. The final results of overall quality of life rating were shown as (1%) poor, (42%) neither poor nor good, (52%) good and (2%) very good. Conclusion Palliative care and end of life decision making from surgical point of view is really delicate issue. This is a satiation room of “Blending Science and Compassion”. The modest understanding of palliative care, in reality is the evidence-based specific palliative treatment focus on different goals, not giving up. we would be able to fulfil the time-honoured aphorism that is rooted deeply inside the heart of our professionalism: To cure sometimes, To relieve often, To comfort always.

Keywords : *Palliative surgery, Quality of life, decision making*

Category : Health and Allied Sciences

1065 NEUROPROTECTIVE EFFECT OF MALAYSIAN TUALANG HONEY ON NEURONAL LOSS IN HIPPOCAMPUS OF RATS FOLLOWING CHRONIC CEREBRAL HYPOPERFUSION#

Hnin Pwint Phyu, *Basic Medical Sciences, Kulliyah of Nursing*
Anil Kumar Saxena, *Basic Medical Sciences, Kulliyah of Medicine*
Norlelawati a.talib, *Basic Medical Sciences, Kulliyah of Medicine*
Khin Maung Maung, *Basic Medical Sciences, Kulliyah of Medicine*
Imad matloub, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Hnin Pwint Phyu, Basic Medical Sciences, Kulliyah of Nursing

H.P. Phyu¹, A.K. Saxena², N. A. Talib², K.M.Maung², I. M. Al-Ani² ¹ Department of Basic Medical Sciences, Kulliyah of Nursing ²Department of Basic Medical Sciences, Kulliyah of Medicine International Islamic University Malaysia Introduction: Alzheimer's disease (AD) is a neurodegenerative disease that often associated with advance age and dementia. There are questions whether "honey", a well known natural remedy with significant anti-oxidative and anti-inflammatory properties is able to protect the brain from neurodegenerative changes thus preventing the manifestation of AD. Study of AD in rat animal model is achieved by inducing chronic cerebral hypoperfusion through permanent bilateral common carotid arteries ligation (2 Vessels Occlusion -2VO). Objective: The aim of this study was to assess the neuroprotective effect of Malaysian Tualang honey in chronic cerebral hypoperfusion-induced neurodegeneration in rats through histological examination of the CA 1 area of hippocampus. Methodology: 24 Male Spague-Dawley rats were randomly divided into three groups; SHAM, untreated 2VO and honey treated 2VO. Malaysian Tualang honey was administered orally (1.2mg/kg body weight) 10 days before 2VO and daily up to 10 weeks. After 10 weeks, the animals were sacrificed and the histology of CA1 area of hippocampus was studied using Cresyl Violet staining. Results: There were significantly higher number of viable pyramidal cells in CA1 region of hippocampus in SHAM control (p<0.001) and in honey treated 2VO group (p<0.001) as compared to the untreated 2VO. Conclusion: Our results suggest that Tualang honey might be useful in the treatment of neurodegeneration related to chronic cerebral hypoperfusion such as Alzheimer's disease (AD).

Keywords : neuroprotective, chronic cerebral hypoperfusion, Tualang honey, neuronal loss

Category : Health and Allied Sciences

**1069 MAGGOT DEBRIDEMENT THERAPY ON DIABETIC FOOT ULCER: EXPERIENCE FROM
MAGGOT TREATMENT CENTERS#**

Wan Mohd Azizi Wan Sulaiman, *Basic Medical Science, Kulliyah of Pharmacy*

Mohd Adham Shah Ayeop, *Orthopedic, Kulliyah of Medicine*

Yee Bit Lian, *Medical Biotherapy Sdn Bhd,*

Exhibitor : Wan Mohd Azizi Wan Sulaiman, Basic Medical Science, Kulliyah of Pharmacy

Background: Health professionals have a critical role in managing diabetic foot ulcer (DFU) in their attempt to provide holistic care from speedy wound recovery, shorten hospitalization, less nursing time, leg salvage from amputation, patient satisfaction to decrease medical fees. However, due to antibiotic resistance and the potential problems associated with surgical intervention, maggot debridement therapy (MDT) is now considered a safe, rapid and cost-effective alternative to other forms of debridement, including surgery. Aim/objective: To assess the benefits of MDT on patient with DFU. Methods: A single subject study design which involves a pre-test followed by an intervention, and a post-test, in order to determine the effect of MDT on patient with DFU, in one particular patient at one time. All 42 patients were taken photograph each time prior to treatment. By using Aaron's wound outcome classification, wound assessment was done through visual grading. Findings: Our patient's entire wound completely healed after average of three times maggot treatment, with average vial of 200 maggots involved. The average time for wound condition free from slough was 30 days. Subsequently, patients will continue the normal dressing and skin graft procedures. These data's supported our findings of shorter duration of healing and cost saving as they have been followed up as out-patient. Conclusions: This study indicates the beneficial effect of MDT towards diabetic foot ulcer patient in our Maggot Treatment centres. However, we propose a proper and large scale studies to further confirm our findings.

Keywords : *maggot debridement therapy, diabetic foot ulcer, limb amputation.*

Category : Health and Allied Sciences

1070 BRACHIORADIAL ARTERY (BRA) & SUPERFICIAL BRACHIOULNAR ARTERY (SBUA): A CASE REPORT#

Shahida Saharudin, *Basic Medical Science, Kulliyah of Medicine*

San San Lwin, *Basic Medical Sciences, Kulliyah of Medicine*

Htar Htar Aung, *Basic Medical Sciences, Kulliyah of Dentistry*

Azlin Sa'at @ Yusof, *Radiology, Kulliyah of Medicine*

Exhibitor : Shahida Saharudin, Basic Medical Science, Kulliyah of Medicine

Introduction It is no longer uncommon to encounter arterial variants of upper extremities during routine dissection and clinical practice. It has been reported that arterial variations can occur up to 20%. Of these variants, radial and ulnar artery of high origin is quite commonly encountered. We reported a subject with high origin of radial (BRA) and ulnar artery (SBUA) on each side of the upper limb. **Methods** Four hundred healthy Malays were recruited for this study in Kuantan, Pahang. Both upper limbs were examined with Logic P5 General Electric Ultrasound machine using 12L-RS linear probe. The upper limbs were scanned from the anterior axillary line to the wrist to trace the course of various upper limb arteries. **Results** During ultrasonography of a 23 year- old man, SBUA was found on the right and BRA on the left upper limb. On the right, SBUA originated from the brachial artery at the level of elbow crease with a diameter of 3.1mm. After its origin, the artery coursed superficially to the forearm flexor muscles on the medial aspect of the forearm. It ran alongside of the flexor carpi ulnaris muscle and eventually adopted its usual position on the lateral aspect of the ulnar nerve in the middle third of the forearm. It entered the hand with a diameter of 2.1mm. Brachial artery ran in its usual course and divided into common interosseous artery and radial artery 2cm below the elbow crease. On the left, BRA was seen to originate the upper third of brachial artery with a diameter of 2.4mm. It ran superficial to the median nerve and brachial artery along the arm. At elbow crease, BRA passed posterior to the brachial artery before it ran laterally in the forearm. In the forearm, BRA adopted the morphology of a normal radial artery. It entered the hand with a diameter of 2.0mm. Brachial artery was present as its normal course and divided into common interosseous artery and ulnar artery. **Conclusion** It is not uncommon to encounter arterial variants such as SBUA and BRA. One type of variant may co-exist with the other. Knowledge of these variations may help surgeons to anticipate potential clinical complications during related surgical procedures.

Keywords : *arterial, variations, superficial, brachioulnar, brachioradial, artery.*

Category : Health and Allied Sciences

1079 THE USE OF PULMONARY FUNCTION TEST TO PREDICT OCCUPATIONAL LUNG DISEASE AMONG WORKERS IN STEEL INDUSTRY#

Wisam Nabeel, *Basic Medical Sciences For Nursing, Kulliyah of Nursing*
Nabeel Ibrahim, *Internal Medicine,*
Layla Issa, *Physiology,*

Exhibitor : Wisam Nabeel, Basic Medical Sciences For Nursing, Kulliyah of Nursing

Abstract: Occupational lung diseases are a group of illnesses that are caused by exposure to dusts, gases, vapors and fumes at work which can cause several different types of lung diseases like acute bronchitis pulmonary edema, pulmonary fibrosis, occupational asthma, extrinsic allergic alveolitis and bronchial carcinoma. Substances known to cause occupational lung diseases include sulphur dioxide, chlorine, ammonia, oxides of nitrogen, mineral dust, asbestos, polycyclic hydrocarbons and radon in mines. In such diseases the treatment is not other than optimizing the patient's current health and preventing further exposure and the prognosis varies depending on the severity of the disease from being asymptomatic to severe respiratory debilitation and death. One hundred and eighty asymptomatic workers in the steel industry in Basra city whose duration of employment ranges from 5-15 year were randomly selected and examined at Basra teaching hospital during the period (2000-2002). Workers were assessed clinically and the function of their respiratory system were studied by measuring FEV1 (Forced Expiratory Volume in the first second) and FVC (Forced Vital Capacity). The results showed that the majority of the examined workers 45.55% had restrictive pulmonary defect, 20% had obstructive pulmonary defect while 7.22% had combined obstructive and restrictive defects.

Keywords :

Category : Health and Allied Sciences

1080 STUDY ON OCCOURRENCE OF PERIODONTITIS AMONG OBESE AND NON- OBESE PATIENTS ATTENDING POLYCLINIC OF KOD,IIUM KUANTUN CAMPUS IN 2012#

Thida Cho, *basic Medical Science, Kulliyah of Dentistry*
Widowati Witjaksono, *Admin, Kulliyah of Dentistry*
Rokiah Nurul Amin, *Dental, Kulliyah of Dentistry*
Nurul Adibah Hashim, *Dental, Kulliyah of Dentistry*

Exhibitor : Thida Cho, Basic Medical Sciences, Kulliyah of Dentistry

Objective: A cross-sectional comparative study was done to find out the prevalence of periodontitis among obese and non-obese patients and to find out their relationship .Materials and Methods: Total 70 patients aged between 20 to 60 years old, non-smoker and non-diabetic were selected purposively from the patients who attended at Periodontology Department of polyclinics, KOD IIUM. The patients were grouped according to BMI levels which were underweight, normal, at risk overweight, Obese I, and Obese II. Full mouth periodontal examination was performed and their Community Periodontal Index of Treatment Needs (CPITN) was assessed. Results: Proportion of Periodontitis among the underweight, normal, at risk overweight, Obese I, and Obese II were 21.4 % (3/14), 37.5%(9/24), 62.5%(10/16), 76.9% (20/26) and 65.0%(13/20) respectively. There was more occurrence of Periodontitis among overweight, Obese I and Obese II were found in the study, and it was statistically significant($p < 0.05$).Conclusion: This study highlighted that obesity may be one of causative factors for occurrence of Periodontitis.

Keywords : *obesity,body mass index,waist circumference,periodontitis*

Category : Health and Allied Sciences

1088 **STUDY OF CYTOLOGICAL CHANGES IN NORMAL APPEARING ORAL MUCOSA OF SMOKERS#**

Ghasak Ghazi Faisal, *Basic Medical science, Kulliyah of Dentistry*

Exhibitor : Ghasak Ghazi Faisal, Basic Medical Sciences, Kulliyah of Dentistry

Objective: to investigate the cytopathological effects of smoking in normal appearing oral mucosa of smokers namely, inflammation, hyperkeratinisation and dysplasia and compare to the cytological smear of non smokers. Materials and Method Oral smears were obtained from the side of the tongue and floor of the mouth of 40 smokers having a normal oral mucosa and 40 non-smokers were used as controls. Two samples have been collected from each patient by Cytobrush. The smears were histochemically stained by Papanicolaou stain and examined under light microscope for the mentioned cytological changes. Digital images of the smears were obtained and processed using J Image software to measure the nuclear and Cytoplasmic diameters Results: The smokers group showed 63% inflammation, 26% mild dysplasia and 36% hyperkeratinisation. The control group showed 35%inflammation, 2% mild dysplasia and 12% hyperkeratinisation. There is a statistically significant difference in the presence of inflammation, hyperkeratinisation and dysplasia ($P < 0.005$) between the smokers and non smokers groups. Conclusion: Brush biopsy screening can be used in clinic as adjunct in the early diagnosis of premalignant changes that can help prevent the occurrence of oral squamous cell carcinoma. The procedure is fast, painless and inexpensive.

Keywords : *Papanicolaou stain, brush biopsy, tobacco smokers, dysplasia, oral mucosa, hyperkeratinisation.*

Category : Health and Allied Sciences

1100 APOLIPOPROTEIN E GENE POLYMORPHISM IN HYPERTENSION#

Wisam Nabeel, *Basic Medical Sciences, Kulliyah of Nursing*
Norlelawati Bt. A. Talib, *Basic Medical Sciences, Kulliyah of Medicine*
Nor Zamzila Bt. Abdullah, *Basic Medical Sciences, Kulliyah of Medicine*
Nilar Aung, *Basic Medical Sciences, Kulliyah of Medicine*
Norsidah Bt. Ku Zaifah, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Wisam Nabeel, *Basic Medical Sciences, Kulliyah of Nursing*

ABSTRACT Hypertension is a chronic cardiovascular disease that affects 43% of the Malaysian adult population. Hypertension is associated with significantly high morbidity and mortality rates. The exact cause of hypertension is still unknown but it is believed that hypertension occurs from complex interactions between multiple environmental and genetic factors. Although much is known about the environmental factors that predispose individuals to hypertension but the molecular mechanisms behind hypertension are still poorly understood. Between 30 and 60% of blood pressure variations are determined by genetic factors. A wide spectrum of genes has been studied for their possible role in the pathogenesis of hypertension, however very few genes have shown significant role in hypertension. Numerous recent studies on apoE proteins have shown that this protein exhibit an anti-atherosclerotic and antioxidant roles in the human body. Polymorphisms within the gene encoding apoE protein have been linked with various pathologies including cardiovascular diseases, cognitive and infectious diseases. Apo lipoprotein E (Apo E) is a plasma protein responsible for plasma clearance of triglyceride and cholesterol-rich lipoproteins. The E2, E3 and E4 are the three common alleles of this gene. This case control study consisted of 143 participants (seventy hypertensive and seventy three controls). The aim of this study was to assess the association of apo lipoprotein E gene polymorphisms with hypertension and level of blood pressure. ApoE gene polymorphism was analysed by polymerase chain reaction-restriction fragment length polymorphism assay. The findings of this study suggest that polymorphism in apoE gene was unlikely to confer genetic susceptibility for hypertension in our population samples.

Keywords :

Category : Health and Allied Sciences

1117 THE EFFECT OF TINOSPORA CRISPA ON ANTIOXIDANT STATUS IN STREPTOZOTOCIN INDUCED DIABETIC RATS#

Sarah Firdausa, *Department of Basic Medical Sciences, Kulliyah of Medicine*
Maung Maung Cho, *Department of Basic Medical Sciences, Kulliyah of Medicine*
Nilar Aung, *Department of Basic Medical Sciences, Kulliyah of Medicine*
Khin Maung Maung, *Department of Basic Medical Sciences, Kulliyah of Medicine*
Norsidah Ku Zaifah, *Department of Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Nilar Aung, *Basic Medical Sciences, Kulliyah of Medicine*

Diabetes is a worldwide chronic metabolic disorder which can lead to poor quality of life and even death. Nowadays, herbal therapy is considered as an alternative therapy for diabetes. The aim of this study is to investigate the effect of aqueous extract of *Tinospora crispa* (TCA) on blood glucose level and anti-oxidant status in streptozotocin induced diabetic Sprague-Dawley rats. The animals were divided into five groups (n=6), as follows: normal control (N), normal TCA treated (NT), diabetic control (D), diabetic treated with TCA (DT), and diabetic treated with Vitamin E (DE). Treatment was given for four weeks and blood sample were withdrawn for analysis. The data among groups were compared using one way ANOVA test while pair t test was used to analyze the differences between the data at the beginning and end of the experiment. Blood glucose level of diabetic groups (D and DE) significantly increased at the end of the experiment, but there is no significant changed in control (N) and (TCA) treated groups (NT and DT). Body weight of control and TCA treated group increased significantly, however in diabetic group it decreased significantly. Superoxide dismutase enzyme activity was decreased in groups D and DE, that there is no changed in other groups (N, NT and DT). Glutathione peroxidase was even increased in NT and DT groups. Lipid hydroperoxide and isoprostane level increased significantly in D group, however there is no changed in other groups. This showed that TCA not only lowered blood glucose level but also protect the experimental animals from reactive oxygen species by increasing antioxidant enzyme activity and controlling reactive oxygen species.

Keywords : *Tinospora crispa* (TCA), diabetes, antioxidant enzymes, reactive oxygen species

Category : Health and Allied Sciences

1118 **“A HANDBOOK ON SPECIAL SENSES” (VISION, HEARING, SMELL AND TASTE)#**

Nilar Aung, *Department of Basic Medical Sciences, Kulliyah of Medicine*
Ailin Razali, *Otolaryngology-Head & Neck Surgery, Kulliyah of Medicine*
Maung Maung Cho, *Department of Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Nilar Aung, Basic Medical Sciences, Kulliyah of Medicine

The basic sciences have played an essential role in the training of doctors. Physiology provides the scientific foundation for the field of medicine and all other professions related to human health and physical performance. Vision, hearing, smell and taste considered a special senses and each of these special senses works in concert with the nervous system to assist the body in coping with the environment changes experienced through the day. The scope of special senses have been widen and hence become more complicated for medical students. Text books and references are plentiful; however students might find it difficult to remember the facts due to the expanding knowledge in this particular area. The impetus of writing this book is to set out to provide comprehensive knowledge of the special senses, laid out in a very simplistic manner and designed in a learner friendly format. Therefore, without opening the heavy books, a learner can effectively use this handbook to know the important of special senses and their clinical correlations. This book will benefit not only the medical students but also students pursuing studies in other health-related fields such as dentistry, nursing and allied health.

Keywords : *sensory physiology, special senses, vision, hearing,smell,taste*

Category : Health and Allied Sciences

**1119 KNOWLEDGE ON THE OVER-THE-COUNTER MEDICATION USAGE FOR PAIN MANAGEMENT
AMONG THE SELECTED URBAN AREA POPULATION#**

Aye Mya Mya, Basic Medical Sciences, Kulliyah of Nursing
Syamsul Ahmad Arifin, Basic Medical Sciences, Kulliyah of Nursing
Nurul Syanzana binti Abdul Razak, Basic Medical Sciences, Kulliyah of Nursing

Exhibitor : Aye Mya Mya, Basic Medical Sciences, Kulliyah of Nursing

Aim: This is a report of the study conducted to survey the knowledge of self-medication usage regarding the pain management among the selected population of the urban area. **Methods:** It is a cross-sectional quantitative study. A set of questionnaire was administered to 360 respondents at Ampang Jaya, Selangor, Malaysia. The demographic distribution was measured by descriptive statistics. Kruskal-Wallis test and Mann-Whitney test are used to measure the association between self-medication knowledge and demographic data, and of significant values. **Findings:** More than three quarter of the participants have good knowledge of the self-medication usage for pain and less than one quarter of them have poor knowledge. The gender, education level and occupation displayed significant association with self-medication knowledge. **Conclusion:** This report supports the evidence that the public in Ampang area has a good understanding of over-the-counter medication usage for pain management

Keywords : *Self-medication, knowledge, pain, urban area*

Category : Health and Allied Sciences

1124 ALPHA-MANGOSTIN-CHITOSAN/PLGA NANOPARTICLES AS COMPOSITE NANO-CARRIER SYSTEM FOR NOVEL DELIVERY OF ANTICANCER#

Aimen Abdo Elsaid Ali, *Pharmaceutical Technology, Kulliyah of Pharmacy*

Muhammad Taher, *Pharmaceutical Technology, Kulliyah of Pharmacy*

Farahidah Mohamed, *Pharmaceutical Technology, Kulliyah of Pharmacy*

Exhibitor : Farahidah Mohamed, Pharmaceutical Technology, Kulliyah of Pharmacy

Alpha-mangostin (AM), isolated from the stem bark of *Garcinia malaccensis* has been documented to exert cytotoxic activities against many cancer cell lines. Due to its non-selective bio-distribution, this study had attempted to encapsulate the AM into biodegradable PLGA copolymer using colloidal extraction solvent evaporation method. The polysaccharide, chitosan was incorporated in the PLGA during encapsulation of AM to improve their affinity towards lung cancer cells. The resultant nanoparticles were characterized for their particle size and external morphology by scanning electron microscope (SEM). The surface charge of the lyophilized nanoparticles was evaluated by measuring their electrophoretic mobility, based on a combination of laser Doppler velocimetry and phase analysis laser scattering techniques. The concentration of entrapped AM was determined by RP-HPLC analytical method. Our data demonstrated that the encapsulation efficiency for alpha-mangostin-loaded-chitosan/PLGA nanoparticles (CM-NP) was higher than those without chitosan (M-NP). The in vitro release profile of AM from (CM-NP) and (M-NP) was carried out in PBS containing 0.1% tween 80 over four weeks. Cytotoxicity effect was evaluated against lung cancer cell line (A549). Our data revealed that (CM-NP) showed higher cytotoxic effect compared to (M-NP). In conclusion, PLGA nanoparticles in combination with chitosan may be used as a promising nano-composite to deliver AM to the tumour site.

Keywords : anticancer; nanoparticle; alpha-mangostin; PLGA

Category : Health and Allied Sciences

**1125 THE CORRELATION BETWEEN SERUM LEPTIN AND BLOOD PRESSURE VARIABILITY
AFTER EXPOSURE TO NOISE STRESS AT WORKPLACE#**

Muayad S.Rahma, *Basic Medical Sciences, Kulliyah of Dentistry*
Basma Ezzat Mustafa, *Basic Medical Sciences, Kulliyah of Dentistry*
Ailin Razali, , *Kulliyah of Medicine*
Niza Shamsuddin, *Community Medicine, Kulliyah of Medicine*

Exhibitor : Muayad S.Rahma, Basic Medical Sciences, Kulliyah of Dentistry

Aim Several epidemiologic studies have reported that exposure to noise is associated with cardiovascular disease. The aim of this study to investigate the correlation between the elevation of blood pressure and serum Leptin hormones due to the effects of noise at work place . Material and methods 40 male volunteers aged range between 20 to 45 years old who are exposed to environmental noise were involved in this study. We determined individual noise exposure by using a sound level meter to measure the intensity of the noise in the work area. We determined the Body Mass Index (BMI) by measuring the height and weight using standard measures. We measured the central blood pressure using Sphygmocor technology which is non-invasive measurement of central blood pressure, in addition to that we measured serum leptin by taking blood sample the quantitative measurement was performed using a leptin enzyme immunoassay. Results Spearman rank order correlation was used to examine the correlations between Blood pressure value (Systolic, Diastolic), Body Mass Index (BMI), Patients' age, and Leptin. All the relationships between parameters are positive correlation. Systolic values have a significant correlation with all parameters, while diastolic values have a significant correlation with all parameters except patients' age. Patients' age has a significant correlation with systolic and leptin value only. BMI has a significant positive correlation with blood pressure value. Leptin has significant correlation with blood pressure and patients' age. Conclusion High intensity noise may have negative impact to our biochemical parameters, especially in long continuous noise exposure setting.

Keywords : leptin hormone, systolic, diastolic blood pressure

Category : Health and Allied Sciences

1130 THE EFFECTS OF SERUM OF RUSSELL'S VIPER (DABOIA RUSSELI SIAMENSIS) ON SOME BIOLOGICAL PROPERTIES OF SNAKE VENOM.#

Khin Maung Maung, *Basic Medical Science, Kulliyah of Medicine*
Aye Kyaw, *Department of Medical Research (Lower Myanmar) Yangon, Myanmar.*

Exhibitor : Khin Maung Maung, Basic Medical Science, Kulliyah of Medicine

Studies disclosed the presence of neutralizing protein against snake venoms in the serum of some animals including snakes. Along this line of research several anti-snake venom proteins have been isolated from various animal sera, over half of which are from snake blood. However, effect of serum of Russell's viper on some common snakes of Myanmar had never been studied. Thus, the present research was conducted. The immunodiffusion test of Russell's viper (*Daboia russeli siamensis*) venom (RVV), Anti-snake venom serum against RVV and the serum of Russell's viper showed no precipitin lines between the serum and RVV. Phospholipase A2 enzymes of RVV, Cobra (*Naja kaouthai*), Branded krait (*Bangarus fasciatus*) and Myanmar green snake (*Trimeresurus graminus*) were inhibited by the serum. The hemorrhagic actions of RVV, Cobra venom and Myanmar green snake venom were found to be inhibited by the serum. When RVV (2.5 LD50) was mixed with the serum and injected intramuscularly into the mice, some of the mice do not die. These experiments showed that the serum can inhibit the PLA2 enzyme activity of the snake venom tested. The serum can neutralized the hemorrhagic actions of venoms tested and can also neutralized lethal action of RVV. Antigen antibody reaction was not the mechanism for these inhibitory and neutralization actions.

Keywords : *snake venom serum of snake*

Category : Health and Allied Sciences

1137 **THE IN VITRO AND IN VIVO CHONDROGENESIS OF BONE MARROW
MESENCHYMAL STEM CELLS#**

Hamoud Alfaqeh, *Basic Medical Sciences, Kulliyah of Dentistry*

Kienhui Chua, *Physiology,*

Ruszymah Idrus, *Physiology,*

Exhibitor : Hamoud Alfaqeh, Basic Medical Sciences, Kulliyah of Dentistry

Objectives:This study aimed to determine the in vitro and in vivo chondrogenesis potential of bone marrow mesenchymal stem cells. **Methods:** Ten ml bone marrow was aspirated from sheep iliac crest. BMSCs were isolated, cultured in equal volume mix of Ham's F-12 medium and Dulbecco's Modified Eagle Medium (DMEM) added with 10% fetal bovine serum (FBS). When the culture reached confluence, BMSC were trypsinized and divided equally into two groups with 3×10^6 cells in each group. First group was cultured in basal medium (DMEM +10% FBS), second group was cultured in chondrogenic medium containing 5ng/ml TGF β 3 + 50ng/ml IGF-1 + 40ng/ml L-proline + 100nM Dexamethasone + 50 μ g/ml ascorbic acid-2 phosphate. Culture was maintained at 37 oC in a humidified atmosphere containing 5% CO₂. Medium was replaced twice a week for 3 weeks. After 21 days, BMSCs were trypsinized, cell pellet was constructed using 0.5ml sheep plasma and 30 μ l 1M CaCl₂. The constructs were implanted subcutaneously into nude mice. Five weeks post implant, the mice were sacrificed, and the implanted tissues were harvested and fixed in 10 % formalin. The tissues were then imbedded in paraffin, cut into 5 μ m thickness and stained with safranin O staining. **Results:** In vitro chondrogenesis: Cell aggregates were formed as early as the first week of culture in the chondrogenic medium when observed under the phase-contrast microscope. On day 14 of culture, BMSCs were cultured in DMEM+10% FBS alone formed dense monolayer cells with no cell aggregation was detected (Fig.1A). Chondrogenic medium however showed numerous of cell aggregates (Fig1B). Constructs from the two groups had same jell-like texture and appearance (1C). In vivo chondrogenesis: After 5 weeks of BMSCs implant, the implanted construct appeared small in size (2A, 2B), smooth shiny surface and has cartilage appearance (Fig 2C). Histological sections of the tissues formed with BMSCs cultured in DMEM + 10 % FBS medium was scored only 3.35 ± 0.9 % (n=10) when stained by safranin O. (Fig. 3 graph & 2D) Whereas tissues formed with BMSCs cultured in chondrogenic medium scored $68.8\% \pm 0.12$ area of positive staining with Safranin O. (n=10) (Fig. 3 chart & 2E). **Conclusion:** Our finding demonstrated that Bone marrow mesenchymal stem cells has in vitro and in vivo chondrogenesis when cultured with specific medium comparable to stem cells cultured with basal medium (control).

Keywords : *Stem cells, Chondrogenesis, Growth factors, Cartilage, Bone marrow, safranin O*

Category : Health and Allied Sciences

1138 THE IMPACT OF NOVEL SILANE PRIMERS ON THE SHEAR BOND STRENGTH OF ORTHO-BRACKETS#

Ammar Mustafa, *Dental Materials, Kulliyah of Dentistry*

Jukka Matinlinna, *Dental Materials,*

Akbar Sham Hussin, *Orthodontics, Kulliyah of Dentistry*

Aziz Razak, *Restorative Dentistry,*

Exhibitor : Ammar Mustafa, Dental Materials, Kulliyah of Dentistry

To test the effect of four types of experimental silane coupling agents (OIWA 5-8) on penetration depth of bonding agents into dentinal tubules, Cl. II cavities (n=150) were prepared on sound premolar teeth. The preparation was chosen to simulate the clinical procedure for ideal cavity preparation. • The specimens were divided into two test groups (n=60 each) and a control group (n=30) both test groups were subdivided into four groups (n=15). The first group A-1 was primed with (OIWA5), the second group B-1 was primed with (OIWA6), group three C-1 was primed with (OIWA7), whereas group four D-1 was primed with (OIWA8). All the groups were subjected to thermocycling (6000 cycles, 5°C to 55°C). The not-thermocycled test group was subdivided into four subgroups A-2, B-2, C-2 and D-2. • Control group was prepared with the same steps but with no addition of primer solution. The control group was subdivided into two groups (n=15). The first group was thermocycled while the second group was not thermocycled. The specimens were sectioned longitudinally and tested under scan electron microscopy (EVO 50, ZEISS Germany) to evaluate the penetration depth of the bonding agent. • Obtained results showed significant difference (<0.05) between the thermocycled group and the control group in terms of bonding agent depth penetration into the dentinal tubules. Whereas there was no significant difference between the thermocycled and the non-thermocycled groups (p>0.05). • It was concluded that OIWA 5-8 novel silane coupling agents could promote adhesion capability of the bonding agents that could enhance micromechanical attachment of composite materials to tooth structure.

Keywords : *Silane primers, shear bond strength, orthodontic brackets, restorative materials*

Category : Health and Allied Sciences

1139 MANAGEMENT OF FLABBY RESIDUAL RIDGE WITH SEVERE RESORPTION IN GERIATRIC PATIENTS USING HOLLOW CUSTOM TRAY (2-YEAR CLINICAL STUDY)#

Ammar Mustafa, Prosthetic Dentistry, Kulliyah of Dentistry

Exhibitor : Ammar Mustafa, Prosthetic Dentistry, Kulliyah of Dentistry

This two-year clinical study describes a technique for making a definitive impression for highly displaceable residual ridges. The technique is applicable for both maxillary and mandibular edentulous ridges. Special design of custom tray was investigated to achieve stability for complete dentures in geriatric patients with flabby and resorbed mandibular residual ridge with a main objective to achieve stable and retentive complete denture with long-term functional service. The use of this technique helps in registering the physiologic and anatomic form of the denture bearing areas without tissue displacement. Stable dentures could enhance the tonic strength of the masticatory muscles in elderly patients which could improve essential diet intake for this age group.

Keywords : *flabby ridge, resorbed ridge, impression technique, custom tray*

Category : Health and Allied Sciences

1141

**SOCIODEMOGRAPHIC FACTORS, SOCIAL SUPPORT AND RISK OF
POSTPARTUM DEPRESSION (PPD) AMONG POSTPARTUM WOMEN AT
HOSPITAL SULTAN HAJI AHMAD SHAH, TEMERLOH.#**

siti roshaidai mohd arifin, *Special Care Nursing, Kulliyah of Nursing*
fauzan mohamed, -, *Kulliyah of Nursing*

Exhibitor : siti roshaidai mohd arifin, Special Care Nursing, Kulliyah of Nursing

Introduction: In the year 2000, about 200,000 women aged between 18–44 years were discharged with a diagnosis of depression. Postpartum depression (PPD) occurs in more than 15% of all women who given birth worldwide but is believed to be extensively under diagnosed. Objective: The general objectives of this study were to explore the sociodemographics factor, social support and risk of PPD among postpartum women at HoSHAS. The factors studies were the relationship between sociodemographic and risk of PPD as well as social support and risk of PPD. Methodology: Convenience sampling method was used to select the sample. Hundred forty two respondents were involved in this study. Data collected by using self administered questionnaire adapted from Edinburgh Postpartum Depression Scale (EPDS) and Maternity Social Support Scale (MSSS). The data had been analyzed using PASW version 18.0 in term of descriptive data, independent t-test and chi square test. Results: The results showed that the prevalence of PPD in HoSHAS was 37.3%. There was no significant between sociodemographic and risk of PPD and there was a significant between social support and risk of PPD among postpartum women at HoSHAS. Conclusion: Women received inadequate social support tends to develop PPD in the future. Healthcare setting also must be prepared to face with these women problematic due to increasing number of prevalence from time to time.

Keywords : *Prevalence, Sociodemographic, Social Support, Postpartum Depression.*

Category : Health and Allied Sciences

1148

HALALAN TOYYIBAN PAINKILLER FOR VEGETARIAN#

Anas Abdillah Hazim, *IKOP Sdn. Bhd., Kulliyah of Pharmacy*

Mohamed Awang, *Pharmaceutical Technology, Kulliyah of Pharmacy*

Farahidah Mohamed, *IKOP Sdn. Bhd. and Pharmaceutical Technology Department, Kulliyah of Pharmacy*

Exhibitor : Farahidah Mohamed, IKOP Sdn. Bhd. and Pharmaceutical Technology Department, Kulliyah of Pharmacy

This study was done to prepare halal toyyiban painkiller. The painkiller used here was a non-steroidal anti-inflammatory drug (NSAID), mefenamic acid. All raw materials used had been certified halal including the capsule shells. We also compared the in vitro performance of hard bovine gelatin capsule (BC) and hard vegetable capsules (VC). While vegetable capsules are known to be 100% safe, it is clear that a scientific data should be established with regard to its pharmaceutical performance, safety and stability when use to encapsulate small drug molecules such as mefenamic acid. The drug and relevant excipients were encapsulated into the two types of capsule using automated high speed capsule filling machine under cGMP environment (providing the 'toyyiban' aspect). Several parameters including assay of content, dissolution test and microbial test were evaluated as a function of capsules performance. All the parameters tested followed the specification of United States Pharmacopoeia (USP). The capsules were stored in a stability chamber with a controlled condition of 40°C and relative humidity of 75% for one month. The results showed that the assay and dissolution of both types of capsules were consistent throughout the study period (1 month) with no microbial growth. The results demonstrated that the in vitro performance of vegetable capsule was comparable to the hard bovine gelatin capsule which suggests that vegetable capsule could be a promising alternative dosage form. This study suggested that an alternative painkiller to vegetarian is also possible.

Keywords : vegetable capsules, painkiller, cGMP

Category : Health and Allied Sciences

1149 THE EFFECTS OF STIMULUS REPETITION RATE AND MODE OF RECORDING TO TEOAE RESULTS#

Ahmad Aidil Arafat Dzulkarnain, *Audiology and Speech Language Pathology, Kulliyah of Allied Health Sciences*
Norsyazana Sahal, *Audiology and Speech Language Pathology, Kulliyah of Allied Health Sciences*
Nur 'Azzah Zakaria, *Audiology and Speech Language Pathology, Kulliyah of Allied Health Sciences*

Exhibitor : Ahmad Aidil Arafat Dzulkarnain, Audiology and Speech Language Pathology, Kulliyah of Allied Health Sciences

Transient evoked otoacoustic emissions (TEOAE) is one of the useful objective tests to measure the integrity of outer hair cells and has been widely used clinically. Despite its successful, the TEOAE has several limitations and one of the problems that will be addressed in this study is the interaction of test time and highly background noise to the recording. The TEOAE is susceptible to the physiological noise activities especially in children thus it is important to ensure that the recording is done quickly by presenting the stimulus more rapidly and testing both ears simultaneously (using alternating mode). This study aimed to compare TEOAE absolute amplitude and signal-to-noise ratio (SNR) results between monaural and binaural mode using standard and high rate in normal hearing subject. Thirty six normal hearing subjects (13 male and 23 female) with the mean age of 23.2 ± 1.2 year old were involved in this quasi experimental study. Prior to the testing, subjects underwent otoscopic examination, tympanometry and pure tone audiometry tests to ensure they fulfilled the inclusion criteria. Upon completing the preliminary assessments, TEOAE was conducted to each subject using 84dB pe SPL biphasic clicks stimulus with 260 trains using both monaural and binaural mode at 80 and 50 clicks per seconds. Next, the TEOAE absolute amplitude and SNR for monaural and binaural TEOAE at the same ear was analyzed and compared using RM ANOVA (95% confidence level) at each of the frequencies (1, 1.4, 2, 2.8 and 4 kHz) in both rates. RM ANOVA analysis revealed that there was no significant difference ($p > 0.05$) between monaural and binaural TEOAE absolute amplitude on the same ear in all frequencies and both rates. In addition, there was no significant different ($p > 0.05$) in monaural and binaural TEOAE SNR values on the same ear in all frequencies except for SNR at 1kHz and 1.4 kHz in standard rate and 1 kHz in high rate where the SNR values of monaural recording is considerably higher. In general, this study concluded that both mode of recording have similar and reliable results in both rates and therefore either mode of recordings can be used clinically.

Keywords : *Transient Evoked Otoacoustic Emissions, High Rate, binaural recording*

Category : Health and Allied Sciences

1151 INNOVATIVE HALAL HIGH CALORIE SUPPLEMENT FROM FUNCTIONAL FOOD#

NORAZLANSHAH HAZALI, *NUTRITION SCIENCES, Kulliyah of Allied Health Sciences*

Exhibitor : NORAZLANSHAH HAZALI, Nutrition Sciences, Kulliyah of Allied Health Sciences

Achieving enough calorie and nutritional status is utmost important for survival of life. Nowadays, with the advancement of science and nutritional breakthrough, there are lots of methods can be applied to optimize energy and nutritional requirement. One of the approaches is through utilization and modification of functional foods available locally. Some of these functional foods are high in calorie and nutrient dense. Therefore, the aim of the research was to develop simple formulations of healthy high calorie beverages derived from functional foods. Secondly, this research also aims to determine the people acceptance of these newly develop formulations. Thirdly, it is intended in this study to make comparison with available commercial product. Four formulations with different main ingredients were evaluated. The formulations were subjected to macronutrients analysis and sensory evaluation for measurement of the acceptability. The main sensory properties such as appearance, aroma, consistency, colour, after taste, and overall acceptance were evaluated by a nine point of Hedonic scale used to determine the degree of acceptance. Nutritionist pro's software was used to make comparison among all formulations. Based on the analysis performed, control formulation shown the densest calorie for one serving which equivalent to 360 kcal/serving followed by F2, F3, and F1 formulations. Among experimental group, the finest formulation was F3 in term of acceptability and calorie content. From this research, it indicated the development of high calorie is possible through modification of functional foods.

Keywords : *Innovative, Halal, High Calorie, Supplement, Functional Food.*

Category : Health and Allied Sciences

1152 REPRODUCTIVE MEDICINE: INFERTILITY IN YEMEN, CAUSES, DIAGNOSIS AND OUTCOME OF ASSISTED REPRODUCTIVE TREATMENT.#

Ahmed Kaid Allow, *BMS, Kulliyah of Medicine*
Muna kh. Al-kubaisi, *Obs and gyne, Kulliyah of Medicine*

Exhibitor : Ahmed Kaid Allow, Basic Medical Sciences, Kulliyah of Medicine

Title: Reproductive Medicine: Infertility in Yemen, causes, diagnosis and outcome of assisted reproductive treatment. *Ahmed K. Allow, Muna kh. Al-kubaisi Bracamonte M. Saad Mohammed *BMS, KOM, IIUM
Reproductive medicine: is a branch of medicine that deals with prevention, diagnosis and management of reproductive problems; goals include improving or maintaining normal reproductive health and allowing people to have children at a time of their choosing. The objectives of the present prospective study was to review the infertility in Yemen as a part of reproductive medicine and to study the causes of male and female infertility as well as survey the outcome of assisted reproductive treatments. Subjects and Methods: Two thousand sex hundred and twenty two infertile couples (attending Allow IVF Center Sana'a Yemen) had been involved in the present study in the period from September 2007 to September 2011. A total of 1571 cycles were monitored according to the type of protocol and kind of assisted reproductive techniques which will use for the appropriate couple. Three different protocols had been used and it includes the following protocols: 1-clomiphine citrate; 2- tamoxiphine; and 3- administration of gonadotrophin injections of highly purified folliculo-stimulating hormone (FSH-HP). Four ART which includes: Intrauterine insemination-IUI; IVF+ET; ICSI+ET; and ovulation induction by FSH-HP plus or without programming intercourse (PI). Results The present study showed that 65.52% (1718/2622) of the couples have primary infertility, Fig 1. Seventy three per cent of infertile couples had duration of infertility less than or equal to 5 years (1902/2622), 19% have >5 to 10 years duration (502/2622) and only 8% of the couples had duration of infertility more than 10 years (208/2622), Fig 2. Approximately, (37.45%) (982/2622) of couples suffering from male factor of infertility and 26.62% (698/2622) had suffered from female factor of infertility, Fig 3. The major causes of male infertility is asthenospermia and seminal fluid infection plus sperm agglutination (25.15% and 17.52%, respectively) and low volume of semen (169/982 ; 17.21%), table 1. The major causes of female infertility had been documented as hyperprolactinemia (40.69%), polycystic ovarian syndrome (28%) and anovulation with luteal phase deficiency (22.49%), table 2. The higher pregnancy , live birth rates had been recorded in the protocol 3 (gonadotrophin injection) versus protocol 2 and 1 respectively. Conclusion The present study concluded that the common causes of infertility in Yemen are associated with chewing Qat and an increase in the percentage of polycystic ovarian syndrome among Yemeni infertile women is might be need to further investigation and follow up of these infertile women.

Keywords : Infertility-Yemen-Pregnancy and Live birth rates

Category : Health and Allied Sciences

1153 VERBAL ABUSE AND ITS ASSOCIATED FACTORS AMONG NURSING STUDENTS DURING CLINICAL POSTING IN HOSPITAL UNIVERSITI SAINS MALAYSIA#

Wan Hasliza Wan Mamat, *Basic Medical Sciences for Nursing, Kulliyyah of Nursing*

Exhibitor : Wan Hasliza Wan Mamat, Basic Medical Sciences for Nursing, Kulliyyah of Nursing

Verbal abuse is very common all over the world. It is one of the workplace violence forms that leaves no visible scars, but causes an emotional damage to the victim. Health staff has high risk of being subjected to verbal abuse and similar risks had been faced by nursing students because they worked in the same kind of work environments. The aims of this study were to determine the proportion of verbal abuse and its associated factors among nursing students during clinical placement in Hospital Universiti Sains Malaysia (HUSM). This was the cross – sectional study of 180 nursing students who were studying in year two until year four and had gone through clinical posting in HUSM for a minimum of five months. The students were asked to answer the questionnaire regarding verbal abuse that they had experienced six months prior to the study. Multiple Logistic Regression analysis was applied. The majority of students were Malay, female and studied in diploma of nursing. Finding revealed approximately 37.2% (95% CI 30.1, 44.4) of nursing students had experienced verbal abuse while working in the hospital. Most of the perpetrators were nurses (22.5%) and doctors (21.5%). However, 81.3% of students accepted the incidents as a normal part of work. Female students (OR 2.8, 95% CI 1.24, 6.38, p-value = 0.013) and no social support from lecturers (OR 3.2, 95% CI 1.59, 6.36, p-value = 0.001) were significant factors that associated with verbal abuse among nursing students. This study showed that verbal abuse had occurred towards nursing students during clinical posting. This finding showed the need for immediate plan and action for dealing with verbal abuse in hospital setting.

Keywords : *Verbal abuse, nursing student, clinical posting, HUSM*

Category : Health and Allied Sciences

1154 **PERSONAL CONTROL RELATED TO CHILDBIRTH SATISFACTION AMONG POSTPARTUM MOTHERS IN HOSPITAL TENGKU AMPUAN AFZAN (HTAA)#**

Siti Roshaidai Mohd Arifin, *Special Care Nursing, Kulliyah of Nursing*
Nor Ashikin Addenan, ,

Exhibitor : Siti Roshaidai Mohd Arifin, Special Care Nursing, Kulliyah of Nursing

Introduction: Personal control is defined as an ability of woman to control of herself during the childbirth process. It is one of the factors related to childbirth satisfaction. Childbirth satisfaction is the parameters that are used to measure health outcomes. Therefore, mothers should have high personal control to have more childbirth satisfaction during delivery of baby. Objectives: The objective of this study is to explore the relationship between personal control and childbirth satisfaction among postpartum mothers. Material and methods: This is a cross-sectional study using convenience sampling conducted on 102 postpartum mothers at postpartum ward at HTAA. The data has been analyzed by using Portable Analysis Statistics Windows (PASW) version 18. Descriptive statistic is used to measure the personal control and childbirth satisfaction. Correlation test and t-test are used to test the socio-demographic data with personal control and childbirth satisfaction. Results: It was found that mean total score for personal control was 52.56 [SD = 10.693, min max (29, 70)], mean total childbirth satisfaction score was 140.06 [SD = 17.109, min max (89, 170)]. There was no significant association between socio-demographic factors with personal control and childbirth satisfaction. It was significantly related between personal control and childbirth satisfaction ($r = .373$, $p = 0.00$). Conclusion: There was no significant associations between socio-demographic factors with personal control and childbirth satisfaction. However, there was relationship between personal control and childbirth satisfaction.

Keywords : *Personal control, childbirth satisfaction, post-partum mothers, socio demographic.*

Category : Health and Allied Sciences

1155 THE EFFECTS OF PROLONGATION OF VARIOUS SUPPRESSOR TONES TO TEOAE SUPPRESSION#

Ahmad Aidil Arafat Dzulkarnain, *Audiology and Speech Language Pathology, Kulliyah of Allied Health Sciences*
Nur Izzati Mohd Nawawi, *Audiology and Speech Language Pathology, Kulliyah of Allied Health Sciences*
Nurul Syarida Mohd Sakeri, *Audiology and Speech Language Pathology, Kulliyah of Allied Health Sciences*

Exhibitor : Ahmad Aidil Arafat Dzulkarnain, Audiology and Speech Language Pathology, Kulliyah of Allied Health Sciences

Otoacoustic emission (OAE) suppression is an objective and non-invasive clinical test that has been used to study the efferent central auditory nervous system pathways. The major aim of this study was to compare the suppression of Transient Evoked Otoacoustic Emission (TEOAE) recorded using different suppressor tones that were prolonged in duration at various intervals. Fifty normal hearing adult's subjects (23.04 ± 1.30 year old) (with total of 100 ears) were involved in this study. Qualified subjects undergone TEOAE test using 100 microseconds monophasic clicks (at 84 dBpe SPL) at 5 different phases: (i) baseline with no suppressor at contralateral ear, (ii) TEOAE suppression with suppressor at contralateral ear after 1 minutes, (iii) TEOAE suppression with suppressor at contralateral ear after 3 minutes, (iv) TEOAE suppression with suppressor at contralateral ear after 5 minutes and (v) TEOAE post-noise exposure recording. Two types of suppressor were used in this study; (i) 65 dB SPL narrowband noise (NBN) and (ii) 65 dB SPL warble tone (WB) at 1 kHz. Results showed that the NBN and WB tones gave an average suppression of 0.845 ± 1.4 dB and 0.448 ± 2.1 dB respectively from the baseline to 1 minute of noise exposure. This value however is smaller as compared to at least a minimum of 1 dB SPL suppression when using white noise (Collet, 1993). In addition, Repeated Measure ANOVA (RM ANOVA) analysis at 95% confidence level showed that the TEOAE amplitude was significantly reduced ($p < 0.05$) as the duration of NBN masker increased, however there was no significant changes ($p > 0.05$) in the TEOAE amplitude at different phases while using WB tone. Again, this result was not consistent with the 1-4 dB reduction of TEOAE suppression using white noise (Berlin et al., 1994, Collet et al., 1992, Veuille et al., 1992). The differences in our average suppression value as well as the effect of prolongation of suppressor tones with the literatures might be due to the wide frequency spectrum in white noise masker (20 to 20 000 Hz) which enable them to inhibit majority of the OHC, thus suppress the majority of OAE energy. Next, the TEOAE absolute amplitude in post noise exposure was compared using paired t-test. The results revealed that the TEOAE amplitude was significantly higher ($p > 0.05$) in post noise exposure compared to the baseline recording which indicates increased of outer hair cells sensitivity after prolonged contralateral noise exposure (Zyl A et al., 2008). In general, this study concluded that the NBN and WBN have the same effect as white noise suppressor when the duration of the suppressor tone is increased, thus this study should be expanded to pathological populations to see if there is clinical values behind it.

Keywords : *Transient Evoked Otoacoustic Emissions, suppression TEOAE*

Category : Health and Allied Sciences

1161 THE EFFECT OF INFORMATION NEEDS' PROGRAM ON ANXIETY AMONG FAMILY MEMBERS IN AN INTENSIVE CARE UNIT.#

Noor Azizah Mohd Ali, *Critical Care Nursing, Kulliyah of Nursing*

Exhibitor : Noor Azizah Mohd Ali, Critical Care Nursing, Kulliyah of Nursing

Background: Admission or hospitalization of a relative to Intensive Care Unit (ICU) can result in many psychosocial problems such as anxiety and trigger perceived needs of patient and their family members. Critical care nurses play a vital role in identifying needs and help them by providing information in this crisis period to reduce anxiety level. Objective: To determine perceived needs of family members and examine the effect of information needs' program on anxiety level among family members of hospitalized relative in an Intensive Care Unit (ICU). Methods: A quantitative study; quasi- experimental with two non-randomised study groups, using a pre and post test design was carried out among family members whom their relative admitted to one adult general ICU. Convenience sampling of thirty- two participants from intervention and control group respectively were involved in this study. The study consists of a pre test measurement of State- Anxiety Inventory and perceived important needs using Critical Care Family Needs Inventory (CCFNI) of family members. It followed by the intervention of information needs' program at individual basis and post test measurement of the State- Anxiety on day three was done. Data analyses were descriptive and inferential statistics of paired sample t- test, independent- t-test and Chi- square test. Results: Support subscale of CCFNI reported the mean of 45.00 (SD± 8.27) followed by Proximity; 32.25 (SD±3.16). Information subscale perceived important by the participants at the third rank with mean 27.22 (SD± 3.22), Assurance; 26.14 (SD± 1.85) and the least important subscale was Comfort; 19.04 (SD± 2.84). There was a reduction in mean score of State- Anxiety pre and post period in intervention group; from 64.81 (SD±7.39) to 58.28 (SD±9.69). Increased in mean score of State- Anxiety was observed in control group with pre mean was 64.25 (SD±6.70) and post was 67.28 (SD±8.04). The information needs' program received by family members in intervention group has three times effective as compared to routine information given by staff nurses if any in control group. The result was statistically significant decrease in State- Anxiety scores from Pre (M= 64.81, SD± 7.39) to Post (M= 58.28, SD± 9.69, $t(31) = 5.52, p < 0.001$ with large effect size in intervention group. The result was not statistically significant increases in anxiety scores from Pre (M= 64.25, SD± 6.70) to post 67.28 (8.04), $t(31) = -1.89, p > 0.05$ (two-tailed) in control group. The mean increased in State- Anxiety score was -3.03 with small effect size. Conclusion: The findings highlighted the immediate perceived important needs by family members and the effectiveness of information needs' program in reducing acute stage of anxiety among family members in ICU. Therefore, recommendations from the study finding need to be considered by medical and nursing personals as well as an organization.

Keywords : *family members, perceived needs, anxiety, intensive care unit*

Category : Health and Allied Sciences

1165 PREVALENCE OF METABOLIC SYNDROME AND ITS COMPONENTS AMONG ADULTS IN GEBENG, KUANTAN (2012)#

Htike Myat Phyu, *Community Medicine, Kulliyah of Medicine*

Exhibitor : Htike Myat Phyu, Community Medicine, Kulliyah of Medicine

Background: Metabolic syndrome (MetS) is a group of risk factors associated with morbidity and mortality of non communicable disease such as Diabetes Mellitus and cardiovascular diseases. This study was conducted to measure the prevalence of MetS and its components among adults in Gebeng, Kuantan. Methods: A cross-sectional study was conducted during 2012. Houses in the villages were selected by stratified random sampling and adults between 18-59 years old in the houses were interviewed. Anthropometric measurements (weight, height, waist circumference), blood pressure, fasting blood glucose and lipid profile were taken to diagnose MetS according to Modified National Cholesterol Education Programme's Adult Treatment Panel III (NCEP ATP III) criteria definition. Results: Out of 217 adults, prevalence of Metabolic Syndrome was 35% (95%CI: 28.89 – 41.55) and about 80% of them having at least 1 component of five factors (95% CI: 73.48 – 84.27). The prevalence of respective components are as follow: central obesity was 63.1% (95%CI: 56.56 – 69.36), elevated blood pressure was 53.5% (95%CI: 46.79 – 60.03), impaired fasting blood glucose was 24% (95% CI: 18.64 – 29.98), hypertriglyceridemia was 25.8% (95% CI: 20.32 – 31.94), low HDL cholesterol was 21.7% (95% CI: 16.56 – 27.51). Among those diagnosed with Metabolic Syndrome by modified NCEP, 75% of them were more than 40 years old, 65.8% were female, 83% were current smokers, 96% were overweight (≥ 23 kg/m²). Conclusion: Prevalence of Metabolic syndrome is as high as Malaysian nationwide survey done in 2011 and prevalence of respondents having at least 1 out 5 components was alarmingly high. It is the high time of an effective intervention program needed for this population to reduce the complications of Metabolic Syndrome including diabetes and CVD which will become epidemic in the near future.

Keywords : Metabolic Syndrome, Prevalence

Category : Health and Allied Sciences

1166 **PREVALENCE OF METABOLIC SYNDROME AND ITS ASSOCIATION WITH
PHYSICAL ACTIVITY AMONG ADULTS IN KAMPUNG CHENGAL LEMPONG,
KUANTAN (2012)#**

Htike Myat Phyu, *Community Medicine, Kulliyah of Medicine*

Exhibitor : Htike Myat Phyu, Community Medicine, Kulliyah of Medicine

Background Metabolic syndrome (MetS) is a cluster of risk factors associated with morbidity and mortality of cardiovascular diseases. This study was conducted to measure the prevalence of MetS and its association with physical activity among adults in Kampung Chengal Lempong, Kuantan. Methods A cross-sectional study was conducted during 2012. Houses in the village were selected by stratified random sampling and adults between 18-64 years old in the houses were interviewed. Physical activity level was determined by Global Physical Activity Questionnaire-Malay Version (GPAQ-M). Blood pressure, anthropometric measurements, and blood investigation were done to diagnose MetS according to Modified National Cholesterol Education Programme's Adult Treatment Panel III (NCEP ATP III) criteria definition. Data were analysed by chi-square and multiple logistic regression tests. Results Out of 108 respondents, 23 (21.3%) had MetS, of which 87% were physically inactive. After adjusting the data for confounders (age, gender, smoking, socioeconomic status and body mass index), it was found that physically inactive group were at three times higher risk to develop MetS (adjusted OR=2.16, 95% CI=0.41-11.50) than physically active group. Conclusion Prevalence of MetS was lower when compared to a 2011 Malaysian nationwide survey. The association between MetS with physical activity was statistically insignificant.

Keywords : *Metabolic Syndrome and Physical activity*

Category : Health and Allied Sciences

1178 PRIMARY ORAL HEALTH CARE : REASONS FOR SEEKING TREATMENT FOR ORAL HEALTH PROBLEMS AT THREE PRIMARY CARE CLINICS OF KUANTAN, PAHANG, MALAYSIA#

Mohd Aznan Md Aris, *Family Medicine, Kulliyah of Medicine*
Tin Myo Han, *Community Dentistry, Kulliyah of Dentistry*
Robiatu Adawiyah Sulong, *Family Medicine, Kulliyah of Medicine*

Exhibitor : Mohd Aznan Md Aris, Family Medicine, Kulliyah of Medicine

Background: A limited oral health personnel who engage most in secondary care is one of the challenges to provide primary oral health care including oral health promotion and emergency care in primary care setting. In Malaysia-Myanmar comparative study (2012), a range of magnitude of oral health problems (OHPs) in primary care clinics was 1 to 6.5/1000/month. Reasons for seeking treatment for OHPs at primary care clinics may relate with awareness of the patients on oral health services. Objectives: To assess relationship between the reasons for taking treatment for oral health problems at primary care clinics and awareness of the patients on oral health care services nearby their residence. Methods: Total 77 patients with OHPs who attended at 3 primary care clinics - University Primary Care Clinic, International Islamic University, (IIUM-Kuantan Campus), Public Primary Care Clinic (KK Balok) and Private clinic (Polyclinic Ar Razi)- in Kuantan, Malaysia, participated willingly in the study from 1st April to 31st July 2012. A pre-tested structured questionnaire with open-ended questions was used to collect the data. A cross analysis was done between types of clinics and in terms of reasons for seeking treatment at primary care clinics and their awareness on oral health services nearby residence. Association between reason for seeking treatment at primary care clinics and awareness on oral health services was also analysed. Findings: Although, 56% of the reasons for seeking treatment for oral health problems at primary care clinics were non-specific answers same as reason for encounters, significant answers reflecting nature of primary care practices such as easily accessibility to primary care clinics (17%), preferring to and requiring services provided by primary care physicians because of co-morbidity with medical diseases (12%) and getting emergency services (5%) were noticed. A significant differences ($p < 0.05$) between the patients from 3 primary care clinics and their awareness on existing dental clinic, types of dental clinics and clinic opening hours and day was found; but it was not significant ($p > 0.05$) in knowing dentists and dental nurses. The association between the reasons for seeking treatment for OHPs at primary care clinics and awareness of the oral health services was not statistically significant ($p > 0.05$). Conclusion: This study indicated that primary care physicians may play one of key partners for oral health promotion, prevention & emergency oral health care because of co-morbidities with medical diseases and nature of practices. Activities to promote awareness on oral health services and coordinated care between primary care physicians and oral health practitioners should be promoted to provide holistic care to the patients.

Keywords : *Oral Health Problems, Reasons for Seeking Treatment, Primary Care Clinics*

Category : Health and Allied Sciences

1184 HAEMOGLOBIN LEVEL IN PATIENTS WITH RECURRENT ORAL ULCERATION ATTENDING KOD, IIUM#

BASMA AL-AHMAD, *BMS, Kulliyah of Dentistry*
MUHANNAD KASHMOOLA, *ORAL MEDICINE, ORAL PATHOLOGY, Kulliyah of Dentistry*
Noor Lide Abu Kassim, *Kulliyah of Dentistry*

Exhibitor : BASMA AL-AHMAD, Basic Medical Sciences, Kulliyah of Dentistry

Objective:. Recurrent oral ulceration is a common chief complaint of patients coming to oral medicine clinic Kulliyah of Dentistry, International Islamic University of Malaysia (IIUM) . Recurrent oral ulceration is a term used to describe small mouth ulcers which typically last a few days but come back every few weeks or months. They affect the tongue, lips and cheeks, but any part of the mouth can get ulcers. About two in every three people will have been affected with recurrent oral ulceration at some time in their lives. The relation between ROU and Hb is still controversial , Some previous studies suggested that Hb deficiency may play a role in the pathogenesis of ROU , The aim of this research is to study the relation between Hb status in patients with recurrent oral ulceration by measuring the haemoglobin level. Materials and method: this research is a cross-sectional study comprises of fifty patients presented with recurrent oral ulcers referred to oral medicine clinic, haemoglobin level was measured by using haemoglobinometer; (Hemocue Hb 201+). Results: According to our study, most of the patients with recurrent oral ulcerations have significantly low haemoglobin level ($P=0.001$). Conclusion: This study shows high relation between recurrent oral ulceration and haemoglobin level. However,for further studies full haematologic investigations, longitudinal studies of large groups and long-term observation are required

Keywords : Haemoglobin level, recurrent oral ulcer, anaemia

Category : Health and Allied Sciences

1186 A PRELIMINARY ASSESSMENT ON MAGNITUDE OF ORAL HEALTH PROBLEMS AMONG FIVE SELECTED PRIMARY CARE CLINICS OF MALAYSIA AND MYANMAR IN 2012#

Tin Myo Han, *Community Dentistry Department, Kulliyah of Dentistry*
Dr Mohd Aznan Md Aris, *Family Medicine Department, Kulliyah of Medicine*
Robiatu Adawiah Sulong, *Family Medicine Department, Kulliyah of Medicine*

Exhibitor : Tin Myo Han, Community Dentistry Department, Kulliyah of Dentistry

Background: There is growing evidence that oral health is related to local and systemic diseases by sharing common risk factors¹. Although, oral health has long been overlooked in the medical community², electronic medical records study in 2011 found that 1.2% of all encounters of the University Primary Care Clinic were oral diseases³. The first point of contact for patients with Primary Care Physicians (PCPs) can facilitate preventive dental care through timely referrals to dental profession⁴. Objectives: To assess the oral health concern of general/family medicine practices which may be used to set primary and emergency oral health care training for primary care physicians Methods: A uniform structured format was used to collect total number of patients and the patients with oral health problems (OHPs) who attended at the selected 3 primary care clinics of Kuantan, Malaysia (a private, a public and a University clinic) and two private clinics of Myanmar (one from Yangon (City) and one from Hninthada District within 1st April, 2012 to 31st July 2012). A cross-analysis was done between demographic data, reason for encounter (RFE) and the countries under study. Findings: In Malaysia, range of proportion of oral health problem (OHP) per month among the 3 primary care clinics was from 4.2 to 25.7 per 1000 patients/month. That of two Myanmar private clinics was from 3.6 to 11.6 per 1000 patients/month. Although, age group differences- the younger age group more in Malaysia and the older age group more in Myanmar was seen, there was no gender differences. Although the common OHP in both countries were more or less same -dental caries, periodontal diseases, oral ulcer, hand-foot mouth disease (HFMD); and co-morbidity with medical diseases were more in Myanmar than in Malaysia. Discussion and conclusion: This study confirms that Oral Health Problem is an important health issue in reason for encounter of primary care practices. It is recommend that all primary care physicians be more aware of oral health problems and if necessary be made part of the training as a primary care physician.

Keywords : *Magnitude, Oral Health Problems, Primary Care Clinics, Kuantan, Malaysia , Myanmar*

Category : Health and Allied Sciences

**1188 ASSESSMENT OF BLOOD GLUCOSE LEVEL BEFORE AND AFTER TOOTH EXTRACTION
AMONG THE PATIENT IN KULLIYAH OF DENTISTRY IIUM#**

BASMA AL-AHMAD, *BMS, Kulliyah of Dentistry*
Nazih Mustafa, *ORAL SURGERY, Kulliyah of Dentistry*
Noor Lide Abu Kassim, , *Kulliyah of Dentistry*

Exhibitor : BASMA AL-AHMAD, Basic Medical Sciences, Kulliyah of Dentistry

Objective: Several vital signs change during the procedure of tooth extraction, variations in plasma glucose levels during dental treatment have been the subject of study and controversy for several years. The aim of this study is to observe the extent to which blood glucose level measurements change in patients undergoing tooth extraction under local anesthesia. Material and Method: This is a cross sectional, descriptive and analytical study. 53 patients involved in this study to determine blood glucose level by using capillary blood glucometer. The data were collected and analyzed by using SPSS software Paired-T test. Result: the blood glucose level before and after tooth extraction values were $4.9 + 0.829$, $5.6 + 1.00$ respectively, which shows significant increase after the extraction, with higher increase in female than in male. Conclusion: Our results show that there were significant increases in blood glucose level after tooth extraction this may be due to that extraction is one of stress inducing factors; anxiety triggered by dental surgical treatment can induce the secretion of endogenous catecholamines which stimulates glycogenolysis with a consequent increase in the blood level of glucose. Gaining and understanding of these changes may also allow dentists to identify situations of increased risk and prevent emergency situations in clinical practice.

Keywords : blood glucose, stress, tooth extraction

Category : Health and Allied Sciences

**1192 KNOWLEDGE AND HYGIENE PRACTICE RELATED TO MENSTRUATION
AMONG ADOLESCENT GIRLS IN KUANTAN.#**

Haliza Hasan, , *Kulliyah of Nursing*
Nor Asyikin Mohd Nor, , *Kulliyah of Nursing*

Exhibitor : Haliza Hasan, , Kulliyah of Nursing

Introduction: Adolescents are a large and growing segment of the world's population. During adolescence, young people develop their adult identity, move toward physical and psychological maturity. Menstruation, the periodic vaginal bleeding that occurs with the shedding of the uterine mucosa is one of the signs of puberty, and occurs one or two years following appearance of secondary sexual characteristics. **Objectives:** This study aimed to assess the knowledge, hygiene practice and relationship between socio-demographic data with knowledge and hygiene practice **Methods:** This cross-sectional quantitative study. A set of self-administered bilingual questionnaire was distributed and answered by 292 students at SMK Sultan Abu Bakar and SMK (P) Methodist, Kuantan, Pahang. Descriptive Statistic is used to tabulate the demographic distribution. **Result:** Students were revealed moderate knowledge (55.1%) and bad hygiene practice (50.3%). This study showed significant relationship between age with knowledge and hygiene practice ($p < 0.001$). Whereas, there is no significant relationship between race and parents' education with knowledge and hygiene practice ($p > 0.05$) **Conclusion:** Moderate knowledge and bad hygiene practice quite similar to other previous studies. Age was showed significant relationship with knowledge and hygiene practice, race and hygiene practice showed no significant relationship with knowledge and hygiene practice.

Keywords : *Menstruation, Knowledge, Hygiene Practice, Adolescent, Girl*

Category : Health and Allied Sciences

1207 **ETHYL-P-METHOXYCINNAMATE (EPMC) EXTRACTED FROM KAEMPFERIA GALANGA (“CEKUR”) INDUCES CYTOTOXICITY AND ENHANCES CHEMOSENSITIVITY OF HUMAN LUNG CANCER CELLS TO DOXORUBICIN#**

Solachuddin Jauhari Arief Ichwan, *Basic Medical Sciences, Kulliyah of Dentistry*

Faridah Abdul Rasid, *Biotechnology, Kulliyah of Science*

Muhammad Nor Omar, *Biotechnology, Kulliyah of Science*

Muhammad Taher Bakhtiar, *Pharmaceutical Technology, Kulliyah of Pharmacy*

Exhibitor : Solachuddin Jauhari Arief Ichwan, Basic Medical Sciences, Kulliyah of Dentistry

Lung cancer is the leading cause of cancer deaths all over the world for several decades. The majority of the cases now occur in the developing countries including Malaysia. Lung cancers have been generally treated by a combination of surgery, radiation and chemotherapy. Unfortunately, the chemotherapy's efficiency is so far from satisfactory due to the side effects and to the resistance of tumor cells. Over the recent years, there has been growing interest in naturally occurring phytochemical compounds with chemotherapeutic potential, because they display very minimal side effects and selectively kill cancer cells, either as single or combination therapy. *Kaempferia galanga* (commonly known as “cekur”) is an aromatic ginger from the family of Zingiberaceas and cultivated throughout Southeast Asia. The rhizome of this plant is used as an herb in cooking in Indonesia and Malaysia. The rhizome extracts of *K. galanga* has been proven to have an anti-inflammatory, analgesic, nematocidal, mosquito repellent, vasorelaxant, sedative, antimicrobial, anti-oxidant, antiallergic and wound healing properties. Ethyl-p-methoxycinnamate (EPMC), the most abundant essential oil constituent of *K. galanga* has been shown to exhibit in vitro anti-neoplastic activities against several cancer cell lines. However, there is no available information on the effects of EPMC on human lung cancer cancers. Here, we report that the EPMC exhibited cytotoxicity against human A549 and H1299 lung cancer cells in a time and dose dependent manner as assessed by MTT assay. The scratch assay showed that EPMC inhibited the cancer cells migration. Moreover, EPMC treatment enhances chemosensitivity of both cancer cells to chemotherapeutic drug Doxorubicin as determined by Trypan blue exclusion test. Taken together, these results identify EPMC as a natural phytochemical worthy of further research for its anti-cancer activity to treat human lung cancers.

Keywords : *Ethyl-p-methoxycinnamate, Cekur, Lung Cancer, cytotoxic, chemotherapy, chemosensitivity*

Category : Health and Allied Sciences

1209 THE RELATIONSHIP OF PEER ASSESSMENT AND FINAL EXAMINATION IN MEDICINE#

Jamalludin Ab Rahman, *Community Medicine, Kulliyah of Medicine*
Niza Samsuddin, *Community Medicine, Kulliyah of Medicine*
Razman Mohd Rus, *Community Medicine, Kulliyah of Medicine*
Seikh Farid Uddin Akter, *Community Medicine, Kulliyah of Medicine*
Htike Myat Phyu, *Community Medicine, Kulliyah of Medicine*

Exhibitor : Jamalludin Ab Rahman, Community Medicine, Kulliyah of Medicine

Peer assessment measures inter-personal skill and such skill is important for medical students. Four batched of IIUM medical students from 2009-2012 were required to assess their peers. Four items questionnaire was used. Inter-items correlations were satisfactory. Five hundreds and two students first year medical students involved in the analysis. The correlation coefficient between peer assessment and final examination was 0.371 ($P < 0.001$) after adjusted for academic years. Peer assessment was proven to be useful in medical teaching.

Keywords : *peer assessment, medicine, students, correlation*

Category : Health and Allied Sciences

1210 THE AFFECT OF SPERM DNA FRAGMENTATION ON SPERM PARAMETERS IN MALAYSIAN MEN AT IIUM FERTILITY CENTRE#

Azantee Yazmie Abdul Wahab, *Obstetric and Gynecology, Kulliyah of Medicine*
Muhammad Lokman IM, , *Kulliyah of Nursing*

Exhibitor : Azantee Yazmie Abdul Wahab, Obstetric and Gynecology, Kulliyah of Medicine

INTRODUCTION Male factor is responsible for approximately 30% of the infertility cases. Sperm quality shown to decline worldwide including in Malaysia for almost all the infertility cases related to male factor. Most of the studies have shown that sperm DNA fragmentation are related to sperm parameters. Although conventional semen analysis could determine the quality of the sperm, these parameters are unable to reveal the sperm DNA defects. The aim of this study is to determine the correlation between the sperm DNA integrity and the sperm parameters. MATERIALS & METHODS A cohort study was conducted on 41 male patients (23 normozoospermia and 18 oligozoospermia) who seek fertility treatment at IIUM Fertility Centre from October 2011 until March 2012. Conventional semen analysis was performed on these patients according to World Health Organization (WHO), 1999 to determine the sperm parameters. Then, followed by the Acridine orange test (AOT) which was done on the same sample in order to analyze the sperm DNA integrity. RESULTS The DNA fragmentation Index (DFI) above 30% were 13 (56.5%) and 12 (66.7%) for normozoospermia and oligozoospermia patients respectively. The DFI of the normozoospermia men (N=23) was ranged from 0.9% to 85.3%. In the sperm parameters, DNA fragmentation have affected the sperm concentration, motility and morphology ($p<0.05$). CONCLUSIONS Our results have shown that there is a correlation between sperm DNA fragmentation and sperm parameters.

Keywords : *dna fragmentation, sperm parameter, oligozoospermia*

Category : Health and Allied Sciences

1212 **THE UPREGULATION OF IRS2 AND GLUT2 GENES IN RIN-5F PANCREATIC B-CELLS BY PLUCHEA INDICA (L.) EXTRACTS#**

Wastuti Hidayati Suriyah, *Basic Medical Sciences, Kulliyah of Pharmacy*
Abdul Razak K, *Basic Medical Sciences, Kulliyah of Pharmacy*
Mohamad Taher Bakhtiar, *Pharmaceutical Technology, Kulliyah of Pharmacy*
Solachuddin J.A. Ichwan, *Basic Health Sciences, Kulliyah of Dentistry*

Exhibitor : Abdul Razak K, Basic Medical Sciences, Kulliyah of Pharmacy

Pancreatic β -cell failure is known to be one of the main factors causing diabetes mellitus. This dysfunction is associated with decreased insulin secretion of β -cell secretory product. *P. indica* (beluntas) is growing natively in Malaysia and has been traditionally used as medicinal plant. In our previous findings, *P. indica* showed has a hypoglycemic effect in normal rats and increased glucose uptake in adipocytes. The lowering glucose mechanisms of *P. indica* extracts in this study were assessed by in vitro. This study aimed to analyze the selected gene expressions of insulin stimulating effect on *P. indica* extracts using RIN-5F pancreatic β -cells. *P. indica* leaves were dried and extracted consecutively in a series of organic solvents (n-hexane, dichloromethane, ethyl acetate, and methanol) and water extract. The maximum tolerated concentration of the extracts used in this study was 0.2 mg/ml as determined by MTT assay. The insulin release assay (ELISA) demonstrated that n-hexane and water extracts stimulated insulin secretion compared to control ($p < 0.05$). Moreover, the gene expression study by using qRT-PCR method showed that Insulin receptor substrate 2 (*Irs2*) and glucose-transporter *Glut2* mRNA expressions were markedly elevated in the hexane and water extracts treated pancreatic β -cells ($p < 0.05$). These findings confirmed the previous in vivo study on hypoglycemic effect of *P. indica* and indicated that *P. indica* has potential effect on diabetes management through its insulin secretagogues property.

Keywords : *diabetes mellitus, Pluchea Indica, RIN-5F pancreatic β -cell, insulin secretion, Irs2, Glut2, gene expression*

Category : Health and Allied Sciences

1221 **OVARIAN TUMOUR: COMPUTED TOMOGRAPHY (CT) CHARACTERISTICS WITH HISTOPATHOLOGICAL CORRELATION#**

Radhiana Hassan, *Radiology, Kulliyah of Medicine*

Azian Abdul Aziz, *Radiology, Kulliyah of Medicine*

Suhaiza Abdullah, *Obstetric and Gynaecology, Kulliyah of Medicine*

Ahmad Razali Md Ralib, *Radiology, Kulliyah of Medicine*

Exhibitor : Radhiana Hassan, Radiology, Kulliyah of Medicine

Ovarian cancer was the fourth commonest cancer among women in Malaysia. Despite the development of effective surgical and chemotherapeutic approaches, it remains a leading cause of death in gynaecological malignancies. This is a retrospective study of CT characteristics of ovarian mass with histopathological correlation. A total of 90 patients were included in the study. Age ranges from 8 to 91 years, mean age of 39 years. Malignancy was seen in 27.8% of cases, benign lesion in 70% and borderline lesion in 2.2% of cases. Presence of solid component, thick septation, contrast enhancement and presence of ascites were significantly correlates with risk of malignancy.

Keywords : *ovarian mass, ovarian cancer, CT scan*

Category : Health and Allied Sciences

1226 HIGH PERFORMANCE LIQUID CHROMATOGRAPHY ASSAY OF GINGER (ZINGIBER OFFICINALE ROSC.)#

Julia Retno Andayani Budi Muljono, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*
Shazatul Azida Shapiei, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*

Exhibitor : Julia Retno Andayani Budi Muljono, Pharmaceutical Chemistry, Kulliyah of Pharmacy

A comprehensive High Performance Liquid Chromatography (HPLC) analysis of gingerol of ginger rhizome of Bukit Tinggi □, Tanjung Sepat cultivars and a commercial ginger supplement was carried out. Lyophilized ginger powder was macerated using ethyl acetate as a solvent for 72 hours and filtered. A clear supernatant was separated and dried under nitrogen gas and subsequently re-dissolved in mobile phase prior analysis. All the data were obtained using an isocratic RP-HPLC system (Agilent) equipped with an auto sampler. The sample analysis was run on a 125 mm x 4 mm (i.d) C8 RP-HPLC column (Agilent), mobile phase consisting of 60% acetonitrile and 40% water, an UV- detector operating at 282 nm and 6-gingerol as reference compound. By applying this assay, we obtained Bukit Tinggi ginger cv. contained about three-fold higher of 6-gingerol (62%) compared to that of Tanjung Sepat (20%) and the commercial ginger supplement (18%). Thus, a simple and accurate HPLC assay has been successfully developed for analysis 6-gingerol in various sample origins. Keywords: Gingerol, High Performance Liquid Chromatography, Zingiber officinale Rosc.

Keywords : Gingerol, High Performance Liquid Chromatography, Zingiber officinale Rosc.

Category : Health and Allied Sciences

1227 **A SURVEY ON MALAYSIAN C/ICU NURSES' PERSPECTIVES OF PATIENT'S TRANSITION#**

Salizar Mohamed Ludin, *Critical Care Nursing, Kulliyah of Nursing*

Exhibitor : Salizar Mohamed Ludin, Critical Care Nursing, Kulliyah of Nursing

Background: Preparation of critically ill patients throughout their transition while in C/ICU and following discharge is an important element of the recovering process during critical illness. As nurses are primary caregivers in critical care contexts, understanding of patients' transition is essential. This study is part of a larger project on exploration of nurses' understanding of critically ill patients' transition experience and the use of the knowledge in their care practice. The purpose of this study was to describe the nurses' awareness towards the concept and consequences of transition and their awareness of transitional care provided to the critically ill patients in their unit. Design: An interpretive descriptive research approach was used in this study. Data collection were carried out through survey (n=178) using a newly developed questionnaire, in four Malaysian tertiary hospitals (7 C/ICUs) within eight month period, in 2008. Data were subjected to descriptive statistics and correlation analysis. Results: Teaching hospitals' nurses' shows higher awareness of transition and impact ($U=1614$, $z=-4.94$, $p<0.001$), and higher awareness of transitional care practice ($U=1559.5$, $z=5.116$, and $p<0.001$) as compared to those from service hospitals. While those nurses with <10 years ICU experience ($U=1048$, $z=-3.188$, $p<0.001$) had higher awareness of transition and impact, but no difference in their perspectives of transitional care practice. Also, whether or not attended any course make no difference in their awareness. Positive correlation was seen between nurses awareness of transition and impact, and their awareness of transitional care practice (Spearman rho= 0.42, n= 178, $p<0.001$). Conclusion: This study demonstrates a relationship between nurses' awareness on critically ill patients' transition and impact, and awareness on transitional care practice, and the type of hospital, and years of experience (< 10 years) in Malaysian C/ICU. However, nurses awareness was not associated to whether or not they have attended any course, nor to nurses with >10 years' experience. There was a positive correlation between nurses' awareness of transition and impact, and their awareness of transitional care practice.

Keywords : *critically ill, Critical/Intensive Care Units (C/ICU), transition, transitional care*

Category : Health and Allied Sciences

1231 RETENTION OF KNOWLEDGE IN PRECLINICAL DISCIPLINES BY CLINICAL STUDENTS IN THE IIUM MEDICAL PROGRAMME#

Taufiq Hidayat Hasan, *Paediatrics, Kulliyah of Medicine*
Naznin Muhammad, *Basic Medical Sciences, Kulliyah of Medicine*
Norzamzila Abdullah, *Basic Medical Sciences, Kulliyah of Medicine*
Yi Yi Mint, *Basic Medical Sciences, Kulliyah of Medicine*
Nilar Aung, *Basic Medical Sciences, Kulliyah of Medicine*
Abdul Wahab Jantan, *Paediatrics, Kulliyah of Medicine*

Exhibitor : Taufiq Hidayat Hasan, Paediatrics, Kulliyah of Medicine

Introduction: A thorough knowledge in the various disciplines of the basic sciences is a major importance for the practice of clinical medicine. Many basic sciences teachers share a common concern that much of what they teach in preclinical phase is soon forgotten when students move to clinical years. Objective: To examine the retention of such knowledge by clinical students in the Medical Programme of International Islamic University Malaysia (IIUM). Methods: Sixty seven Year 3 and 64 Year 5 students undergoing the Paediatric posting rotation of the academic sessions 2011/2012 were included into this study. Open-ended, short-answer questions of the completion type in the disciplines of anatomy, physiology, biochemistry and general pathology constructed by experts were used. These questions were used to test the retention of the above stated knowledge. Self-administered questionnaire was also designed to obtain the perceptions of students on the learning of basic medical sciences. Results: A significant difference was seen between the mean total scores for the Year 3 and Year 5 students in the basic medical sciences knowledge tests (31.9% vs. 37.7%; $p = 0.002$). Year 5 students showed significantly higher retention of knowledge on anatomy and biochemistry ($p < 0.001$ and $p = 0.021$). Overall in approximately 50% of the questions students indicated that they knew the answers but could not recall. Seventy percent of students stated that they only attempted to retain facts that they perceived as important. Almost all the students (96.2%) agreed that they remembered information better due to vertical integration in the curriculum. Conclusions: This study did not see deterioration in the retention of knowledge in basic medical sciences as the clinical students progress through clinical years. Students stated that the integration of knowledge in basic medical sciences disciplines into the clinical sciences during the preclinical years helped them remember facts better.

Keywords : *retention, basic medical science, medical student, clinical years*

Category : Health and Allied Sciences

1232 **EVALUATION OF TOOTH APICAL CLOSURE IN APEXIFICATION TREATMENT USING CALCIUM HYDROXIDE#**

Anisa Kusumawardani, *Conservative Dentistry, Kulliyah of Dentistry*
Karlina Samadi, *Conservative Dentistry,*
Cecilia Lunardhi, *Conservative Dentistry,*

Exhibitor : Anisa Kusumawardani, Conservative Dentistry, Kulliyah of Dentistry

Introduction: Crown tooth fracture with open pulp occurs as 2-13% of all injury accidents involving teeth. Most of these cases occurred in newly erupted teeth whose roots are not fully formed. Apexification with calcium hydroxide (Ca(OH)₂) is used to stimulate formation of a barrier at the open apex and continue the growth of the apical tooth in the case of pulp necrosis. Root growth after apexification treatment can produce different forms. In addition to close to perfection, the roots can be shorter, wider canals with thin lateral walls, or may also have inverted tapered shape. Objectives: To observe the effectiveness of apexification treatment in open apex teeth using Ca(OH)₂ and to see the percentage of apical closures type through periapical röntgen photos. Methods: We studied 41 samples photos of young permanent incisors having apexification treatment using Ca(OH)₂. Data were taken from periapical röntgen after treatment, diagnostic photos were used as a control. From the total sample eligible, the dental apex closures were read by three readers using magnifying viewer and classified into four types of apical closures according to Weine classification which are (A) The apex closes accompanied by constriction of the root canal, (B) The apex closes without a narrowing canal, (C) calcification in apex area, (D) No change in radiograph appearance. The collected data were described by the percentage. Results: All of the patients diagnosed as having necrotic pulp with open apex were successfully treated with Ca(OH)₂. The form of apical closures were analyzed, and the most apical closure result were type A (43.90%), followed by type B (36.59%), type C (17.07%) and D (2.44%). Conclusion: Ca(OH)₂ gives 100% successful rate in the apexification treatment. The most common radiographic appearance of root growth after apexification was apical closure accompanied by constriction of the root canal.

Keywords : *Apexification, Apical Closure, Calcium Hydroxide*

Category : Health and Allied Sciences

1233 **INCREASED OF BCL-2/BAX RATIO CORELATED WITH DECREASED OF LYMPHOCYTE APOPTOSIS: A STUDY IN THE BRONCHIOLUS AND LUNG OF ASTHMATIC MICE#**

Taufiq Hidayat Hasan, *Paediatrics, Kulliyah of Medicine*

Saptadi Yulianto, *Pediatrics,*

Wisnu Barlianto, *Pediatrics,*

Hidayat Sujuti, *Biochemistry and Biomolecular,*

Chandra Kusuma, *Pediatrics,*

Exhibitor : Taufiq Hidayat Hasan, Paediatrics, Kulliyah of Medicine

Introduction: The failure of lymphocyte apoptosis is one of the factors causing chronic airway inflammation in asthma. Some studies indicate the role of Bcl-2 in inhibition of lymphocyte apoptosis, but still little research on the role of Bax and its relationship to Bcl-2 in asthma. Objectives: To prove the role of Bcl-2-lymphocyte in inhibition of lymphocyte apoptosis and decrease in Bax-lymphocytes in bronchiolus and lung of asthmatic mice. Methods: This study is a randomized control group design. Subjects were Balb/c mice which divided into 2 groups: non-asthma and asthma. Asthma group were sensitized with ovalbumin intraperitoneally on day 0 and 14, followed by inhalation every 2-3 days for 6 weeks. At week 8, all subjects terminated. Bcl-2 and Bax-lymphocytes expression examined with immunohistochemical method, whereas apoptotic lymphocytes by TUNEL method. Statistical analysis used independent sample t-test and regression analysis with 95% confidence interval. Bronchial and lung specimens obtained from 18 subjects (9 from each group). Results: The ratio of apoptotic lymphocytes decreased in the asthma group ($p=0.003$), Bcl-2-lymphocytes increased in the asthma group ($p<0.001$), and Bax-lymphocytes decreased in the asthma group ($p=0.003$). There was a strong negative correlation ($r=-0.66$, $r^2=0.43$, $p=0.003$) between the Bcl-2 and lymphocyte apoptosis. There was also a strong negative correlation ($r=-0.56$, $r^2=0.35$, $p=0.009$) between the ratio Bcl-2/Bax and lymphocyte apoptosis. However, no significant relationship was found between Bax-lymphocytes and lymphocyte apoptosis ($r=0.36$, $r^2=0.13$, $p=0.15$). Conclusion: Increasing ratio of Bcl-2/Bax inhibits lymphocyte apoptosis where Bcl-2 more plays a role than Bax.

Keywords : *asthma, ovalbumin, lymphocyte apoptosis, Bcl-2, Bax*

Category : Health and Allied Sciences

1240 PREVALENCE, KNOWLEDGE AND PRACTICE REGARDING URINARY TRACT INFECTION (UTI) AMONG YOUNG AGE WOMEN IN KUANTAN#

Haliza Hasan, , *Kulliyah of Nursing*
Norafiza Abd Latif, , *Kulliyah of Nursing*

Exhibitor : Haliza Hasan, , Kulliyah of Nursing

Introduction: Urinary tract infection (UTI) is one of the most common bacterial infection in young age women. The long range consequences of ignoring the UTI can lead to renal failure, phylonephritis, and septicaemia. Thus, it is important to learn as much as possible about the knowledge of urinary tract infection (UTI) and practice towards preventing UTI in order to prevent and maintain health status. Objective: The purpose of this study was to identify the prevalence, knowledge and practice regarding urinary tract infection (UTI) among young age women in Kuantan. Methods: This study was a cross-sectional study conducted among young age women aged between 18 until 28 years old. Three selected area in Kuantan was chosen in this study which were Taman Tasik Bandar, Taman Gelora and Kuantan Parade. 307 respondents were participated in this study. The questionnaires was distributed among respondents in order to determine the prevalence of UTI and also to assess their knowledge and practice regarding UTI. Result: The data was analyzed by using descriptive analysis, Pearson Chi-square test and Pearson correlation were used in this study. Based on the result, it revealed that 7.53% respondents were experienced with UTI, 85% of respondents had high knowledge and 25.7% were good in practice towards urinary tract infection (UTI). There were a significant association between socio-demographic characteristic and level of knowledge and practice towards UTI since the p-value was less than 0.05. Conclusion: The health education related to urinary tract infection (UTI) is necessary provided among young age women in order to prevent the infetion of bacteria and to mintain health status. The increase knowledge of disease can reduce the misconduct and misconception towards UTI.

Keywords : *Urinary tract infection, prevalence, knowledge, practice, health promotion and health prevention.*

Category : Health and Allied Sciences

1241 **FILM DOSIMETER FOR ENVIRONMENTAL RADIATION MONITORING#**

Zafri Azran Abdul Majid, *Department of Diagnostic Imaging and Radiotherapy, Kulliyah of Allied Health Sciences*

Norazlanshah Hazali, *Department of Nutrition Sciences, Kulliyah of Allied Health Sciences*

Abdul Halim Sapuan, *Department of Diagnostic Imaging and Radiotherapy, Kulliyah of Allied Health Sciences*

Exhibitor : Zafri Azran Abdul Majid, Department of Diagnostic Imaging and Radiotherapy, Kulliyah of Allied Health Sciences

Environmental radiation is an ionising radiation that present in the natural environment which source are mostly from cosmic rays and the industrial waste. This may lead the environment and the population to be exposed to ionising radiation. Therefore, the environmental radiation needs to be observed cautiously to minimize the ionising radiation impact that may harm the environment and human health. Currently, there are a few devices available in the market to monitor an outdoor environmental radiation. However, the device cost is high and it is quite complicated to use. For that reason, a new low cost and easy to use outdoor environmental radiation monitoring device need to be developed. Therefore, a photographic film will be use as a dosimeter. Hence this invention is designed to develop the covered photographic film attached with variable filter that can be used to develop environmental radiation monitoring device for detecting the ionising radiation.

Keywords : Film Dosimeter

Category : Health and Allied Sciences

1253 **DISASTER MANAGEMENT: A STUDY ON KNOWLEDGE, ATTITUDE AND PRACTICE OF COMMUNITY HEALTH NURSE#**

Nurul'Ain Ahayalimudin, *Department of Critical Care Nursing, Kulliyah of Nursing*
Aniza Ismail, *Community Health, UKM,*
Ismail Mohd Saiboon, *Emergency Medicine, UKM,*

Exhibitor : Nurul'Ain Ahayalimudin, Department of Critical Care Nursing, Kulliyah of Nursing

Background: Nurses accounted to a greater number of healthcare providers. Therefore, it is crucial for nurses, predominantly community health nurse to be prepared in facing disaster as the catastrophic event occurs without warning. Being prepared will reduce nurses' fright and anxiety, and simultaneously lessen the impact of disaster towards community. The purpose of this study is to determine knowledge, attitude and practice of community health nurse towards disaster management. Method: This cross-sectional study conducted in one of states in Malaysia. The questionnaire distributed to randomly select 312 registered nurses who work in health clinics from October to November 2011. Results: The response rate of community health nurse is 84.6 per cent (n=264). It shows about 40.9 per cent (n=108) of nurses are having adequate knowledge on disaster, 83.3 per cent (n=220) portray a positive attitude and merely 30.7 per cent (n=81) having an adequate practice. It has been identified an association between attending disaster-related education/training with nurses' knowledge ($p < 0.001$, $\chi^2 = 24.000$), attitude ($p < 0.05$, $\chi^2 = 4.177$) and practice ($p < 0.001$, $\chi^2 = 25.558$). Nurses who attended disaster-related education/training are more likely to have an adequate knowledge ($p < 0.001$, AOR=3.511, 95% CI=2.097-5.881), portraying positive attitude ($p < 0.05$, AOR=2.042, 95% CI=1.025-4.069) and having an adequate practice ($p < 0.001$, AOR=4.080, 95% CI=2.326-7.156) towards disaster management as compared to those who does not have an opportunity to attend disaster-related education/training. Conclusion: It has been proven statistically that adequacy of knowledge and practice, and portraying positive attitude is driven by attendance to the disaster-related education/training program. Thus, primary health care institutions are required to conduct disaster-related education/training regularly as to give an exposure to nurses for managing disaster adequately.

Keywords : *Disaster; Disaster Management; Knowledge, Attitude and Practice; Community/Public Health Nurse*

Category : Health and Allied Sciences

1264 **DEVELOPMENT, VALIDITY AND RELIABILITY OF QUESTIONNAIRE FOR ASSESSING NURSES' KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS DISASTER MANAGEMENT#**

Nurul'Ain Ahayalimudin, *Department of Critical Care Nursing, Kulliyah of Nursing*
Aniza Ismail, *Community Health, UKM,*
Ismail Mohd Saiboon, *Emergency Medicine, UKM,*

Exhibitor : Nurul'Ain Ahayalimudin, Department of Critical Care Nursing, Kulliyah of Nursing

Background: Recently, world have been stunned by a series of unpleasant event such as earthquakes, tsunami, hurricane and it occurs more frequent. Many people have been affected, loss of human life and properties, and expose inhabitants to the short-term and long-term impact of the disaster. In this situation, nurses play crucial role in managing disaster victims, yet they receive petite training. As a caregiver, nurses who are working in hospital-based and community-based should be incorporated in rendering care to obtain maximum outcomes. However, up to day, there is a lack of validated measures to assess the extent of the problem. The purpose of this study tells what person au fait is, what they believe and how they act, and identification of factors associated, thus it will increase awareness among nurses towards disaster management. Methods / Design: This study had developed such questionnaire with a total of 41-items of closed-ended questions and has been analyzed by using PASW statistic 18. It was divided into three (3) sections which are section on knowledge, attitude and practice. The questionnaire was developed and pre-tested to two groups which consist of 22 nurses who work in Department of Emergency Medicine and Primary Care Centre of Universiti Kebangsaan Malaysia Medical Centre (UKMMC). Reliability test has been carried out and Cronbach's alpha was computed at 0.83 for knowledge, 0.66 for attitude and 0.78 for practice. After executed the test, there were two questions from attitude section has been removed, however, there is no major changes on the properties of the tool. Minor changes were made based on the verbatim and written comments from respondents and it remains the same meaning. The revised tool was utilized and further tested in a large population. Discussion: Developing a questionnaire to assess knowledge, attitude and practice of nurses would allow investigating their awareness on disaster management. The end results shall contribute to the understanding of disaster management in Malaysia in terms of emergency and public health response among nurses. Identification of factors eventually favouring nurses' participation in disaster management, thus, will lead to the development and establishment of disaster nursing disciplines in Malaysia.

Keywords : 1253

Category : Health and Allied Sciences

1265 IN VITRO ELUTION AND DISSOLUTION OF TOBRAMYCIN AND GENTAMICIN FROM CALCIUM PHOSPHATE BEADS#

Che Nor Zarida Che Seman, *Department of Orthopaedics, Traumatology and Rehabilitation, Kulliyah of Medicine*

Ahmad Hafiz Zulkifly, *Department of Orthopaedics, Traumatology and Rehabilitation, Kulliyah of Medicine*

Nazri Mohd Yusof, *Department of Orthopaedics, Traumatology and Rehabilitation, Kulliyah of Medicine*

Exhibitor : Ahmad Hafiz Zulkifly, Department of Orthopaedics, Traumatology and Rehabilitation, Kulliyah of Medicine

The delivery of local antibiotics from a biodegradable implant for osteomyelitis is an attractive alternative. The implant delivers high antibiotic concentration at tissue levels, obliterates dead space, aids bone repair and does not need to be removed. This study was conducted to investigate the in vitro drug release characteristics of tobramycin and gentamicin from calcium phosphate beads and the surface morphology before and after elution of antibiotic. Calcium phosphate beads were loaded with tobramycin and gentamicin separately to form 2 types of antibiotic beads. Tobramycin and gentamicin concentrations were determined spectrophotometrically by measuring the UV absorbance at 400 nm. The standard graphs for tobramycin and gentamicin concentration versus absorbance reading were prepared as references to identify the concentration of the drugs release after incorporating calcium phosphate over 8 weeks. This study showed that incorporating tobramycin and gentamicin with calcium phosphate provided slow residual release of antibiotic from 30 minutes to 1344 hours (8 weeks). Tobramycin and gentamicin-incorporated calcium phosphate partially degraded within 8 weeks of incubation in phosphate-buffered saline (PBS). The degradation of these antibiotic beads would result in a gradual release of drugs through voids, cracks and imperfections of the surfaces. In this respect, the drug delivery systems of tobramycin and gentamicin-incorporated calcium phosphate have the potential of biodegradable and thus, controlling the drug release.

Keywords : *osteomyelitis, drug delivery system, tobramycin, gentamicin, calcium phosphate, drug release*

Category : Health and Allied Sciences

1266

HIGH FIBER AND LOW FAT JACKFRUIT BURGER#

Ibrahim Abu Bakar, *Nutrition Sciences, Kulliyah of Allied Health Sciences*
Ainin Azwani Abdul Rafa, *Nutrition Sciences, Kulliyah of Allied Health Sciences*
Syafina Samsudin, *Nutrition Sciences, Kulliyah of Allied Health Sciences*

Exhibitor : Ibrahim Abu Bakar, Nutrition Sciences, Kulliyah of Allied Health Sciences

Nowadays, people eat red meat too much. Meat burger was eaten more frequent, especially by children. Previous studies showed that meat burger contribute to the high prevalence of obesity among children in many countries. This study was conducted to develop alternative meat burger by substituting beef with unripe jackfruit pulps. Meat was substituted with 25%, 50%, 75% and 100% jackfruit pulp (MBS1, MBS2, MBS3 and MBS4). Ordinary meat burger (MBO) sold at local markets were randomly purchased as reference samples. Sensory evaluation were carried out by 50 panelists (Male=16, Female=34) to see the level of acceptability and proximate analyses were carried out to compare the total content of moisture, ash, fat, protein, carbohydrate and crude fiber in all MBS and MBO samples. The results showed that all MBS formulations were well accepted by consumers where MBS2 was significantly ($P<0.05$) got highest score in term of overall acceptability. Mean content of fibre were significantly ($P<0.05$) higher in all MBS compared to MBO and mean content of fat were significantly ($P<0.05$) lower in all MBS compare to MBO.

Keywords : Meat, Jackfruit pulps, burger, proximate analysis, sensory evaluation

Category : Health and Allied Sciences

1271 AN IN VIVO IMPLANTATION STUDY IN NEW ZEALAND WHITE RABBIT: FRACTURE MODEL HEALING METAL INJECTION MOLDING COMPARED TO CONVENTIONAL IMPLANT#

Ahmad Hafiz Zulkifly, *Orthopaedics, Traumatology and Rehabilitation, Kulliyah of Medicine*

Nurul Hafiza Mohd Jan, *Orthopaedics, Traumatology and Rehabilitation, Kulliyah of Medicine*

Exhibitor : Ahmad Hafiz Zulkifly, Orthopaedics, Traumatology and Rehabilitation, Kulliyah of Medicine

The current metal implants used for internal fixation are made from conventional machining process. Machining is simply known as an action that requires an implant to be machined from a solid piece of metal stock . The MIM orthopaedic implant was invented as an alternative process to produce an orthopaedic implant. In vivo study was performed to compare fracture healing process using conventional machining plate and MIM plate. The ability of fractured bone to unite aided by both type of plates was assessed by analyzing the degree of callus formation in radiographic film. New Zealand White rabbits were used as model and plate was implanted in tibia after creating a fracture. X-ray of rabbit tibia was taken at 3, 6, 9, 12 and 26 weeks post-operatively. The result revealed that there is callus formation noted on tibia implanted with machining conventional plate and in MIM plate in 3 weeks. There was no difference in length of callus formation in 6 week group rabbit in both types of implant. It can be concluded that, MIM plate has equal potential to hold a fracture fragments and to promote healing as good as compared to conventional machining plate. The MIM orthopaedic implant showed great potential to be developed as an alternative for fracture implant and specialized orthopaedics implant.

Keywords : *In-vivo, MIM, orthopaedic implant, internal fixation*

Category : Health and Allied Sciences

1272 **PLAQUE REMOVAL EFFICACY OF AN ELECTRIC TOOTHBRUSH IN RELATIVE TO MANUAL TOOTHBRUSH#**

Lina Al-Bayati, *Periodontics, Kulliyah of Dentistry*
Munirah Yakob, *Periodontics, Kulliyah of Dentistry*
Wisam Kamil, *Periodontics, Kulliyah of Dentistry*
Wan N. Rabiatal Akmalia Abd Razak, , *Kulliyah of Dentistry*
Khalidah Roslan, , *Kulliyah of Dentistry*

Exhibitor : Lina Al-Bayati, Periodontics, Kulliyah of Dentistry

With the advanced technology, powered toothbrush has been used as advanced solutions for home oral healthcare. The objective of this study was to compare the efficacy of a battery-powered toothbrush relative to a manual toothbrush as a self-plaque control modality over a two months period. This study was a randomized, controlled, examiner-blind design, which examined plaque removal with the two types of toothbrushes in 24 systemically healthy and non-smoker individuals from the dental students of International Islamic University Malaysia, with mild to moderate gingivitis who met the inclusion criteria. Subjects were divided to one of two groups: the test group (n = 12) using an electric toothbrush or the control (n = 12) using a manual toothbrush. At the baseline, the plaque index, gingival index and bleeding on probing of all subjects were examined and recorded, followed by a full mouth scaling and prophylaxis. Subjects were professionally instructed the oral hygiene instructions for each regimen, two months later, all participants were re-examined and the data were recorded. The results showed significant improvement in all periodontal clinical parameters for subjects in the control and test groups comparing with the baseline records ($p < 0.05$), however, there is no significant difference between the two oral hygiene regimes as a self-plaque control modality regarding the plaque scores ($p= 0.895$) and the bleeding on probing ($p= 0.373$). The electric toothbrushes delivered similar effect comparing to the manual toothbrushes regarding their effectiveness on the plaque removal. The difference between brushes didn't reach statistical significance.

Keywords : *electric toothbrush, manual toothbrush, gingivitis*

Category : Health and Allied Sciences

1273 **THE ASSESSMENT OF GINGIVAL HEALTH STATUS AMONG A SAMPLE OF MALAYSIAN PATIENTS#**

Lina Al-Bayati, *Periodontics, Kulliyah of Dentistry*

Wisam Kamil, *Periodontics, Kulliyah of Dentistry*

Farhana Farid, , *Kulliyah of Dentistry*

Farhanah Foa'ad, , *Kulliyah of Dentistry*

Exhibitor : Lina Al-Bayati, Periodontics, Kulliyah of Dentistry

The health of the mouth is central to a person's overall health. The aim of this study was to investigate the severity of gingivitis and plaque in a representative sample of Malaysian patients attending the periodontics clinic International Islamic University Malaysia. A total of 51 subjects of age 20-35 years old were evaluated for the severity of gingivitis and the presence of plaque using Gingival Index (GI) and Plaque Index (PI). Detailed medical, dental history and demographic data were collected in a questionnaire form. The results of the study demonstrated 75% patients were diagnosed with moderate gingivitis ($GI < 2$); remaining 25% were diagnosed with mild gingivitis ($GI < 1$). 29% of study sample used interdental aids (dental floss) once at night and 39% used mouthwash only one time/day. The plaque and gingival indices in males were higher than in females, 1.2(0.3)-1.3(0.2), 0.9(0.3)-1.0(0.4) respectively. There was an increase in the percentage of severity of gingival index and presence of plaque in the representative sample, indicating the need for restricted oral hygiene instructions, awareness program, and regular professional plaque removal to improve the oral health condition.

Keywords : *Gingivitis, plaque index, gingival index, oral hygiene*

Category : Health and Allied Sciences

1274 THE ASSESSMENT OF SERUM LIPID LEVEL AMONG A SAMPLE OF KUANTAN PATIENTS WITH PERIODONTAL DISEASES#

Wisam Kamil, *Periodontics, Kulliyah of Dentistry*

Lina Al-Bayati, *Periodontics, Kulliyah of Dentistry*

Suhailah Ali, *Periodontics, Kulliyah of Dentistry*

Exhibitor : Wisam Kamil, Periodontics, Kulliyah of Dentistry

Data on whether periodontal therapy affects serum lipid levels are inconclusive. This study was to explore the relationship between periodontal diseases and serum lipid level, investigating its link to various systemic diseases related to hyperlipidemia. Thirty systemically healthy patients with periodontal disease were recruited for the study. All subjects underwent oral examination and their clinical periodontal parameters were recorded. Five milliliters of fasting venous blood sample was drawn and tested for the systemic levels of total cholesterol, triglyceride (TG), high-density lipoprotein (HDL) and low-density lipoprotein (LDL). The results revealed the mean lipid serum levels (mmol/L) at the baseline are 4.9 (1.0), 1.2 (0.48), 1.6 (0.58), and 2.8 (0.83) for the total cholesterol, TG, HDL and LDL respectively. There is a positive correlation between the lipid serum levels and clinical periodontal parameters represented by the percentage of sites with the presence of plaque, mean clinical attachment loss and the percentage of sites with moderate pocket depth, but this correlation failed to reach the statistical significance. This study demonstrated that patients with periodontal disease have no significant correlation with serum lipid levels ($p > 0.05$), however subjects with increased level of bleeding on probing reflected significant non-desirable level of HDL ($p = 0.006$).

Keywords : *Periodontal diseases, serum lipid, high-density lipoprotein*

Category : Health and Allied Sciences

1276 THE EFFECT OF DIFFERENT PLAQUE CONTROL MODALITIES ON THE GINGIVAL HEALTH STATUS AMONG A SAMPLE OF MALAYSIAN ADULTS#

Wisam Kamil, *Periodontics, Kulliyah of Dentistry*
Lina Al-Bayati, *Periodontics, Kulliyah of Dentistry*
Kassim Bazirgan, , *Kulliyah of Dentistry*
Rohilah Ramlan, , *Kulliyah of Dentistry*

Exhibitor : Wisam Kamil, Periodontics, Kulliyah of Dentistry

In order to overcome the individual's failure to achieve an optimal plaque control standard, different level approaches of biofilm control might be conducted for patient such as an appropriate motivation, instructions, mouth rinses, and adequate tools, therefore, the effectiveness of each self-performed plaque control in maintaining periodontal health status is depending on the proper technique application. The aim of this study was to investigate the effect of mechanical comparing to chemical plaque control on the gingival health status. Thirty systemically healthy patients, 20-30 years old and with gingivitis, were recruited for the study. They were randomized into three different groups according to the self-performed plaque control practice, group 1 (control): (n=10) used tooth brush with modified Bass technique (TB with MBT), group 2: (n=10) used (TB & MBT and un-waxed Oral B® dental floss, and group 3: (n=10) used (TB & MBT, un-waxed Oral B® dental floss, and chlorhexidine mouthwash 0.2%). All subjects received supra and subgingival scaling, and detailed oral self-care demonstration according to mode of oral self-care for each group. The periodontal parameters gingival index GI, plaque index PI, and bleeding on propping BOP were evaluated at baseline and after two months. The results showed improvements for all periodontal clinical parameters for subjects of group 2 and 3, and significant reduction ($p < 0.05$) of BOP levels for subjects of group 3, 15.3 (9.9) with chemical and mechanical plaque control compared to group 1, 27.9 (16.7) with manual tooth brushing only. In adults with gingivitis the quality of self-performed mechanical plaque removal is not sufficiently effective and should be improved. Dental health professionals should emphasize on the improvement of quality of self-performed mechanical plaque removal and use of adjunct chemical plaque control mouthwashes and regular attendance to periodontal clinic to receive professional intervention means of plaque removal

Keywords : *Gingivitis, tooth brushing, mouthwash, scaling, oral hygiene*

Category : Health and Allied Sciences

1278

BURDEN AND QUALITY OF LIFE AMONG ELDERLY CAREGIVERS#

Sharifah Munirah Syed Elias, *Nursing, Kulliyah of Nursing*

Ashikin Atan, *Nursing, Kulliyah of Nursing*

Annis Suraya Mohamad, ,

Exhibitor : Sharifah Munirah Syed Elias, Nursing, Kulliyah of Nursing

Abstract Objective: Caregivers are part of vital role in the healthcare system, as they provide help for the elderly patients. The aim of this study is to explore the caregiver burden and their quality of life (QOL). **Methodology:** This cross sectional design was carried out at the outpatient clinics. Caregivers of elderly patients have been recruited through convenience sampling. The sample size is 200 respondents. The questionnaire has been self administered by the respondents. The instrument used is a questionnaire that consists of sociodemographic characteristics, Caregiver Burden Scale (Zarit, Reever, Bach-Peterson, 1980) and Quality of life scale (WHOQOL, 1997). Statistical test (SPSS version 16) has been used and analyzed as descriptive and inferential statistic. **Results:** From the Caregiver Burden Scale, the level of no or minimal burden had highest frequency which is 59 (45.4%), followed by 53 (40.8%) had mild to moderate burden, then 14 (10.8%) had moderate to severe burden and only 4 (3.1%) had severe burden. For the relationship between sociodemographic characteristics and caregiver burden, there were not statically significant different between gender ($p=0.69$), marital status ($p=0.58$), age ($p=0.26$), income ($p=0.09$) and caregiver burden, but statistically significant difference between educational level ($p<0.05$) and caregiver burden. For the relationship between caregiver burden and quality of life, the Pearson's Product-Moment Correlation Coefficient showed that the relationship of Caregiver Burden and Domain physical was moderate negative linear relationship ($r= -0.42$, $p <0.05$); and Domain psychosocial was a moderate negative linear relationship ($r= -0.43$, $p<0.05$); and Domain social was weak negative linear relationship ($r= -0.25$, $p <0.05$) and for Domain environment, the relationship also a moderate negative linear relationship ($r= -0.34$, $p <0.05$). **Conclusion:** The elderly patients need caregivers support and as caregivers they are face with burden indirectly. Thus, it is important to determine caregiver burden level and it's relation towards their QOL.

Keywords : *Burden, quality of life, elderly caregivers*

Category : Health and Allied Sciences

1286 CORTICAL AUDITORY EVOKED POTENTIAL (CAEP) MATURATION IN CHILDREN AGED 6 TO 12#

NOOR AFZARINI HASNITA ISMAIL, *AUDIOLOGY AND SPEECH LANGUAGE PATHOLOGY, Kulliyah of Allied Health Sciences*

Dani Tomlin, *Otolaryngology, University of Melbourne,*
Kelly Graydon, *Otolaryngology, University of Melbourne,*

Exhibitor : NOOR AFZARINI HASNITA ISMAIL, Audiology and Speech Language Pathology, Kulliyah of Allied Health Sciences

Objective: This study investigated the maturation process of the cortical auditory evoked potential (CAEP) responses in children ranging from 6 to 12 years of age using a tonal stimulus. The aim of this study was to examine the changes in the latency of the obligatory components, P1, N1, P2 and N2, as a function of age. **Method:** The CAEPs latency responses were recorded from 42 normally hearing children. They were grouped into seven different age groups, 6, 7, 8, 9, 10, 11 and 12 years old. Responses were evoked by a 500Hz tone burst, with random presentations between the left and right ears at a level of 80dBnHL with alternating polarity and a stimulus duration of 100ms. **Results:** Results of correlation analysis revealed a significantly decrease in N1 latencies with increased age. Regression analysis also found a gradual latency decreases as a function of age. **Conclusion:** The results offered a useful reference in identification of the maturation process of N1 latency in children 6 to 12 years old using a tonal stimulus. These results therefore, add to the previous literature in this field to understand better the development of the CAEP in children.

Keywords :

Category : Health and Allied Sciences

1295 COMPLIANCE ASSESSMENT AGAINST ORAL MEDICATION THERAPY OF DM TYPE II AMONG PATIENT IN THE KLINIK KESIHATAN BESERAH KUANTAN#

Arbaktun Mardiah Mohamed, Department of Professional Nursing Studies, Kulliyah of Nursing

Exhibitor : Arbaktun Mardiah Mohamed, Department of Professional Nursing Studies, Kulliyah of Nursing

This study focused on determining compliance among DM type II patient at Klinik Kesihatan Beserah Kuantan towards their oral medication prescription. This research was an intervention research to compare the level of knowledge, attitude and behaviour among the respondent. Forty respondents were selected for this study through convenience sampling and divided into control group and intervention group. The objective for this research was to determine level of knowledge, attitude and behaviour among DM Type II patient who being prescribed with oral antidiabetic drug (OAD). Health education intervention such as personal advice, pamphlet distribution and demonstration were carried out to help respondent increased their knowledge and skill for their self care at home. The result shows significant changes towards knowledge ($p < 0.001$) after intervention programme done but no significant changes in compliance because most of patient belief that there are side effects of drug and therefore they choose not to be comply to their prescription and at least 6 month period of time is needed to change behaviour. Overall this study shown that combination of few methods in health education and time frame plays an important role in enhancing knowledge, attitude and behaviour changing that being promoted. Further research on this subject matters and to include physical activity and diet component is very much recommended as to increase the quality of life among our DM Type II patient in the future.

Keywords : medication compliance, DM Type II, Health education

Category : Health and Allied Sciences

1300

10-YEAR PREDICTION OF STROKE FROM THE EYE#

Mohd Zulfaezal Che Azemin, *Department of Optometry and Visual Science, Kulliyah of Allied Health Sciences*

Exhibitor : *Mohd Zulfaezal Che Azemin, Department of Optometry and Visual Science, Kulliyah of Allied Health Sciences*

Traditional predictors for stroke include hypertension, diabetes, the body mass index, smoking, total cholesterol, HDL cholesterol, and triglycerides. However, the current predictors are not able to explain a significant number of stroke cases. The retina is an extension of the brain, therefore changes in the retinal vessel may reflect structures in cerebral vessels. The non-invasive nature of retina imaging has opened a unique window into human brain function and perfusion physiology. Recent studies show associations between retinal vascular changes and either small infarcts detected on brain imaging, or with clinical stroke. To date, studies have reported cross-sectional associations between the retinal fractal dimension and lacunar stroke. However, no prospective data are available about the relation of the retinal fractal dimension and the incidence of stroke.

Keywords : *stroke, retina, fractal dimension*

Category : Health and Allied Sciences

1305 TRADITIONAL VEGETABLES OR ULAM AS POTENTIAL FOODS TO BE USED IN INTERVENTION PROGRAMME AGAINST VITAMIN A DEFICIENCY#

Fatimah Azzahra Mohd Zaifuddin, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*
Rashidi Othman, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Norazian Mohd Hassan, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*

Exhibitor : Norazian Mohd Hassan, Pharmaceutical Chemistry, Kulliyah of Pharmacy

Vitamin A deficiency (VAD) is one of the continuous leading causes of children and pregnant women death. To overcome this malnutrition which currently affected one-third of the world population, there is always renewed interest in exploring numerous dietary sources rich in pro-vitamin A (pro-VA) compounds collectively known as carotenoids. The yellow to red coloured carotenoids are found concentrated in dark green leaves. Malaysia is blessed with a wonderful diversity of edible greens yet documentation for their pro-VA carotenoids' content is limited. Therefore, this study was aimed to explore alternative sources for pro-VA in 20 ulam species which are commonly consumed by the local folks. Two types of pro-VA carotenoids identified via HPLC analysis; β -cryptoxanthin and β -carotene. β -cryptoxanthin and β -carotene accumulation are found to be highest in cekur manis (0.35 ± 0.03 mg/0.1g DW) and daun selom (31.83 ± 0.61 mg/0.1g DW), respectively. Total retinol equivalent activity (reflection to vitamin A activity) presented by these two carotenoids in every species is also included in this study where daun selom exerted the highest activity (5.305 mg RE/0.1g DW). Finally, it is suggested that nine of the ulam species may be used in local food intervention programme to curb VAD problems.

Keywords : pro-vitamin A, carotenoids, β -cryptoxanthin, β -carotene, ulam

Category : Health and Allied Sciences

1311 FACTORS AFFECTING PAIN MANAGEMENT PRACTICE AMONG PAEDIATRIC NURSES#

Siew Pien Lee, *Nursing, Kulliyah of Nursing*
Nor'ain Abdul Rashid, *Nursing, Kulliyah of Nursing*

Exhibitor : Siew Pien Lee, Nursing, Kulliyah of Nursing

Introduction: Pain can be describe as a report of subjective sensory experience, an unpleasant emotional experience and symptoms that make people hurt (Conlon, 2009). Therefore, pain assessment was important to assess the degree of pain (Manne, Jocaben & Redd, 1991). Accuracy of pain assessment was essential for optimal pain management in pediatric patient. However, due to children's development level and limitation of their verbal communication, pain in children still remains inadequately assessed and undertreated (Lufty & Grove, 2003). There were numerous barriers had been identified to be affecting pain management practice particularly in pediatric patient (Ely, 2001; Czarnecki et al. 2011; Melby, 2011). Objectives: This study to identify the factors affecting pain management among the pediatrics nurses. Methodology: The survey "Barriers to Optimal Pain Management" was distributed to all the nurses who work in pediatric wards in HTAA. Fifty four surveys were returned with response rate of 77.14%. Results: The five most important factors affecting pain management was identified were RNs' concern about patients becoming tolerance to analgesics, RNs' concern about side effects of medication, competing demand on RNs' time, low priority given to pain management by nursing management and limitation in RNs' knowledge of pain management. Most of the respondents stated that the factors affecting pain management will be improve by improving the barriers. Conclusion: Although the pain management practices was at a high level yet there were several factors identified to be factors influencing pain management practice among paediatric nurses. Results of the present study showed that nursing factors mainly knowledge of paediatric pain management as the most significant barriers. Although these barriers are not distinctive to this one organization, the investigators are hopeful that the resulting interventions will improve RNs' ability to provide optimal pain management to their patients.

Keywords : *Pediatric Nurse, Pain management, Factors affecting pain management.*

Category : Health and Allied Sciences

1316 FACTORS INFLUENCE BREASTFEEDING PRACTICE AMONG VARIOUS ETHNIC MOTHERS IN KUANTAN, PAHANG#

Radiah Abdul Ghani, *Biomedical Science, Kulliyah of Allied Health Sciences*

Exhibitor : Radiah Abdul Ghani, Biomedical Science, Kulliyah of Allied Health Sciences

Exclusive breastfeeding has been recommended as perfect food for newborn babies. The recommendation is due to the advantages of breastfeeding to the mothers and infants in medical, social and economical are already well known. However, there are number of women are still avoid to breastfeed their infants without a valid reason. Many strategies have been carried out to increase the prevalence of breastfeeding worldwide but the prevalence of exclusive breastfeed is still below the global rate. This study aim are to investigate the pattern of breastfeeding among ethnic mother and to find the relationship between socio-demographic, working environment, family, spouse and friend support and also knowledge of breastfeeding toward mother perception and attitude toward breastfeeding practice. Self- administered questionnaire were distributed among three major ethnic mothers in Kuantan Pahang. The questionnaire contains four sections which are socio-demographic, working information, family and friends support and also knowledge of breastfeeding. All possible factor associated with breastfeeding practice were evaluated. The result showed that Malay mothers have higher prevalence of exclusive breastfeed (20.7%) compared to Indian (10%) and Chinese (3.13%). In each ethnic was affect by different factors. There was strong relationship between maternal age, marital status, educational level, working in professional or non professional sector, working arrangement (fixed or shift) and maternity leave (p -value <0.05) among Malay ethnic, Chinese mother influence by working as full or part time worker (p -value <0.05) while Indian mothers by type of employee they working at (government or private) (p -value <0.05). Other factors like knowledge of breastfeeding and support from family members and friends also affect on mother perception toward breastfeeding. In conclusion, each ethnic was significantly influenced by different factors to breastfeed the infants. Limitation of this study is by smaller sample size thus the finding might not be the conclusive and further study should be done in order to obtain the more reliable results.

Keywords : *breastfeeding, multiethnic, Kuantan, breastfeeding knowledge, socio-demographic*

Category : Health and Allied Sciences

1322 **EVALUATION OF THE USE OF PLECTRANTHUS AMBOINENSIS (LOUR) SPRENG AS A PROPHYLACTIC AGENT OF MALARIA IN MICE#**

Norazsida Ramli, *Department of Basic Medical Sciences, Kulliyah of Medicine*
Pakeer Oothuman Syed Ahamed, *Basic Medical Sciences, Kulliyah of Medicine*
Muhammad Taher Bakhtiar, *Pharmaceutical Technology, Kulliyah of Pharmacy*
Hassan Mohamed El-hady, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Pakeer Oothuman Syed Ahamed, Basic Medical Sciences, Kulliyah of Medicine

The ethanolic extract of the leaves of *Plectranthus amboinensis* was investigated for phytochemical constituents and antimalarial activity. Antimalarial activity of different extract doses of 50, 200, 400 and 1000 mg/kg were tested in vivo against *Plasmodium berghei* (PZZ1/100) infections in mice during residual infections. The results revealed that the extract contained only flavonoid. The extract significantly reduced the parasitemia by the 50 ($p=0.000$), 200 ($p=0.000$) and 400 mg/kg doses ($p=0.000$) in the in vivo prophylactic assay. The %chemo-suppression was calculated as 83.33% for 50mg/kg dose, 75.62% for 200 mg/kg dose and 90.74% for 400 mg/kg dose. Body weight of all treatment group; T1, T2, T3 and T4 also showed enhancement after 7 days post-treatment. Thus, the isolation of active compound of this extract may give a promising drug molecule to be served as prophylactic agent of malaria in mice.

Keywords : *antimalarial, prophylactic, Plectranthus amboinicus*

Category : Health and Allied Sciences

1328 TGF-B1 AND VEGFA PROTEIN EXPRESSIONS ARE UPREGULATED AT THE WOUND AREA FOLLOWING TREATMENT WITH PAPAYA EXTRACT FORMULATION#

Moahmmad Tariqur Rahman, *Biotechnology, Kulliyah of Science*

Nafiu Bidemi Abdulrazaq, *Biotechnology, Kulliyah of Science*

Exhibitor : Moahmmad Tariqur Rahman, Biotechnology, Kulliyah of Science

Wound healing is an intricate process of tissue repair that involves a number of cellular and molecular events. The unripe fruit of *Carica papaya* Linn was shown to benefit wound healing. We have also shown that formulation of papaya extracts with Se or Zn enhanced wound healing efficiency. In this study, Se, Ag or Zn was added to papaya extract to study the mechanisms papaya formulation enhanced wound healing efficiency. Induced excision wound in rats was treated topically twice/day for 14 days and wound size was monitored by taken digital pictures of wounds and analysed using software on days 0, 1, 3, 5, 7, 9, 11 and 13. Healing efficiency of each treatment was evaluated based on the physical and histopathological parameters. The expressions of transforming growth factor- β 1 and vascular endothelial growth factor A were analysed with immunohistochemical stain. The results revealed that papaya phosphate buffered saline extract (PE) significantly reduced wound size over time similar to the standard drug, especially in the groups treated with PES or PEV, as compared with the controls ($p < 0.05$). Fibroblasts recruitment to the wound site was significantly increased ($p < 0.05$) in all groups as compared to NC at day 4 however, PES treatment alone maintained significant ($p < 0.05$) number of fibroblasts in wound at day 10. New blood vessels appeared early in wounds treated with PE, PES and PEV. The same treatment groups exhibited better collagen deposition at day 10. There was up regulation of TGF- β 1 and VEGFA in the early time point especially in the group treated with PES, the expression of this protein was generally down regulated in the later time point except in negative control group. Therefore, the effect of papaya extract formulated with Se may involve biological mechanisms associated with the expression of TGF- β 1 and VEGFA.

Keywords : *papaya, wound healing, TGF- β 1, angiogenesis*

Category : Health and Allied Sciences

1329 IN-HOUSE SEMI-NESTED REVERSE TRANSCRIPTION POLYMERASE CHAIN REACTION FOR THE DETECTION OF HCV-RNA IN SERUM WITH LOW VIRAL LOAD#

Hairul Aini Hamzah, *Basic Medical Sciences, Kulliyah of Medicine*
Muhammed Imad Al-Deen Mustafa, *Basic Medical Sciences, Kulliyah of Medicine*
Nasuruddin Hj Abdullah, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Hairul Aini Hamzah, Basic Medical Sciences, Kulliyah of Medicine

Hepatitis C is a viral disease caused by hepatitis C virus. Patients infected with the virus may develop chronic hepatitis, who were remain asymptomatic. Our objective is to establish a sensitive and reliable assay for the detection of HCV-RNA in serum. Sera were collected from 39 chronic HCV patients and 53 from patients with negative anti-HCV. Viral RNA was extracted and subjected for RT-PCR or semi-nested RT-PCR. Results showed high sensitivity of the assay which can detect up to 2.15 IU/ml of viral load. The specificity of the assay was also evaluated. Thus, the established protocol was reliable for the detection of HCV-RNA from serum.

Keywords : *polymerase chain reaction, hepatitis c virus*

Category : Health and Allied Sciences

1335 FACTORS INFLUENCING PREGNANT WOMEN TO ABANDON THEIR BABIES IN TWO MALAYSIAN SHELTER HOMES#

Salizar Mohamed Ludin, *Critical Care Nursing, Kulliyah of Nursing*
Syeril Nadia Rosli, , *Kulliyah of Nursing*

Exhibitor : Salizar Mohamed Ludin, Critical Care Nursing, Kulliyah of Nursing

Introduction: Lately, baby abandonment has become a preferable option for desperate pregnant women. Due to that the government and private organizations have tried several prevention measures to curb this alarming epidemic of “baby dumping” issue. Nevertheless, our everyday news shows that the problem still persists. Thus by understanding on the actual crisis from the women involved in baby abandonment may help to solve this problem. Aim: This quantitative research aim to examine the influencing factors among desperate pregnant women on baby abandonment. Design and methodology: Cross sectional survey was conducted at two shelter homes in Selangor and Johor by purposive sampling method. 37 participants answered the questionnaires which was adapted and modified based on study done by Hubbard (2008) and AIA (2004). Data was analysed using SPSS version 16.0. The results were descriptively tabulated and correlations between factors influencing baby abandonment and demographic profile. Also, the association between internal and external factors were tested using Chi square plus Fisher’s Exact Test. Results: Result shows that the women had low level of education and low or no monthly income. Significant association was found between ‘fear of rejection by partner’ factor and intention of baby abandonment among the participants ($p=0.003$). Respondents also agree on other factors that influence baby abandonment decision even though the result shows that they were not significant. Conclusion: This study challenged the government and respective parties in providing effective preventive measures and intervention method to curb this social illness.

Keywords : Baby Abandonment, desperate pregnant women, factors Influencing

Category : Health and Allied Sciences

1337 MITOCHONDRIAL GENES SEQUENCING OF MALAYSIAN SEA ANEMONES – TOWARDS IIUM MOLECULAR ECOLOGY DATABASE (IMED)#

Farah Hanis Zulkipli, *Department of Biomedical Science, Kulliyah of Allied Health Sciences*

Ridzwan Hashim, *Department of Biomedical Science, Kulliyah of Allied Health Sciences*

Norafiza Zainuddin, *Department of Biomedical Science, Kulliyah of Allied Health Sciences*

Kamarul Rahim Kamarudin, *Department of Biotechnology, Kulliyah of Science*

Exhibitor : *Kamarul Rahim Kamarudin, Department of Biotechnology, Kulliyah of Science*

There are at least 1,000 species of sea anemones (Phylum Cnidaria: Class Anthozoa) in the world. A number of ten species are known to be the hosts to anemone fishes. Interestingly, out of that, six species can be found in Malaysian coastal waters. Malaysia is geographically part of the Coral Triangle. These unique marine-dwelling animals have the potentials to be exploited as an indicator animal for UV radiation in marine environment, producers of biologically active polypeptides and protein, medications that prevent patients from rejecting newly transplant organs, a source of a compound for vertebrate heart stimulant, a source of food in some areas of Asia including Sabah by which the ethnic groups of Bajau and Suluk consume sea anemones as their native foods, and North America as well. In Malaysia, phylogenetic research on local sea anemones is still insufficient and only one chromosomal 18S rRNA gene sequence of local *Heteractis magnifica* deposited in 2003 is available in the GenBank, National Center for Biotechnology Information (NCBI), U.S. National Library of Medicine (GenBank accession no.: AY372260) to date. Due to that, this preliminary molecular study of Malaysian sea anemones is being undertaken using ribosomal RNA (rRNA) genes (i.e. 12S rRNA gene and 16S rRNA gene – non-protein coding regions) and control region gene (i.e. D-Loop gene – a protein coding region) of mitochondrial DNA. Beside Polymerase Chain Reaction technique (PCR), PCR coupled with Restriction Fragment Length Polymorphism technique (PCR-RFLP) is also being used as an effort to identify diagnostic markers. Generally, this study aims to give viewpoints of the recent taxonomic validation of Malaysian sea anemones via genetic approaches. Findings from this study will be documented in a mini genetic library or IIUM Molecular Ecology Database (IMED) for subsequence molecular studies in near future. All the DNA sequences will be submitted to and registered with the GenBank database prior to publications.

Keywords : *Sea anemone, Malaysia, mitochondrial genes, PCR-RFLP, IIUM Molecular Ecology Database (IMED)*

Category : Health and Allied Sciences

1358 **EMOTIONAL DISTURBANCES AMONG DIABETIC PATIENTS IN MALAYSIA#**

Ali Sabri Radeef Al-Ani, *Psychiatry, Kulliyah of Medicine*

Ramli Musa, *Psychiatry, Kulliyah of Medicine*

Nik Nur Fatnoon Nik Ahmad, *Internal Medicine, Kulliyah of Medicine*

Exhibitor : *Ali Sabri Radeef Al-Ani, Psychiatry, Kulliyah of Medicine*

Title: Emotional disturbances among diabetic patients in Malaysia Ali Sabri Radeef (1), Ramli Musa(1), Dr.Nik Nur Fatnoon Binti Nik Ahmad (2) (1) Department of Psychiatry, Kulliyah of Medicine International Islamic University Malaysia (2) Department of Internal Medicine, Kulliyah of Medicine International Islamic University Malaysia **Background:** Diabetes mellitus is a global health problem that causes significant mortality and morbidity. It is important to assess the association of diabetes with emotional disturbances symptoms like depressive, anxiety and stress symptoms so that we can detect early those psychiatric problems and treat them in order to have adequate glycemic control, less diabetic complications, improve quality of life, and good medication adherence . Despite this, emotional disturbances are consistently under-diagnosed and under-treated by physicians in general medical patients. **Objectives:** This study aims to determine the prevalence of emotional disturbances among patients with diabetes mellitus and to assess the severity of depressive symptoms among those patients. **Methodology:** This is a prospective cross sectional study conducted on a sample of 191 patients with diabetes mellitus attending the diabetic clinic at the Hospital Tengku Ampuan Afzan, Pahang state, Malaysia over a period of 10 months. The prevalence and severity of depressive, anxiety and stress symptoms were assessed in those diabetic patients by using the self-rating Bahasa Malaysia version of the Depression Anxiety and Stress Scales (DASS-42) which had been translated and validated previously by researchers (Ramli M, Ariff MF, Zaini Z). **Results:** . The prevalence of depression was 13.6% among diabetic patients and more common among females than males and most of depressed patient had moderate depression (5.8%), while the prevalence of anxiety was 28.8%which is significantly higher in female patients and most of the patients had moderate anxiety (11.5%). The prevalence of stress was 11.5% and more among women and most of the patients had mild stress (7.3%) **Conclusion:** Emotional disturbances including depression, stress, and anxiety are common among patients with diabetes mellitus.

Keywords : *Depression, anxiety, stress, diabetic patients*

Category : Health and Allied Sciences

1365 THE EFFECTIVENESS OF DENTAL HYGIENE EDUCATION PROVIDED BY YEAR-4 DENTAL STUDENTS, KULLIYAH OF DENTISTRY, INTERNATIONAL ISLAMIC UNIVERSITY, MALAYSIA#

Tin Myo Han, *Community Dentistry Department, Kulliyah of Dentistry*

Tin Maw, *Community Dentistry Department, Kulliyah of Dentistry*

Mohamad Badiuzzaman Tuan Ibrahim, *Kulliyah of Dentistry*

Mohammad Faiz Kamaruddin, *Kulliyah of Dentistry*

Exhibitor : Tin Myo Han, Community Dentistry Department, Kulliyah of Dentistry

Background: Dental hygiene education (DHE) is a process by which the dental practitioner prescribes a set of explanation and instructions so that it would benefit the patient in keeping and maintaining good oral hygiene.1 Thus, providing DHE is of utmost importance to prevent common oral diseases such as dental caries and periodontal diseases.2 All dental students have to practice DHE sessions with patients under dental public health curriculum in their clinical years of BDS course.3 Objective: To assess the effectiveness of dental hygiene education given by year-4 dental students to the patients. Methods: An interventional study was carried out among 19 selected patients who attended DHE session at KOD, IIUM from May 2012 to December 2012. A semi-structured pre-tested questionnaires was used to assess the participants' factual dental health knowledge regarding tooth decay, oral cancer, gum diseases, periodontal diseases, diet consumption and time to initiate tooth brushing for children; their practices on self-treatments, frequency of oral self-care and cleaning methods, home care practices; and attitudes of patients towards keeping oral health, following dentists' instruction, regular dental check-up, oral health effect on general health and tooth brushing program. As an objective assessment, plaque score of the patients was measured by O'Leary's plaque index. First assessment was done before giving DHE session by Year-4 dental students and second assessment was done 4weeks after it. Changes between 1st and 2nd time assessment were analyzed by X2 test and "t" test to infer the effectiveness of intervention. Results: Before DHE session, range and mean (\pm SD) of plaque score of 19 patients were 51 to 100 and 82(\pm 16); and those of after DHE were 23 to 99 and 61.77(\pm 19). Significant ($p < 0.05$) reduction of plaque score before and after DHE was observed. Although, a significant change ($p < 0.05$) was observed in two out of 8 factual knowledge questions, there were not significant changes regarding attitude and practices of all participants before and after DHE session. Conclusion: The effectiveness of DHE session could not be proved by using subjective questionnaires in assessment of patients' factual knowledge, attitude and practices; nevertheless, the effectiveness of DHE session is convinced by using objective assessment on plaque score. Thus, this study indicated that there was some extent of benefit on patients by attending DHE session provided by year-4 dental students.

Keywords : *dental hygiene education (DHE), plaque score, knowledge, attitude, practice, oral health, dental students, effectiveness*

Category : Health and Allied Sciences

1369

WOUND HEALING EFFECT OF ACROSTICHUM AUREUM ON RABBIT#

Deny Susanti Darnis, *Chemistry, Kulliyah of Science*

Hendy Putra Herman, *Biotechnology, Kulliyah of Science*

Shahbudin Saad, *Biotechnology, Kulliyah of Science*

Muhammad Taher Bakhtiar, *Pharmaceutical Technology, Kulliyah of Pharmacy*

Norazsida Ramli, *Biomedical Science, Kulliyah of Allied Health Sciences*

Exhibitor : Deny Susanti Darnis, Chemistry, Kulliyah of Science

Medicinal use of *Acrostichum aureum* and *A. speciosum* in wound healing treatment by Malays community was tested scientifically in this project. Of total 22 different extracts tested in vitro, aqueous extracts of rhizome, stems, and leaves (*A. aureum*) and stems (*A. speciosum*) showed enhancement in migration rate in scratch wound assay and they were further tested in vivo using rabbits. Twelve male rabbits, weight 2.0 - 2.7 kg, age 2 - 4 months were divided into three groups, each group consist of four rabbits. Four excisional wounds were made on their dorsal with diameter 6 mm for each rabbit and each wound was treated with different extracts. The treatment started on day 0 with solcoseryl jelly served as a positive control while aqua cream as a negative control. Percentage wound contraction and epithelization period showed that aqueous extract of *A. aureum*'s leaves significantly promoted wound healing, at concentration of 50 mg/g in aqua cream (p-value 0.01) and 100 mg/g in aqua cream (p-value 0.03) compared to negative control. The rhizomes extract of *A. aureum* also significantly promoted wound healing at concentration 100 mg/g in aqua cream (p-value 0.003). These results strongly suggested the beneficial effects of the rhizome and the leaves of *A. aureum* in wound healing treatment. And the findings of this research have proven the traditional use of *A. aureum* as wound healing herbs.

Keywords : *Acrostichum aureum*; excisional wounds; solcoseryl jelly

Category : Health and Allied Sciences

1389 AWARENESS ON SEEKING KNOWLEDGE OF MALE INFERTILITY AMONG MALE IN Kuantan#

Muhammad Lokman Md Isa, *Basic Medical Sciences for Nursing, Kulliyah of Nursing*
Syarifah Nabiilah Aminah Syed Tahir, ,

Exhibitor : Muhammad Lokman Md Isa, Basic Medical Sciences for Nursing, Kulliyah of Nursing

Introduction: Male infertility is an issue among couples of not having offspring after two years of regular conception. Factors of this issue can arise from male, female or both gender. Reality, this issue is assumed to be on the female side. Thus, knowledge awareness on male infertility is essential in planning for further intervention Aim: This study was conducted to determine the awareness of seeking knowledge of male infertility among men in Kuantan Design and methodology: A cross sectional survey was conducted at Bandar Indera Mahkota, Kuantan Parade and Taman Kerang. Convenient type of sampling was used. 264 data was collected using self administered questionnaire. Data had been analyzed by using PASW version 18.0, in terms of descriptive statistic, Anova, Independent t test and Pearson Correlation was carried out. Result: Men that have tertiary education have higher awareness in seeking knowledge of male infertility compared to those having secondary with secondary education (Mean: 6.47, SD: 1.965) and tertiary education (Mean 7.29: ,SD: 2.517) and the main factor that avoiding men from seeking knowledge of male infertility is shame (52.65%). Analyzed results also showed weak correlation between experience in sexual disease with awareness of seeking knowledge on male infertility among male in Kuantan ($r=+0.103$). Conclusion: Respondents who have tertiary education have more awareness in seeking knowledge of male infertility compared with secondary education. Thus, efforts to educate reproductive health issues at every level of educations are essential so awareness level can be improved as problems can arise if infertility issue is not resolved correctly. Results also showed that shame is the main factor that causes men not to seek knowledge of male infertility.

Keywords : Male Infertility, Awareness, Sexual Disease, Spermatogenesis, Sexual Education

Category : Health and Allied Sciences

1401 PLUCHEA INDICA STIMULATES GLUCOSE UPTAKE THROUGH ENHANCEMENT OF GLUT4 AND PPAR γ GENES EXPRESSION IN 3T3-L1 ADIPOCYTES#

Wastuti Hidayati Suriyah, *Basic Medical Sciences, Kulliyah of Pharmacy*

Abdul Razak K, *Basic Medical Sciences, Kulliyah of Pharmacy*

Muhamad Taher Bakhtiar, *Pharmaceutical Technology, Kulliyah of Pharmacy*

Solachuddin Jauhari Arief Ichwan, *Basic Medical Sciences, Kulliyah of Dentistry*

Exhibitor : Solachuddin Jauhari Arief Ichwan, Basic Medical Sciences, Kulliyah of Dentistry

Diabetes mellitus (DM) is a serious and deadly disorder that has reached epidemic proportions with the prevalence rates and trends are escalating largely in developing countries. The awareness of the modern drugs to treat DM which have numerous side effects and inability to provide all-healing solution against human disorders, has led to a recent growing interest in the therapeutic use of natural products, especially those derived from plants. Medicinal plants are well known to have a potential antidiabetic agent and can be an alternative strategy for diabetes management. *Pluchea indica* (beluntas) is widely distributed in Malaysia and it is believed to have antidiabetic properties. Our previous study showed that *P. indica* has a hypoglycemic effect in normal rats. Adipose tissue plays substantial role in regulating blood glucose levels by up taking the glucose from the blood into the tissue. The 3T3-L1 adipocytes have been widely used as an in vitro model to study basic cellular mechanism of type 2 DM. However, so far the antidiabetic potential of *P. indica* on adipocytes never been explored. This study was aimed to investigate the effects of *P. indica* in stimulating glucose uptake and expression of genes involved in this activity such as GLUT4 and PPAR γ in 3T3-L1 adipocytes. *P. indica* leaves were extracted in a series of organic solvents (hexane, dichloromethane, ethyl acetate, and methanol). The plant also was macerated using water to yield water extract. The maximum tolerated concentration of the extracts on the adipocytes was determined based on the MTT assay. The Oil Red O staining was performed to visualize the adipocytes lipid content. We found that all extracts induce accumulation of lipid droplets relatively equal to control except n-hexane. Radioactively labeled 2-Deoxy-D-glucose uptake assay demonstrated that methanol extract significantly increased glucose uptake ($p < 0.05$). Moreover, similar result was also confirmed using glucose oxidase method. Consistently, the methanol extract also enhanced the expression of GLUT4 and PPAR γ genes, which have been known as important regulators of glucose uptake as shown by qRT-PCR analysis. Taken together, these findings indicate that *P. indica* is a potential candidate for diabetes management.

Keywords : *Diabetes Mellitus, Pluchea indica, 3T3-L1 adipocytes, glucose uptake, PPAR γ , GLUT4*

Category : Health and Allied Sciences

1414 DENTAL AGE ASSESMENT IN PATIENTS WITH HYPODONTIA USING WILLEMS'S METHOD#

Susi Sukmasari, *Paediatric Dentistry, Kulliyah of Dentistry*
Yunita Dewi Ardini, *Paediatric Dentistry, Kulliyah of Dentistry*
Cheong Joo Ming, *Orthodontic, Kulliyah of Dentistry*

Exhibitor : Susi Sukmasari, Paediatric Dentistry, Kulliyah of Dentistry

DENTAL AGE ASSESMENT ON PATIENTS WITH HYPODONTIA USING WILLEMS'S METHOD Susi Sukmasari¹, Yunita Dewi Ardini¹, Cheong Joo Ming² ¹Assistant Professor, Unit of Paediatric Dentistry, Kulliyah of Dentistry, IIUM ²Lecturer, Unit of Orthodontics, Kulliyah of Dentistry, IIUM Abstract Objective: To compare the dental age and chronological age of permanent teeth in children with hypodontia. Materials and methods: This was a cross-sectional study based on Orthopantomograms (OPGs) sample of children and adolescents of known age (6-14 years old), attended Dental Clinic of Paediatric Dentistry and Orthodontics at IIUM, Kuantan Campus in Pahang, Malaysia, from 2009 to 2012. Out of 727 OPGs, 38 OPGs with hypodontia which fulfilled the inclusion criteria were selected. The OPG machine used was Planmeca ProMax 3D, which provides detailed high resolution of 3 lp/mm image without artefacts. The exposure time was 12 seconds with a magnification factor of 1.45. Data regarding hypodontia was collected. Assessments were performed using Planmeca Romexis 2.8.O.R software. Dental age of all permanent teeth on the left mandible was assessed using Willems's method (4) from the OPGs. Chronological age was measured from birth to a given date when OPG was taken. The difference between dental and chronological age was analysed using t-test. Results: Dental age of permanent teeth in both boys and girls was lower than the chronological age. Dental age of permanent teeth in boys was lower than the dental age of permanent teeth in girls. Dental age in children with hypodontia was significantly lower compared to the chronological age (p=0.000). Conclusion: Dental age of permanent teeth in children with hypodontia was lower than chronological age. Dentist should be aware about hypodontia since it is the most common dental anomalies.

Keywords : *Dental age, Chronological age, Willems's method, Hypodontia.*

Category : Health and Allied Sciences

1419 BODY MASS INDEX (BMI) AND BEHAVIOURAL CHANGES IN "PROGRAM SIHAT, CERGAS DAN CERIA" #

ASHIKIN ATAN, *PROFESSIONAL NURSING STUDIES, Kulliyah of Nursing*

Exhibitor : ASHIKIN ATAN, PROFESSIONAL NURSING STUDIES, Kulliyah of Nursing

BODY MASS INDEX (BMI) AND BEHAVIOURAL CHANGES IN "PROGRAM SIHAT, CERGAS DAN CERIA" Ashikin A1, Azman A2, Ruzita AT3, Hasimah I 2 Norazilah MR2 1International Islamic University Malaysia, 2Institute for Health Behavioural Research, Ministry of Health Malaysia, 3 Universiti Kebangsaan Malaysia. Introduction: "Program Sihat, Cergas dan Ceria", a health promoting programme among school children, was implemented to reduce the prevalence of overweight and obesity among standard 4 and 5 students via healthy eating and physical activity intervention. Objective: To evaluate changes in the practice of healthy eating and physical activity, and Body Mass Index among respondents. Method: Study was conducted in two schools in Selangor involving standard 4 and 5 students. This was an interventional study without control group using purposeful sampling. A total of 212 respondents were enrolled whereby four intervention activities based on healthy eating and physical activity was conducted for duration of four months. Self administered questionnaire were used. Pre and post anthropometric data were collected. Results and Discussion: The findings showed significant increase the consumption of vegetables, fruits, plain water and exercise habits ($p < 0.025$). No significant changes were reported in having breakfast before 9.00am, milk or dairy product intake and sedentary activities ($p > 0.025$). At the end of the intervention, weight problem was slight decreased (1.4%) which underweight decreased (1.9%) and slight increment overweight and obesity (0.5%). Conclusion: "Program Sihat, Cergas dan Ceria" resulted in improvements in weight management among the students and knowledge on healthy eating and physical activity. Continuous intervention activities with multiple approaches over a longer period could yield better results.

Keywords : *body mass index, obesity, intervention, primary school, programme*

Category : Health and Allied Sciences

1423 **A COMPREHENSIVE STRUCTURE-ACTIVITY RELATIONSHIP OF PHOSPHOINOSITIDE-3-KINASE-BETA (PI3K-B) INHIBITORS#**

Abubakar Abdullahi, *Basic Medical Science Department, Kulliyah of Pharmacy*
Abdualrahman M. Abdulkader, *Pharmaceutical Chemistry Department, Kulliyah of Pharmacy*
Nadiahanis Abdulsamat, *Basic Medical Science Department, Kulliyah of Pharmacy*
Abdul Razak Kasmuri, *Basic Medical Science Department, Kulliyah of Pharmacy*
Farahidah Mohamed, *Pharmaceutical Technology Department, Kulliyah of Pharmacy*
Abul Bashar Mohammed Helaluddin, *Pharmaceutical Chemistry Department, Kulliyah of Pharmacy*

Exhibitor : Abubakar Abdullahi, Basic Medical Science, Kulliyah of Pharmacy

INTRODUCTION: Phosphoinositide 3 kinase beta (PI3K- β) has been established as a therapeutic target in various PTEN-deficient cancers. This makes the design of PI3K- β specific inhibitors an essential strategy in targeting these cancers. **METHODOLOGY:** We used G-QSAR to design new inhibitors of PI3K- β from 3D structures and biological activities (IC₅₀) of 125 inhibitors. The inhibitors were classified into different chemical groups and then fragmented into R1, R2 and R3 based on ligand-target interaction requirements. The dataset was divided into training and test sets using sphere exclusion algorithm. Different variable selection algorithms and model building methods were used to derive QSAR model equations. **RESULTS:** Four G-QSAR models were derived using multiple linear regression method which was coupled with different variable selection algorithms: simulated annealing (model 1, $r^2= 0.7412$, model 3, $r^2= 0.7267$), stepwise forward backward regression (model 2, $r^2= 0.7015$) and stepwise forward regression (model 4, $r^2= 0.7415$). The models were further validated by means of leave-one-out method (q^2) and the correlation coefficient of the training set ($pred_r^2$). Models validation showed model 1 to have significant internal and external predictive abilities of $q^2= 0.6171$ and $pred_r^2= 0.6013$, respectively. Thus, this model was selected to analyse the contribution of different 2D descriptors on the inhibitory activity. Fragment 3 was found to have significant contribution to activity (41.7%) while fragments R1 and R2 contributed 30.8% and 27.5%, respectively. Interestingly, hydrogen bond donor in both fragment R1 and R3 has a positive contribution of 12.2% to the activity. In addition, the model revealed that the rotatable bonds in fragment R1 are detrimental to activity. The retention index of zero order and retention index of five-member ring in fragment R2 seem to positively affect activity. Other descriptors such as electrotopological, path count and element count were shown to take part in the activity alteration. **CONCLUSION:** This model provides potentially important guides for designing and developing new potent PI3K-beta inhibitors.

Keywords : *Phosphoinositide-3-kinase-beta, cancer, Drug design, Quantitative structure activity relationship*

Category : Health and Allied Sciences

1424 COOPERATION BETWEEN ARID3A AND P53 IN THE TRANSCRIPTIONAL ACTIVATION OF P21WAF1 IN RESPONSE TO DNA DAMAGE#

Widya Lestari, *Oral Biology, Kulliyah of Dentistry*
Solachuddin Jauhari Ichwan, *Oral Biology, Kulliyah of Dentistry*

Exhibitor : Widya Lestari, Oral Biology, Kulliyah of Dentistry

ARID3A/DRIL1/Bright is a family member of AT rich interaction domain (ARID) DNA-binding proteins that involve in diverse biological processes. We have reported that p53 activates ARID3A transcription, and ARID3A overexpression induced G1 arrest. However, a role of ARID3A in the p53 pathway remains unclear. Here, 'we show that ARID3A cooperates with p53 to transcriptionally activate p21WAF1, a p53-target gene important for cell-cycle arrest. ARID3A bound to its binding sites in the p21WAF1 promoter in vivo and in vitro, and induced p21WAF1 transcription in U2OS cells expressing wild-type p53 but not Saos-2 cells lacking p53. Co-expression of ARID3A with p53 cooperates to activate p21WAF1 transcription and the stably transfected p21WAF1 promoter. Mutation of the ARID3A binding sites reduced the p21WAF1 promoter activity, and siRNA-based ARID3A knockdown suppressed transcription of p21WAF1 but not proapoptotic NOXA and PUMA in response to DNA damage. Furthermore, p53 knockdown decreased ARID3A transcription, and, conversely, ARID3A overexpression or knockdown resulted in an increase or decrease in p53 stability, respectively. These results indicate cooperative and interdependent roles for ARID3A and p53 in transcriptional activation of p21WAF1 in response to DNA damage. ♦

Keywords : *ARID3A; DRIL1; Bright; p53; p21WAF1; gene expression.*

Category : Health and Allied Sciences

1425

GENETIC AND BIO-CHEMICAL DETERMINANTS OF DEMENTIA#

Seikh Farid Uddin Akter, *Community Medicine, Kulliyah of Medicine*

Mohammed Fauzi Abdul Rani, *Internal Medicine, Kulliyah of Medicine*

Mohamad Sahari Nordin, , *Institute of Education*

Sarina Sulong, *Human Genome Centre, Universiti Sains Malaysia,*

Muhammad Muzaffar Ali Khan Khattak, *Nutrition, Kulliyah of Allied Health Sciences*

Mohd. Aznan Bin Md. Aris, *Family Medicine, Kulliyah of Medicine*

M. Taher Bin Bakhtiar, *Pharmaceutical Technology, Kulliyah of Pharmacy*

Exhibitor : Seikh Farid Uddin Akter, Community Medicine, Kulliyah of Medicine

As the neurodegenerative disease (NDD), dementia, is emerging as a silent epidemic for rapidly developing countries like Malaysia, locally investigation of its prevalence including genetic, biochemical and behavioural determinants were the focussed objective of this study. For clinical epidemiological investigation of dementia, the commonest NND, an initial descriptive study to assess the magnitude of dementia followed by a case-control study were conducted in collaboration with other higher educational institutions both overseas and in Malaysia. This study revealed many facts locally unexplored previously. Data were collected from a statistical sound sample size (197 study subjects initially for the descriptive phase; 63 dementia cases and 103 age matched controls for analytic phase) using a questionnaire for personal profile and other related factors. The standard protocols were followed to measure the selected biochemical determinants such as adiponectin, glucose levels, lipid profile and alleles of apolipoprotein E gene (APOE). The statistical analyses were performed using standard statistical software, the SPSS (Statistical Package for the Social Sciences) for Windows, Version 17. In addition to descriptive statistics, pertinent inferential statistical analyses were performed. It appears from the initial descriptive study that dementia was the leading diseases (72.1%) of the identified neurodegenerative diseases among study subjects. In investigation of genetic determinant, as in other areas of inquiry, one-fifth (19.7%) of the identified cases revealed the positive family history reflecting the putative role for inherited susceptibility. About one-third of them were smokers (29.4%). Among the known co-morbidities, type 2 diabetes mellitus, hyperlipidemia and hypertension were remarkable (43.7%, 11.3% and 65.5% respectively). The evident of high percentages of patients were suffering from different co-morbidities in combinations suggested the potential scope for further investigations of selected biochemical and genetic determinants such as, serum adiponectin level, lipid profile and glycaemic status and alleles (ApoE-ε2 Apo ApoE-ε3 and E-ε4) of APOE to explore the respective etiological role. ApoE-ε4 was statistically significantly associated with dementia ($\chi^2(df = 1) = 10.8, p < 0.01$) and might be an important determinant for the dementia cases. The proportion of dementia cases among neurodegenerative diseases in this study was alarmingly high. Type 2 diabetes mellitus was the most common co-morbidity and ApoE-ε4 appears to be a genetic determinant of dementia.

Keywords : *Genetic, bio-chemical, behavioural, determinants, neurodegenerative, disease, Malaysia*

Category : Health and Allied Sciences

1431 **IMPACT OF RISK REDUCTION INTERVENTION ON STAGE-1 HYPERTENSION#**

Seikh Farid Uddin Akter, *Community Medicine, Kulliyah of Medicine*
Mohammed Fauzi Abdul Rani, *Internal Medicine, Kulliyah of Medicine*
Mohamad Sahari Nordin, , *Institute of Education*
Mohd. Aznan Bin Md. Aris, *Family Medicine, Kulliyah of Medicine*
Jamalludin Ab Rahman, *Community Medicine, Kulliyah of Medicine*
Razman Mihd Rus, *Community Medicine, Kulliyah of Medicine*
Niza Samsuddin, *Community Medicine, Kulliyah of Medicine*

Exhibitor : Seikh Farid Uddin Akter, Community Medicine, Kulliyah of Medicine

This intervention, pre-post test design, study was conducted among 219 respondents aged 18 years and above during the period from July 2007 to June 2009 with intervention on 32 respondents of uncomplicated stage-I hypertension. The intervention was physical activity enhancement, smoking cessation and dietary advice for overweight reduction. The primary objective was to evaluate the intervention outcome in a selected community (Kampung ≈ Village) at Kuantan, Pahang Darul Makmur, Malaysia. Data were collected by person-to-person interview. In addition to descriptive statistics, selected standard statistical tests such as chi-square and t-test were performed as appropriate. Mean height, weight and BMI of the respondents were found to be 156.6 cm, 64.2 kg and 26.2 kg/m² respectively. Mean Blood Pressure of the respondents was found to be 128/83 mmHg under WHO-ISH recommended procedures. Overall prevalence of Stage-I Hypertension in this study was 26.9%. Blood pressure increased significantly with increment of body weight (for systolic blood pressure (SBP): $R^2 = 0.064$, $F = 15.949$, $p < 0.001$ and for diastolic blood pressure (DBP): $R^2 = 0.049$, $F = 12.120$, $p < 0.01$). Similar association was also observed with waist circumference (SBP: $R^2 = 0.093$, $F = 22.325$, $p < 0.001$ and for DBP: $R^2 = 0.033$, $F = 8.378$, $p < 0.01$). Mean change of systolic blood pressure after 6 months intervention was -2.1 ± 15.2 mmHg and that of diastolic blood pressure measurement showed a change of -4.4 ± 11.6 mmHg. Among 32 respondents, 56.3% (18) could control their blood pressure to normal level by adopting healthy behavioral life-styles. Prevalence of hypertension was high in the studied community and risk reduction intervention found effective.

Keywords : Hypertension, Intervention, Risk, Reduction

Category : Health and Allied Sciences

1434 KAEMPFERIA GALANGA EXTRACT-EMBEDDED SILICA IN PALM OLEIN EMULSION FOR MOSQUITO REPELLENCY#

MUHAMMAD TAUFIQ JAILANI, *PHARMACEUTICAL TECHNOLOGY, Kulliyah of Pharmacy*

SAIFULLAH KHAN, *PHARMACEUTICAL TECHNOLOGY, Kulliyah of Pharmacy*

KHADRI ABDUL WAHAB, , *Kulliyah of Pharmacy*

KAUSAR AHMAD, *PHARMACEUTICAL TECHNOLOGY, Kulliyah of Pharmacy*

MOHD ISA MEHAT, , *Natural Medicinal Product Centre*

NURUL WAHIDA SAAD, *BIOMEDICAL SCIENCE, Kulliyah of Allied Health Sciences*

Exhibitor : KAUSAR AHMAD, Pharmaceutical Technology, Kulliyah of Pharmacy

It was reported that the hexane fraction of *Kaempferia galanga* extract has potent mosquito repellency. This work explored the potency of the said extract when embedded in the pores of micronized amorphous silica to reduce the volatility, and later prepared as an oil-in-water RBD palm olein emulsion stabilized by suitable excipients. Five formulations including one negative control was prepared. The most stable formulation, based on the particle size distribution and the ability to release the active compound to make it airborne, which is important in order to exert its repellent effect, was selected for field test. The evaluation was carried out as specified in the Bioassay Method for Mosquito Repellent on Human Skin (MS 1497: 2000). The field test results suggest that the application of the formulation containing *K. galanga* extract/silica in the emulsion managed to reduce the number of mosquito bites.

Keywords : *Kaempferia galanga, palm olein-in-water emulsion, mosquito repellent*

Category : Health and Allied Sciences

1451 PREPARATION OF METFORMIN HCL MICROSPHERES AND ENCAPSULATION EFFICIENCY#

RUHAINI RUSLAN, *PHARMACEUTICAL TECHNOLOGY, Kulliyah of Pharmacy*
AIMAN ELSAID, *PHARMACEUTICAL TECHNOLOGY, Kulliyah of Pharmacy*
KAUSAR AHMAD, *PHARMACEUTICAL TECHNOLOGY, Kulliyah of Pharmacy*
FARAHIDAH MOHAMED, *PHARMACEUTICAL TECHNOLOGY, Kulliyah of Pharmacy*

Exhibitor : KAUSAR AHMAD, Pharmaceutical Technology, Kulliyah of Pharmacy

Due to the pharmacokinetic properties, metformin HCl needs longer period to achieve therapeutic effects with multiple daily doses which may reduce patient's adherence towards the medication. Hence, novel drug delivery system such as microspheres may be helpful for this non-compliance of the conventional therapy. Double-emulsion solvent evaporation technique was employed in this work since Metformin HCl is a hydrophilic drug. PLGA and PVA of specific characteristics were used. A total of 30 formulations were prepared by varying the concentration of metformin and different conditions. The procedure employed resulted in spherical and free-flowing microspheres with acceptable particle size for drug delivery. Maximum encapsulation efficiency observed was 15%. The concentration of metformin used influenced the encapsulation efficiency among other factors. Higher values, which is desirable for dosage form, may be obtained by manipulating the parameters such as the molecular weight of PLGA.

Keywords : metformin, microsphere, PLGA, encapsulation efficiency

Category : Health and Allied Sciences

1461 INTEGRATED DESIGN, MODELING AND ANALYSIS OF TWO-WHEELED WHEELCHAIR FOR DISABLED#

Abqori Aula, *Mechatronics Engineering, Kulliyah of Engineering*
Tareq M. Altalmas, *Mechatronics Engineering, Kulliyah of Engineering*
Salmiah Ahmad, *Mechatronics Engineering, Kulliyah of Engineering*
Rini Akmeliawati, *Mechatronics Engineering, Kulliyah of Engineering*
Shahrul Naim Sidek, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : Salmiah Ahmad, Mechatronics Engineering, Kulliyah of Engineering

This paper focuses on the integrated design and modeling of a two-wheeled wheelchair (TWW), The TWW provides a higher mobility and self-reliance for its users has been modeled using few reliable platforms namely Maple for mathematical model derivation, MapleSim for dynamic of the system, Solidworks for its virtual 3D modeling while Labview is used for motion analysis and control. TWW is a highly nonlinear, complex system that offers higher mobility and space-saving than conventional four-wheeled one. The integrated models derived and design would be very much importance and benefitted to be used for further control design.

Keywords : *Two-wheeled wheelchair, mathematical modeling, motion analysis, MapleSim, SolidWorks.*

Category : Health and Allied Sciences

1469 A REVIEW REPORT ON THE STUDY OF VEGETARIAN CAPSULES AND HARD BOVINE GELATIN CAPSULES#

Aye Mya Mya, Basic Medical Sciences, Kulliyah of Nursing

Exhibitor : Aye Mya Mya, Basic Medical Sciences, Kulliyah of Nursing

Introduction: This is a review report on the study of vegetarian capsules and hard bovine gelatin capsules regarding the rising availability of the soft vegetarian capsules in the industry. Discussion: Empty capsule is the necessary accessory material in the production of capsule and its quality is one of the most important factors. The traditional empty capsule is most made of gelatin prepared from animals such as cows and pigs as its raw materials, and the properties of which decide its disadvantages such as high contents of water, easy to absorb humidity and transfer the moisture into the drug contained in it; leading to the failure of medicine and easy to weather, crash and degenerate under the influence of outside factors. In addition, it might be rejected by the people in Islamic countries and regions. Therefore, searching for a replacing product is an inevitable development trend and so empty capsule, a new product and called 'plant capsule' has come into being and become a favorite in the capsule industry. According to the results of the study by Faradiah, M. et al. (2011), the disintegration of the vegetarian capsule was consistent throughout the study with stable physical appearance regardless of the ratio between disintegrant and filler and pH of disintegrant media; disintegration of the bovine capsule increases with time and the shells were becoming hardened and dented though. The result displayed that vegetarian capsule is better in-vitro performance in terms of disintegration and stability than bovine capsule. The hard vegetarian capsule could be a promising alternative dosage form. In the current industry, there is not only hard vegetarian capsule, but also soft vegetarian capsules are up in the market. Swiss Caps USA, Inc. has introduced VegaGels, the vegetarian soft capsule alternative to gelatin. The VegaGel technology delivery form has GRAS (generally recognized as safe) status, is Kosher and Halal-certified, and free of GMOs (genetically modified organisms). It was originally launched in 2001 and made then from potato starch. VegaGels were the first vegetarian soft capsules introduced to the market. Following years of research, Swiss Caps introduced an advanced tapioca-based VegaGel that offers an improved barrier, greater compatibility with a wide range of nutraceutical fill ingredients, and enhanced capsule clarity and shine. Other advantages of the tapioca VegaGel include a neutral taste, a USP (Unique Selling Point) monograph and an easy to swallow capsule. VegaGels are also free of gluten, gums, glues and solvents. Conclusion: More studies should be done as soft vegetarian capsules have been launched recently. It could be a good platform to conduct the comparative research study between the hard vegetarian capsule and the soft vegetarian capsule in future so that vegetarian capsule research could be brought up to the next level to be able to assist healthcare professionals as well as to be beneficial to the general public.

Keywords : *soft vegetarian capsule, hard vegetarian capsule, hard bovine gelatin capsule*

Category : Health and Allied Sciences

1471 **HIGHLY EFFICIENT ACTIVATED CARBON FROM PALM SHELL AS AN
ADSORBENT OF TOXIN/POISON#**

Md Mokhlesur Rahman, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*

Mohsina Bintey Shajahan, *Pharm. Chem., Kulliyah of Pharmacy*

Sharif Khan Mohd, *Pharm. Chem., Kulliyah of Pharmacy*

Mohamed Bin Awang, *Pharm. Chem., Kulliyah of Pharmacy*

Kamaruzzaman Bin Yunos, *BioTec, Kulliyah of Science*

Exhibitor : Md Mokhlesur Rahman, Pharmaceutical Chemistry, Kulliyah of Pharmacy

Highly efficient activated carbon as an adsorbent of toxins has been successfully produced from palm shell through chemical activation process using phosphoric acid as activating agents. Palm shell used as the main raw material for activated carbon production was purchased from a local oil palm mill in Pahang, Malaysia. The surface area and pore diameter of the activated carbon was measured by Brunauer, Emmett and Teller (BET) method. Characterization of the activated carbon confirms that it is highly efficient. Finally in vitro test to determine its adsorbing capacity as an antidote for paraquat removal shows that it is highly efficient.

Keywords : *efficient activated carbon, BET, antidote, paraquat, etc*

Category : Health and Allied Sciences

1500 THE EFFECTS OF ADULT CIRCUMCISION ON SEXUALITY AMONG CHINESE MEN: A PRELIMINARY STUDY#

Muhammad Lokman Md Isa, *Basic Medical Sciences for Nursing, Kulliyah of Nursing*
Nur Zu'aini Mohd Sariful Lim, ,

Exhibitor : Muhammad Lokman Md Isa, Basic Medical Sciences for Nursing, Kulliyah of Nursing

Introduction: Circumcision is the procedure to remove the foreskin or prepuce from the penis, left exposing the head/glans. It is carried out by different people in the world of different faiths, cultures and medical understanding for different purposes. In Malaysia, circumcision is a common practice. It is approximately 65 percent of the total Malaysian population of 24 million people are Muslims. Therefore, the circumcision is commonly practiced here for the religious reasons. Objectives: This preliminary study is an initial exploration on the effects of adult circumcision on sexuality, to compare their sex lives before and after circumcision and to identify the acceptance of circumcision among uncircumcised men. Subjects and Methods: Using questionnaire modified from Brief Male Sexual Function Inventory (BMSFI) and Kim and Pang (2006), cross sectional survey was conducted to Chinese men older than 18 years old. Questions were added to assess the acceptability of circumcision and to identify the association between circumcision method and sexuality effects. 81 respondents (aged 19 – 63 years) were conveniently selected into the study, of whom 40 were circumcised and 41 were uncircumcised. Out of the 40 circumcised men, 17 were sexually active before circumcised. Results: There was a significant association between willingness to circumcise with demographic data (age group and level of education). There was no statistically significant difference in sexual drive, erection, ejaculation, and overall satisfaction between circumcised and uncircumcised men. Sex life improved after circumcision in 64.7% of respondents, no change in 35.3% and none reported a worse sex life after circumcision. There was no association between circumcision method and effects after circumcision. Conclusions: Circumcision appears to have positive effects on male sexuality in sexually active adults who undergo the procedure either through traditional or medical approach. Further studies are required to confirm these findings.

Keywords : *Male circumcision, Chinese men, Sexuality, Method of Circumcision*

Category : Health and Allied Sciences

1501 DISTORTION CORRECTION OF DIFFUSION TENSOR IMAGING OF THE SPINAL CORD#

Nur Nadiah Mohd Rais, *Department of Diagnostic Imaging and Radiotherapy, Kulliyah of Allied Health Sciences*

Exhibitor : Nur Nadiah Mohd Rais, *Department of Diagnostic Imaging and Radiotherapy, Kulliyah of Allied Health Sciences*

Introduction: Diffusion tensor imaging of the spinal cord usually suffers from local field inhomogeneity induced by local magnetic susceptibility variations which distort the image in the phase encode direction. Echo planar imaging (EPI) images also generally appear stretched or compressed, which subsequently induced alterations of signal intensity. A new software package developed by Julien Cohen-Adad, PhD., (Harvard Medical School, Massachusetts General Hospital) is used to implement the distortion correction method. **Aims:** 1) Correct for both geometric distortions and intensity variations to yield corrected in-plane voxel. 2) Find the best distortion correction (DISCO) parameters in order to arrive at a valid level of undistorted image. 3) Find the best data acquisition strategy (how many non-diffusion weighted image b0 need to be acquired and what difference does it makes to the amount of distortion). **Methods:** The two images (stretched & compressed) are combined to produce one undistorted image. Three alternatives in analysing DTI data are also being done to compare the influence in the number of b0 on the results. These are: 1) DTI analysis without DISCO 2) DTI analysis by averaging ten sets of b0s 3) DTI analysis by using only one set of b0. Masks of the spinal cord are then created for better estimation of the deformation field and finally different smoothing parameters with and without the masks are tested to arrive at a valid level of undistorted images. **Results:** Corrections for both geometric distortions and intensity variations are achieved. By increasing smoothing parameters in combination with the masks, image data that is closer to the reference data set (gold standard) can be obtained. The number of b0 acquired does not show much difference in terms of the amount of distortions. **Conclusions:** Distortion correction method using DISCO software can be easily implemented with various parameters options. ZOOM-EPI however, is possibly not a huge gain for this project since the technique itself has reduced the distortion. Hence, the distortion correction is not visually so evident on the images although they can be adequately apparent on the statistics value obtained.

Keywords : *Distortion Correction, Diffusion Tensor Imaging, Spinal Cord*

Category : Health and Allied Sciences

**1504 THE EFFECTS OF ORTHODONTIC TREATMENT ON PERIODONTAL HEALTH
AMONG THE ORTHODONTIC PATIENTS ATTENDING KULLIYAH OF
DENTISTRY (KOD) IIUM SPECIALIST CLINIC#**

Widowati Witjaksono, *Periodontics, Kulliyah of Dentistry*

Akbar Sham Hussin, *Orthodontics, Kulliyah of Dentistry*

Sharifah Aishah SA Bakar, -, *Kulliyah of Dentistry*

Rahmah H Alias, -, *Kulliyah of Dentistry*

Exhibitor : Widowati Witjaksono, Periodontics, Kulliyah of Dentistry

Background: Orthodontic treatment requires remodeling of the periodontal tissues, including the periodontal ligament fibers and alveolar bone in order to straighten the misaligned teeth. The effect of orthodontic treatment is apparent esthetically but the effect to the periodontal condition is still in debate. Objective: To investigate the effect of orthodontic treatment on the periodontal condition among the orthodontic patients attending Kulliyah of Dentistry (KOD), IIUM. Methodology: A quasi-experimental study was done among 11 patients scheduled for orthodontic treatment (sample group) at the Orthodontic Specialist Clinic, KOD. Those that fulfill the inclusion and exclusion criteria were selected; 11 patients who are waiting for orthodontic treatment were included as control (control group). The periodontal condition of each patient was examined clinically using WHO 621 probe around the teeth and scored by using the Basic Periodontal Examination (BPE) method. The BPE readings were taken again 6 months after the beginning of orthodontic treatment. Baseline risk ratio (RR) before orthodontic treatment and that of six months after treatment were measured and compared. Results: The baseline RR between the sample group and the control group are: Sextant1 (S1): 0.562; Sextant2 (S2): 0.421; Sextant3 (S3): 2.250; Sextant4 (S4): 5.000; Sextant5 (S5): 3.600; Sextant6 (S6): 2.857. Conclusion: After 6 months of undergoing orthodontic treatment, there is no significant difference in the effect of orthodontic treatment on periodontal condition except in sextant 2

Keywords : BPE, Orthodontic treatment, WHO 621 probe, Periodontium, RR.

Category : Health and Allied Sciences

1507

EMG-CONTROLLED ROBOTIC THUMB#

Shahrul Naim Sidek, *Mechatronics Engineering, Kulliyah of Engineering*
NorAnija Jalaludin, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : Shahrul Naim Sidek, Mechatronics Engineering, Kulliyah of Engineering

Human are born with five fingers connected to each of the hands. These fingers have their own specific role that contributes to different hand functions. Among the five fingers, the thumb plays the most special function as an anchor to many of hand activities such as turning a key, gripping a ball and holding a spoon for eating. As a result, the lost of thumb due to traumatic accidents could be catastrophic as proper hand function will be severely limited. In order to solve this problem, a robotic thumb is developed to complement the function of the rest of the fingers. In developing the system the relationship between the electromyography (EMG) and thumb tip force is first investigated in order to develop a more natural controlled prosthetic thumb. The signals are measured from the thumb intrinsic muscles namely the Adductor Pollicis (AP), Flexor Pollicis Brevis (FPB), Abductor Pollicis Brevis (APB) and First Dorsal Interosseous (FDI). Meanwhile the thumb tip force is recorded by using the force sensor (FSR). The classification of the EMG signals based on different force and thumb configuration is performed by using Artificial Neural Network (ANN). A series of experiments have been conducted and the results show the ability of ANN to classify the EMG signals. The ANN model is later used to control the robotic thumb and the system shows a satisfactory performance.

Keywords : *emg signal, intrinsic thumb muscle, robotic thumb, prostheses thumb*

Category : Health and Allied Sciences

1532 RED TILAPIA SCALES - A POTENTIAL BIOMATERIAL FOR THE MEDICAL AND PHARMACEUTICAL INDUSTRIES#

Suzanah Abdul Rahman, *Biomedical Science, Kulliyah of Allied Health Sciences*

Husna Zambry, *Biomedical Science, Kulliyah of Allied Health Sciences*

Ahmad Saifuddin Othman, *Biomedical Science, Kulliyah of Allied Health Sciences*

Munirah Sha'ban, *Biomedical Science, Kulliyah of Allied Health Sciences*

Ahmed Jalal Khan Chowdhury, *Institute of Oceanography and Maritime Studies, Kulliyah of Science*

Exhibitor : Suzanah Abdul Rahman, Biomedical Science, Kulliyah of Allied Health Sciences

Red tilapia (*Oreochromis niloticus*) is among the popular fresh water fish types sold in Malaysia and its wastes, which include scales, skin, and bones can be found abundantly in markets. The concept of 'waste to wealth' has been applied widely as an alternative to waste reduction and environmental conservation. Based on these perspectives, this study was conducted to assess whether scales of this fish could induce any dermal reactions and also to determine the compatibility with human cells for purposes of medicinal and pharmaceutical novel inventions. A mouse model of delayed-contact hypersensitivity, mouse ear swelling test was chosen to predict contact sensitization using four female Balb/c mice in each testing group. Three different doses of scales powder (500, 1000, and 2000 mg/kg) in an acetone and olive oil formulation were applied to shaved dorsal trunk of the mice at induction phase and to both sides of each ear of the mice at elicitation phase. Mice ear thickness was measured at pre-treatment, 24 hours and 48 hours post-treatment with a Mitutoyo micrometer. An increase in thickness in the form of swelling greater than 20% is considered as a positive response. Observations showed that neither erythema nor oedema was formed and ear thickness increase showed no positive ear swelling response. Next, the cytotoxicity effect of the scales was tested on rabbit cornea keratocytes. The scales were dissolved in DMSO and concentrations of 25, 50, and 100 µg/mL were tested on the cells that were first grown to confluency and seeded into 96 well plates. The microplates were incubated at 37°C supplemented with 5% CO₂ for 48 hours. Absorbance is a fraction of radiation absorbed at specific wavelengths and XTT assay was performed to evaluate the cytotoxicity effect by measuring absorbance at 450 and 650 nm using a spectrophotometer after four different times of incubation (1, 4, 12, and 24 hours). It was found that increasing concentrations linearly inhibited corneal keratocytes activity. Thus, the findings of this study indicated that scales of red tilapia do not induce allergic sensitization but the inhibition on corneal keratocytes activity suggested a requirement of further testing especially on the correct effective concentration before the scales can be applied in the medicinal and pharmaceutical industries.

Keywords : *Red Tilapia, Oreochromis niloticus, Mouse ear swelling test, Corneal keratocytes, Balb/c*

Category : Health and Allied Sciences

1539 EXTRACTION OF COCOA BUTTER EQUIVALENT FAT FROM MANGO SEED KERNEL USING SUPERCRITICAL CARBON DIOXIDE#

Md Zaidul Sarker, *Department of Pharmaceutical Technology, Kulliyah of Pharmacy*
Jahurul Haque, *School of Industrial Technology, USM,*
Sahena Ferdosh, *School of Industrial Technology, USM,*
Sharif Khan, *Department of Pharmaceutical Chemistry, Kulliyah of Pharmacy*
Omar Kadir, *School of Industrial Technology, USM,*
Norulaini Nik, *School of Distant Education, USM,*

Exhibitor : Md Zaidul Sarker, Department of Pharmaceutical Technology, Kulliyah of Pharmacy

Huge amount of mango seed kernels (MSK) are discarded as agricultural wastes of industrial processing's by-product and wastes of direct consumption of the mango fruits that contain considerable amount of cocoa butter analogy fats. Cocoa Butter (CB) is a natural fat obtained from cocoa beans (*Theobroma cacao*). Cocoa butter is highly expensive because of its specific physiochemical properties, low amount of CB fat in cocoa seed and cultivation in a few countries. Food industries are keen to find for alternative fats to cocoa butter from cheap natural sources. Therefore, MSK oil could be one of the alternatives of CB. Mango seed kernel fat could be claimed as the cheapest CB alternative source due to their unique physical and chemical characteristics which show resemble of those to CB. Supercritical carbon dioxide (SC-CO₂) extraction was introduced for screening the waste of MSK obtaining high amount and premium grade CB quality fats. Six different varieties of mango were chosen from where apple mango kernel (AMK) were extracted using SC-CO₂ at pressures of 35 and 42 MPa, temperatures of 60 and 72 °C, and constant CO₂ flow rate at 3.4 ml min⁻¹. The samples were also extracted using Soxhlet extraction method as a conventional method to compare the quantity and the quality of the SC-CO₂ extracted oil yield. The extraction parameters of SC-CO₂ were optimized using central composite design (CCD) of response surface methodology (RSM) yielding cocoa butter analogy fats from mango seed kernels of AMK. The optimized yield was compared with the yield of Soxhlet extraction method. The optimized oil yield was predicted to be 11.3% at pressure 44 MPa, temperature at 72 °C and CO₂ flow rate at 3.4 ml min⁻¹ which was closer to the oil yield (11.7%) of Soxhlet extraction method. However, stearic acid (about 37%) and oleic acid (about 33%) the most predominant fatty acid constituents of CB, and the other triglycerides in terms of fatty acid constituents of the oil yield extracted from AMK at optimized condition of SC-CO₂ were found to be the resemble to that of commercial CB. Moreover, the most important physico-chemical properties such as slip melting point (SMP), solid fat content (SFC), iodine value (IV), saponification value (SpV) and acid values (Av) of AMK oil were also found be similar to that of commercial CB. Thus, the AMK oil extracted using SC-CO₂ method could be proposed as premium quality cocoa butter analogy fats.

Keywords : *Supercritical CO₂ extraction, Optimization, Mango seed kernel oil, Cocoa butter analogy fats, Fatty acid constituents*

Category : Health and Allied Sciences

1542 SELECTED HERBAL EXTRACTS IMPROVE DIABETES ASSOCIATED FACTORS IN 3T3-L1 ADIPOCYTES#

Muhammad Muzaffar Ali Khan Khattak, *Nutrition Sciences, Kulliyah of Allied Health Sciences*

Muhammad Taher Bakhtiar, *Pharmaceutical Technology, Kulliyah of Pharmacy*

Solachuddin JA Ichwan, , *Kulliyah of Dentistry*

Exhibitor : Muhammad Muzaffar Ali Khan Khattak, Nutrition Sciences, Kulliyah of Allied Health Sciences

Owing to the current worsening situation of the increasing burden of diabetes around the world including Malaysia it is worthwhile to discover non-pharmacological prevention or treatment for it. In order to have a useful explanation of the efficacy of herbs or nutrients for diabetes; it is desirable to know the effect on the balance between the adipogenesis, adipolysis and glucose uptake in the adipose tissues. Therefore, four herbs namely *Orthosiphon stamineus* (Cat whisker) (OS), *Peronema canescens* (Sungkai) (PC), *Momordica charantia* (Bitter gourd/bitter melon) (MC) and *Pithecellobium jiringa* (Jering) (PJ) were screened for their antidiabetic properties in in vitro model 3T3-L1 adipocytes. Water extracts of these herbs were prepared and evaluated for their effects on cell proliferation, adipogenesis, adipolysis and glucose uptake in 3T3-L1 preadipocytes cells. The aforementioned extracts promoted cell proliferation at a dose of 0.25mg/ml which showed more than 90% viability after 48 hours of treatment. The result of this study indicates that OS extracts significantly ($P < 0.001$) increased adipogenesis whereas PC, MC and PJ extracts were not effective compared to control. The extracts from all four plants caused increased lipolysis compared to control. The Extract from OS and PJ significantly ($P < 0.05$) stimulated glucose uptake in the cells whereas PC, MC were not effective. When the glucose consumption was compared to control it was significantly ($P < 0.001$) increased for all extracts in the medium. The present study provides some important baseline data on the biochemical aspects of the effect induced by the herbs and suggestive of possessing antidiabetic properties which can be exploited for diabetes prevention and associated metabolic dysfunctions.

Keywords : Herbal extracts, 3T3-L1 adipocytes, adipogenesis, adipolysis, glucose uptake

Category : Health and Allied Sciences

1552 CHARACTERIZATION OF AIRBORNE PARTICULATES (PM10 & PM2.5) AT THE NATIONAL MUSEUM MALAYSIA#

SHAMZANI AFFENDY MOHD DIN, *APPLIED ARTS & DESIGN, Kulliyah of Architecture & Environmental Design*
NORSYAMIMI HANAPI, *APPLIED ARTS & DESIGN, Kulliyah of Architecture & Environmental Design*

Exhibitor : SHAMZANI AFFENDY MOHD DIN, Applied Art and Design, Kulliyah of Architecture & Environmental Design

Keywords :

Category : Health and Allied Sciences

1554 AIRBORNE PARTICULATES MATTER IN NATIONAL TEXTILE MUSEUM ENVIRONMENT#

SHAMZANI AFFENDY MOHD DIN, *APPLIED ARTS & DESIGN, Kulliyah of Architecture & Environmental Design*
NOORFADHILAH BAROLDIN, *APPLIED ARTS & DESIGN, Kulliyah of Architecture & Environmental Design*

Exhibitor : SHAMZANI AFFENDY MOHD DIN, Applied Art and Design, Kulliyah of Architecture & Environmental Design

Keywords :

Category : Health and Allied Sciences

1557 COLLECTION AND CHARACTERISATIONS OF FINE (PM_{2.5}) AND ULTRA FINE (PM_{1.0} & PM_{0.1}) PARTICULATES MATTER IN KUALA LUMPUR, KLANG AND PUTRAJAYA HOSPITAL.#

ALIAS ABDULLAH, *URBAN REGIONAL & PLANNING, Kulliyah of Architecture & Environmental Design*
SHAMZANI AFFENDY MOHD DIN, *APPLIED ARTS & DESIGN, Kulliyah of Architecture & Environmental Design*
NIK NURUL-HIDAYAH NIK YAHYA, *APPLIED ARTS & DESIGN, Kulliyah of Architecture & Environmental Design*

Exhibitor : SHAMZANI AFFENDY MOHD DIN, *Applied Art and Design, Kulliyah of Architecture & Environmental Design*

Keywords :

Category : Health and Allied Sciences

1560

HEALTH AND ALLIED SCIENCES#

Bo Bo Ko, *Oral Biology Unit, Kulliyah of Dentistry*
Tin Myo Han, *Dental public health, Kulliyah of Dentistry*

Exhibitor : Bo Bo Ko, Oral Biology Unit, Kulliyah of Dentistry

Initial assessment on a case scenario based tooth morphology teaching Bo Bo Ko , Tin Myo Han Kulliyah of Dentistry, International Islamic University Malaysia Abstract The aim of the study is to explore the better teaching learning method in tooth morphology teaching .Dental anatomy usually seems to be the dullest subject for the undergraduate dental students .This study design is interventional and the author put a case scenario in tooth morphology teaching to simulate the clinical atmosphere. 43 first year dental students (6 males and 37 females) of International Islamic University Malaysia participated in the study. They were randomly divided into two groups. Group one, the intervention group was taught on morphology of 13 with a case scenario based power point slides. After the lecture the students from this group were supposed to answer the assessment including general knowledge, tooth specimen identification and specific knowledge. In addition to that their perception towards this teaching method was assessed by questionnaires using likert's scale and one open ended question for over all comment. Group two, the control group was taught by the usual class room power point slides. After the lecture ,their knowledge gained on morphology of 13 was also assessed as same as the group one. However,the group two students were not asked for their perception towards case scenario based teaching as they ever did not go through it. In fact, all the students from both groups went through the usual class room morphology teaching on 11 and 12 already. Finally, the score regarding the general knowledge, tooth specimen identification and the specific knowledge on 13, between the two groups were compared by chi-square test and it was found to be statistically not significant. However the students from the intervention group scored much more in specific knowledge part. The minimal score in general knowledge part in the intervention group is quite higher than the control group. Majority of the students in the intervention group agreed that a scenario based teaching is more interesting and can provide the knowledge beyond the boundary of tooth morphology regarding general dentistry.

Keywords : *case scenario, tooth morphology teaching,students perception,teaching learning method*

Category : Health and Allied Sciences

1568 ASSOCIATION BETWEEN PROGNOSTIC BIOMARKERS OF CYCLIND1 AND ESTROGEN RECEPTOR IN BREAST CANCER BY IMMUNOHISTOCHEMICAL ANALYSIS#

SANDA AUNG, *Basic Medical Sciences, Kulliyah of Pharmacy*
THA AUNG, *Pathology, University of Medicine (1), Yangon, Myanmar,*

Exhibitor : SANDA AUNG, *Basic Medical Sciences, Kulliyah of Pharmacy*

Breast cancer is the most common malignant tumour & the leading cause of cancer death in women worldwide annually. Invasive duct carcinoma of the breast is a clinically and biologically heterogeneous disease. A cross-sectional study was carried out among 40 cases of formalin fixed, paraffin embedded tissue sections of invasive duct carcinoma (NST) of the breast. Histological grading was done according to Modified Bloom and Richardson Grading. Immunoexpression of cyclinD1 (using DAKO M7155) and ER (using DAKO M7047) were detected by immunohistochemistry. In this study, at least 10% of brown nuclear staining regardless of staining intensity was interpreted as positive. The data was analysed by using chi-square test. (SPSS version 11.5). In 40 patients, the ages ranged from 34 to 78 years with a mean of 54 years. CyclinD1 expression was detected in 43% (17 of 40) of cases, and was inversely associated with histological grade ($p=0.01$). ER immunoreactivity was found in 30% (12 of 40) of patients and was inversely associated with histological grade ($p=0.021$). CyclinD1 immunoreactivity was positively associated with estrogen receptor expression ($p=0.043$). There was no significant correlation with clinical prognostic parameters of age, menopausal status, tumour size and clinical stage with both prognostic biomarkers.

Keywords : *breast cancer, cyclinD1, estrogen receptor, immunohistochemistry*

Category : Health and Allied Sciences

1589 **A NEW HOPE TO CONTROL FOODBORNE DISEASES AND POLLUTION:
POTENTIAL ANTIMICROBIAL PEEL OF CUCURBITA MOSCHATA#**

EL Zawane Kamarudin, *Biotechnology, Kulliyah of Science*
Qamar Uddin Ahmed, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*
Ahmed Jalal Khan Chowdhury, *Biotechnology, Kulliyah of Science*
Zuvairea Nazren Mohd. Sirajudin, *Biotechnology, Kulliyah of Science*
Abul Bashar Mohammed Helaluddin, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*

Exhibitor : Qamar Uddin Ahmed, Pharmaceutical Chemistry, Kulliyah of Pharmacy

In food industries, different kinds of antimicrobial agents are used during food processing in order to prevent and controlling diseases, enhance the growth and also to increase the production efficiency. However, their persistent use leads to the emergence of resistant in microorganism. Thus, alternative strategies are sought by using unutilized and safe antimicrobial byproducts from natural resources. Cucurbita moschata (tropical pumpkin) is one of the potential candidates whose peels are usually treated as wastes and are discarded during the processing and are responsible for increased pollution. Hence, this study was designed to explore the antimicrobial potential of peels extracts of *C. moschata* in order to generate safe and cheap antimicrobials as well as to address issues related to pollution due to such wastes. Antimicrobial properties of dichloromethane, methanol and aqueous extracts of the pumpkin peel were investigated against *Bacillus cereus*, *Burkholderia cepacia*, *Escherichia coli*, *Enterococcus faecalis*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Vibrio alginolyticus*, *Vibrio parahaemolyticus*, *Candida albicans*, *Candida krusei* and *Candida tropicalis* strains using the broth micro-dilution method. Microdilution method showed minimum inhibitory concentration (MIC) for dichloromethane extract against *B. cepacia* at 6.25 µg/µl. The minimum bactericidal/fungicidal concentrations (MBC/MFC) were also determined to know the nature of all extracts. The screening of antimicrobial properties of different extracts of *C. moschata* peels revealed that dichloromethane extract possesses good antimicrobial efficacy compared to methanol and aqueous extracts. Thus, antimicrobial compounds could be non-polar in nature. *C. moschata* possesses antimicrobial activity and could be potential source for a new class of antibiotics that might be useful to control foodborne diseases.

Keywords : *Pumpkin peel, Cucurbita moschata, Antimicrobial activity, Pathogenic bacteria, Fungi, Broth micro-dilution method, MIC, MBC, MFC, Foodborne diseases*

Category : Islamic Finance and Economics

1004 THE EFFECTS OF ISLAMIC SPIRITUALITY PARADIGM IN DEVELOPING HUMAN CAPITAL PROGRAMS FOR ISLAMIC FINANCIAL INSTITUTIONS#

Suhaimi Mhd Sarif, *Business Administration, Kulliyah of Economics and Management Sciences*

Yusuf Ismail, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Suhaimi Mhd Sarif, Business Administration, Kulliyah of Economics and Management Sciences

This paper explores the effects of Islamic spirituality paradigm in the mindset of Islamic financial institutions (ISFs) managers in developing human capital programs for ISFs. Islamic spirituality embraces a global perspective in terms of Oneness of God (Tawhidic) worldview that emphasizes on the sole submission, obedience and compliance to the Will of God. A competitive human capital programs with Tawhidic worldview provides a robust and comprehensive framework for managers in ISFs to work with and through competent and Tawhidic conscious employees to achieve organizational goals with efficiency and effectiveness. The integration of Islamic spirituality paradigm into the human capital programs enable businesses to create and sustain unique capacity to take advantage of the opportunities within the Islamic spirituality values. The study conducted personal interview with 10 student of Graduate School of Management International Islamic University Malaysia to explore the influence of Islamic spirituality paradigm in developing human capital programs for ISFs towards sustaining business competitiveness and strive for the betterment of Muslim Ummah. The results of the study show that the Islamic spirituality paradigm in the human capital programs is acceptable due to its emphasis on ISFs sustainability and betterment of humanity and Muslim Ummah, which by default includes all races of humanity. The operationalization of Tawhidic paradigm into human capital programs in the managerial skill and thinking should enable managers face global business challenges such as various regional trade alliances, different structures of global business organizations, and the global political/legal/economic environment. The theoretical implication for the study is on the integration of conventional managerial paradigm with Islamic spirituality. As for the practical implication for the study is the operationalization of Islamic spirituality into standard operating procedure. However, the results of the study are not conclusive and cannot be generalized. The study proposes future studies to use case studies method and to include key business stakeholders into the focus group discussion.

Keywords : *Managerial paradigm, Islamic financial institutions, Malaysia*

Category : Islamic Finance and Economics

1019

DEVELOPING SPIRITUAL INTELLIGENCE AMONG STUDENTS#

Rodrigue Fontaine, *Business Administration, Kulliyah of Economics and Management Sciences*
Md Aftab Anwar, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Rodrigue Fontaine, Business Administration, Kulliyah of Economics and Management Sciences

This study reports on an experiment with 96 KENMS students. One of their assignment (entitled "Developing an Islamic personality") required them to access one Islamic talk a week throughout the semester and submit a weekly synopsis. At the beginning of the semester, their spiritual intelligence was tested using King (2008). At the end of the semester, their spiritual intelligence was re-tested. This study shows how spiritual intelligence changed. One of the main benefits of greater spiritual intelligence seems to be the ability to deal with problems in a more productive manner.

Keywords : *Spiritual intelligence, personal development, online*

Category : Islamic Finance and Economics

1024 #البشري المال رأس في الاسـتثمار نحو طريقً :بماليزيا العلمي البحث تمويل

علي شحادة عاصم , ARABIC DEPARTMENT, Kulliyyah of Islamic Revealed Knowledge and Human Sciences

Exhibitor : علي شحادة عاصم , Arabic Language & Literature, Kulliyyah of Islamic Revealed Knowledge and Human Sciences

-
Keywords : asem shehadeh ali

Category : Islamic Finance and Economics

1046 REVISITING THE PRINCIPLES OF GHARAR(UNCERTAINTY) IN ISLAMIC BANKING FINANCING INSTRUMENTS WITH SPECIAL REFERENCE TO BAY AL-INAH AND BAY AL-DAYN- TOWARDS A NEW MODIFIED MODEL#

Siti Salwani Razali, *Business Admin, Kulliyah of Economics and Management Sciences*

Exhibitor : Siti Salwani Razali, Business Administration, Kulliyah of Economics and Management Sciences

One of the significant features of Islamic banking is the elimination of riba and gharar. However many problems arise in some of Islamic banking financing instruments when they are claimed to contain significant elements of gharar thus held unacceptable in certain Muslim countries. Among these instruments are Bay al-Inah and Bay al-Dayn. Currently, Bay al-Inah is not accepted in some countries such as the Middle East countries as it is regarded as part of interest-based transaction. However, in Malaysia, Bay al-Inah has been formalised as a permissible practice and is has emerged as the most important mode of transactions that stimulates the growth of Islamic transaction in Malaysia, which finally comes across the globe to be among the most successful Muslim state in the development of Islamic Finance. On the other hand, Bay al-dayn or the sale of debt is not unanimously accepted or validated by Muslim scholars. Even though some scholars allow it in all forms and aspects, the others either disallow it entirely or allow it under certain circumstances and with certain clauses or conditions. The paper will discuss at length on both contracts and the legal implications of the presence of gharar on the validity of these contracts. The views from the jurists will be critically examined to revisit the existence of gharar especially in these two Islamic banking instruments namely bay al-dayn and bay al-inah.

Keywords : *Islamic Financial Instruments, Contracts, Gharar(Uncertainty), Bay Inah and Bay al-Dayn, Islamic Banking Products*

Category : Islamic Finance and Economics

1047 PRINCIPLE OF INVITATION TO TREAT AND MU'ATAH IN THE ONLINE CONTRACT#

Siti Salwani Razali, *Business Admin, Kulliyah of Economics and Management Sciences*

Exhibitor : Siti Salwani Razali, *Business Administration, Kulliyah of Economics and Management Sciences*

Principle of Invitation To Treat and Mu'atah in the Online Contract ABSTRACT In dealing with the issue of offer, it is crucial to determine whether a statement communicated does amount to an offer or a mere invitation to treat. Even though offer and acceptance are among the basic elements that forms a particular contract which binds both contracting parties, however in the case of invitation to treat, both Common Law and Islamic Law have its own views regarding this matter. Meanwhile, the main focus of this paper regarding the principle of Invitation to Treat and Mu'atah as specified in the Islamic law. One important thing to be highlighted in this paper is how the invitation to treat can be considered as a valid contract based on views by some of the Islamic jurists, although the under common law it is stated that it is invalid due to the fact that it is regarded as mere invitation to treat which does not constitute the offer. This paper also compares the differences between both principles in the context of online or cyber transaction. Subsequently, in order to explain in detail both principles of invitation to treat and mu'atah, this paper refers to several Quranic verses, Hadith of the Prophet and opinions from many Muslim and non-Muslim scholars. In order to support our arguments, we also indicate some cases pertaining to the principle. Finally, this paper aims to provide better understanding on both principles as well as to analyze some critical issues especially with regards to the invitation to treat.

Keywords : *Mua'tah, Invitation to Treat, offer (ijab), acceptance (qabul), website, sighah, display of goods, auction, advertisement, tenders, Islamic Law, Common Law, jurists*

Category : Islamic Finance and Economics

1056 AGENCY PROBLEMS, AMANAH AND VALUE MAXIMIZATION IN CORPORATE FINANCING#

Razali Haron, *Finance, Kulliyah of Economics and Management Sciences*
Khairunisah Ibrahim, *Finance, Kulliyah of Economics and Management Sciences*

Exhibitor : Razali Haron, Finance, Kulliyah of Economics and Management Sciences

Theories on capital structure have long been studied in a variety of settings and economic environments throughout the years using a set of commonly cited influencing factors. Literature claims that corporate financing decisions in the emerging market are much influenced by agency problems and financial constraints. This study intends to investigate whether agency problems and financial constraints do influence greatly in the corporate financing decisions among firms in the emerging market as claimed. Using a set of firm and country level determinants this study employed two static models on panel data covering 790 firms (Malaysia), 269 firms (Thailand) 546 firms (Singapore) for the period of 2000-2009. This study confirms the notion that agency theory is the dominant theory in governing the corporate financing decision on firms in emerging market. A high proportion use of short term debt, as found in this study acts as a controlling mechanism to mitigate asset substitution and underinvestment problem thus strongly supports the finding on the domineering agency theory. Lenders who engage in monitoring have incentives to lend short term debt. This may rationalize why agency theory is the most dominant theory as found in this study, as debt being a controlling mechanism on managers. This finding has policy implication in addressing the issues of agency problem. Looking at the agency issues from an Islamic perspective, there is one fundamental element that should be considered and taken into account in the attempt to mitigate the shareholders and managers conflicts which is the concept of amanah (trustworthiness) especially when debt is used as the mitigating tool for asset substitution and underinvestment problem as evidenced in this study. Since being an Islamic firm complying with Syariah tenets, its aim will be falah (wealth) maximisation which can be translated into value maximization but with social welfare agendas borne in mind. One of the proposed instruments to achieve this is by exercising the spirit of brotherhood among the shareholders and managers via the Islamic principle of risk sharing. This particular principle implies that any investments or business undertakings must assume loss or risk of which failing to do so would violate the principle of 'adl (justice). Thus sharing the risk would drive both the shareholders and managers to work harder and inculcate the spirit of brotherhood between them in realizing value maximization. The basis of this relationship between shareholders and managers according to Islamic principles is the concept of amanah (trustworthiness) where the manager, an agent working on behalf of the shareholders, tries to serve the interest of the firm with amanah and put aside his own motives. When amanah is there, the trust built between them will be so strong that agency problems can be mitigated. Asymmetric information can be ruled out when amanah is in practice thus shareholders-managers conflicts can be alleviated.

Keywords : *Agency Problems, Amanah, Value Maximization, Corporate Financing*

Category : Islamic Finance and Economics

1062 ISLAMIC CAPITAL MARKET AND RATIONAL FINANCING BEHAVIOUR OF SHARIAH COMPLIANT FIRMS#

Razali Haron, *Finance, Kulliyah of Economics and Management Sciences*
Khairunisah Ibrahim, *Finance, Kulliyah of Economics and Management Sciences*

Exhibitor : Razali Haron, Finance, Kulliyah of Economics and Management Sciences

The development of the Islamic Capital Market (ICM) in Malaysia has been a remarkable one with a recorded average expansion rate of 13.6% per annum over the ten year period between 2000 and 2010 and is anticipated to expand further at the average rate of 10.6% per annum over the ten year period to 2020, to reach RM 2.9 trillion by 2020. In line with its future expansion, Shariah compliant securities (listed firms) are forecasted to be one of the important elements in ICM. Therefore, this study aims to examine the dynamic aspect of capital structure among Shariah compliant firms in Malaysia. Specifically this study will cover the determinants of target capital structure, existence of target, speed of adjustment to target capital structure, factors affecting speed of adjustment and firms' rational financing behaviour. The study employs the Partial Adjustment Model and to be estimated using Generalized Method of Moment (GMM) suggested by Arellano and Bond (1991). GMM estimators are employed because they are widely used in estimating the Partial Adjustment Model. 663 Shariah compliance securities are analyzed during a period of 10 years from 2000 to 2009. Looking at the dynamic aspects, the study finds that there exists a target level (optimal) of leverage for Shariah compliant firms in Malaysia. The results on the determinants show that country specific factors also have strong influence in corporate financing behaviour of these Shariah compliant firms in Malaysia along with firm specific factors. Pursuing target capital structure firms do adjust from time to time due to time varying factors. The study finds strong evidence on the negative relationship between speed of adjustment and DIST (distance from target leverage and observed leverage) on firms, thus implying that these firms adjust faster if their actual leverage is not far from target. Firm size is found to have negative relationship with speed of adjustment while profitability and growth are positively related throughout these Shariah compliant firms. We also depict that these firms are always under-adjust in the sense that they fall short of the adjustment required to attain to the target leverage levels. These firms close by 60.13% the gap between current and target leverage within one year and take 1.66 year to reach target leverage suggesting the existence of dynamic trade-off theory. Approximately 71.82% for Shariah complaint firms in Malaysia behave rationally and 75% seem to be over-levered compared to 25% under-levered. This suggests these firms consume excessive debt due to the influence of the positive economic growth and stable interest rates environment during the period. When comparison is made between the under-levered and over-levered firms for Shariah compliant firms in Malaysia, the mean speed of adjustment for under-levered firms are reported to be higher compared to the over-levered firms. This study on factors affecting speed of adjustment and firm rational financing behaviour is a new contribution to the literature as no work has been done regarding these issues specifically on Shariah compliant firms of ICM.

Keywords : *Islamic Capital Market, Rational Financing Behaviour, Shariah Compliant Firms, Generalized Method of Moments*

Category : Islamic Finance and Economics

1066 MEASURING SERVICE QUALITY PERFORMANCE IN THE MALAYSIAN FINANCIAL INDUSTRY: A COMPARATIVE ANALYSIS OF SELECTED BANKS#

Dzuljastri Abdul Razak, *Department of Finance, Kulliyah of Economics and Management Sciences*
Mustafa Omar Mohammed, *Department of Economics, Kulliyah of Economics and Management Sciences*
Mohd Zaidi Md Zabri, *Management Centre*

Exhibitor : Dzuljastri Abdul Razak, Department of Finance, Kulliyah of Economics and Management Sciences

Purpose – Based upon the SERVQUAL model, this paper attempts to measure and compare the service quality between local and foreign-owned Islamic banks in the Malaysian financial industry, in light of the liberalisation of its Islamic banking sector. **Design/Methodology** – Two batteries of 22 statements each measuring the customers' expectations and perceptions were developed based on the original dimensions of the SERVQUAL model. Data were collected from 153 Islamic banks' customers residing in two major cities in Selangor, Malaysia using self-reporting questionnaires. Factor analysis is used to validate the instrument, after which the gap analysis is employed. **Findings** – The factor analysis extracted three dimensions of service quality, i.e. tangibility, competence and empathy. The results reveal that there are large and significant differences between respondents' expectations and perceptions. Specifically, the perceptions of competency are found to be significantly different between these two types of banks. **Implications** – The Malaysian Islamic banking industry needs to take initiative to become more competent by being more responsive through continuous upgrading its tangible assets while providing superior service quality with empathy, which is in conformity with the Maqasid al-Shariah (objectives of the Islamic law). **Originality/value** – This study is the pioneering study in examining the general perception and expectation of service quality among the local Malaysian Islamic banking patrons vis-à-vis its foreign-owned counterparts using the SERVQUAL model.

Keywords : *Service quality, Islam, Finance, Banking, Malaysia*

Category : Islamic Finance and Economics

1067

INTRODUCING TAKAFUL IN INDIA: PROSPECTS AND CHALLENGES#

Sheila Nu Nu Htay, *IIUM Institute of Islamic Banking & Finance, IIUM Institute of Islamic Banking & Finance*
Ahmed Salman Syed, *IIUM Institute of Islamic Banking & Finance, IIUM Institute of Islamic Banking & Finance*

Exhibitor : Sheila Nu Nu Htay, IIUM Institute of Islamic Banking & Finance, IIUM Institute of Islamic Banking & Finance

The main objective of this research is to examine the viability of introducing takaful in India by investigating the prospects and challenges of introducing it. India is a multi-linguistic country with the sacred feature of it is 'unity in diversity'. It is a country with 1.38 billion population and 13.6% of its population are Muslims. It has the third highest Muslim population after Indonesia and Pakistan. Thus, this study surveys the prospects and challenges of introducing takaful in India by questionnaire to the public and interviewing the insurance operators. Descriptive statistics is used to analyze the questionnaire and content analysis is used for interviews. The findings from the questionnaire show that the awareness of takaful is least but the acceptability of takaful and its expected prospects are very good. Moreover, the interview results show that insurance operators are able to offer the takaful products by extending product line or through Islamic windows although their staff need to go through training to be familiar with takaful. In the opinion of insurance operators, the future of takaful is bright, provided that the government is willing to support it. Basically, it has been found that strengths and prospects of introducing takaful are more than weaknesses and threats. Thus, this study concludes that it is viable to introduce takaful in India.

Keywords : takaful, india

Category : Islamic Finance and Economics

1068 INVISIBLE HANDS BEHIND CORPORATE GOVERNANCE PRACTICES IN MALAYSIA#

Sheila Nu Nu Htay, *IIUM Institute of Islamic Banking & Finance, IIUM Institute of Islamic Banking & Finance*
Ahmed Salman Syed, *IIUM Institute of Islamic Banking & Finance, Advanced Engineering and Innovation Centre*
Ibrahim Shaugee, *IIUM Institute of Islamic Banking & Finance, IIUM Institute of Islamic Banking & Finance*

Exhibitor : Sheila Nu Nu Htay, IIUM Institute of Islamic Banking & Finance, IIUM Institute of Islamic Banking & Finance

The issues of corporate governance became very popular in the corporate world in UK, USA and Europe during the last two decades. With the opening up of economies and liberalization, the concern for corporate governance also spread to the developing world. Therefore, most of the developed and developing countries, including Malaysia have laid down corporate governance guidelines to enhance the current governance practices. Based on the analysis of the contents in the corporate governance codes, most of the recommendations are founded on the concept of agency theory. Unfortunately, the majority of the findings of researchers show that the results are not in line with the theoretical expectations. In Malaysia, Malaysian Code on Corporate Governance was introduced in 1998 and eventually; it has been amended in 2000 and 2007. However, some of the findings on corporate governance in Malaysia are not in line with the recommendations of the Code. Thus, this study examines the possible reasons that hinder current corporate governance system less effective in Malaysia. The main reasons for this problem are due to nature of ownership structure, political and culture background of Malaysia and the adoption of unsuitable foreign corporate governance template. The findings of this research will be useful for the regulators to develop future rules and regulations and implement them accordingly.

Keywords : *corporate governance, malaysia*

Category : Islamic Finance and Economics

1072 A STUDY ON THE CONCEPT OF MATERIALITY IN SHARI’AH AUDIT: A SHARI’AH PERSPECTIVE#

Ahmad Zainal Abidin, ,
Noraini Mohd Ariffin, *Accounting, Kulliyah of Economics and Management Sciences*
Marjan Muhammad, ,

Exhibitor : Noraini Mohd Ariffin, Accounting, Kulliyah of Economics and Management Sciences

The concept of materiality provides a basis for auditors to ignore small misstatements, but there are variations of definition for what is considered “small”. Materiality in auditing is important because they have a significant influence on what information is recorded in the accounts and disclosed in financial statements and hence available for decision making by external parties. Conventional audit has been using this materiality concept as one of the important concepts in conducting an audit, whether at planning, executing or reporting stage. However, there is no study about the application of this concept from the Shari’ah perspective, particularly in Shari’ah audit. Thus, the objectives of this study is firstly, to study the permissibility of the materiality concept in Shari’ah audit, particularly from reporting perspective, and secondly, to analyse the current practice of materiality concept in Shari’ah auditing in Islamic banks in Malaysia. The study will use the library research through investigation of classical and contemporary books to address the first objective of the study. For the second objective, the study adopts a multiple case study and documentations review and interview method are chosen for the data collection. It is hoped that this study may be considered as a preliminary attempt to discuss further this materiality concept from the Shari’ah perspective.

Keywords : *Shari’ah audit, materiality, Islamic banking*

Category : Islamic Finance and Economics

1076 THE MEASUREMENT MODEL OF SOCIAL RESPONSIBILITY CONSTRUCT FROM ISLAMIC PERSPECTIVE: EMPIRICAL ANALYSIS OF MALAYSIAN BUSINESS ORGANIZATIONS#

Naail Mohammed Kamil, *Business Administration, Kulliyah of Economics and Management Sciences*

Mohamed Sulaiman, *Business Administration, Kulliyah of Economics and Management Sciences*

AAhad M. Osman-Gani, *Business Administration, Kulliyah of Economics and Management Sciences*

Khaliq Ahmad, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Naail Mohammed Kamil, Business Administration, Kulliyah of Economics and Management Sciences

The present study investigates the measurement model of the Islamic social responsibility (ISR) construct in business organizations in the Malaysian context. The study aims to contribute new knowledge to the existing literature of Social responsibility (SR) in general, and ISR in particular. Using disproportionate stratified random sampling, the survey data used for this empirical research was drawn from 405 Muslim employees in business organizations in Malaysia. After yielding an instrument to measure ISR, Principal Component Analysis (PCA) using SPSS version 18.0, and Confirmatory Factor Analysis (CFA) using AMOS version 18.0 were conducted. Good fit indices from CFA revealed that, the ISR measurement model in the Malaysian business organizational context is explained by five components; Integrity, Emotional Control, Fulfillment of Covenant, Justice and Truthfulness. Theoretical and practical implications from the study were further discussed. Human Resource Development professionals, organizational managers and government authorities may use the findings of this study to justify their efforts in designing appropriate learning and performance improvement interventions so that ISR of employees can be monitored and further enhanced.

Keywords : *Islamic Social Responsibility (ISR), Taqwa (Islamic piety), Islamic management*

Category : Islamic Finance and Economics

**1077 BANK CUSTOMER CLASSIFICATION IN INDONESIA: LOGISTIC REGRESSION VIS-À-VIS
ARTIFICIAL NEURAL NETWORKS#**

Muhamad Abduh, *IUM Institute of Islamic Banking and Finance, IUM Institute of Islamic Banking & Finance*
Zainurin Dahari, *Business Administration, Kulliyah of Economics and Management Sciences*
Mohd. Azmi Omar, *Finance, Kulliyah of Economics and Management Sciences*

Exhibitor : Muhamad Abduh, IUM Institute of Islamic Banking and Finance, IUM Institute of Islamic Banking & Finance

This paper aims to identify factors distinguish Islamic and conventional bank customers in Indonesia. It tries to relate between bank customers' religiosity, assessment upon certain factors such as bank performance, bank advertisement and main reasons of using banking services towards their decision on which bank they had joined. Logistic regression and neural networks models are used to answer the research questions based on 520 customers reside in Jakarta. Data collection is done through a direct survey using self administered questionnaire. The results from logistic regression and neural networks models demonstrate that shariah compliant issues, customers' awareness on the fatwa announced by National Ulama Council on the impermissibility of bank interest, safety of fund as main reason of using banking services and customers' perception on bank advertisement are the significant factors which classify the bank customers in Indonesia. Nonetheless, neural network classifies better than logistic regression.

Keywords : *classification, logistic model, artificial neural networks, bank customers*

Category : Islamic Finance and Economics

1085 THIRD PARTY CERTIFICATE IN TAKAFUL INDUSTRY: SHARIAH ISSUE AND ITS SOLUTION#

Ahmad Basri Ibrahim, *Fiqh and Usul al Fiqh, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Ahmad Murshidi Ahmad Mukhtar, ,
Mohd Hafizal Elias, ,
Wan Ahmad Najib Wan Ahmad Lotfi, ,

Exhibitor : Ahmad Basri Ibrahim, Fiqh and Usul al Fiqh, Kulliyah of Islamic Revealed Knowledge and Human Sciences

This paper attempts to discuss the type of contract that can be utilized to link between a participant and a person covered in Third Party Certificate in takaful industry. For example, a husband participates in one takaful scheme on behalf of his wife and a father does the same thing on behalf of his children. What will happen to their contributions in participant's account and tabarru' account if the husband or the father dies first? To the best of the authors' knowledge, when this paper is written, this issue has not been addressed and discussed sufficiently by takaful players or Shari'ah scholars in this country. As such, this paper is written to explore what is the best contract that can be utilized in third party certificate and its impacts. This paper is a collaborative research between an academician and the Takaful practitioners.

Keywords : *Takaful, Hibah, Tabarru', wakalah, Person covered*

Category : Islamic Finance and Economics

1086

STRATEGIC MANAGEMENT FROM AN ISLAMIC PERSPECTIVE#

Rodrigue Fontaine, *Business Administration, Kulliyah of Economics and Management Sciences*
Khaliq Ahmad, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Rodrigue Fontaine, Business Administration, Kulliyah of Economics and Management Sciences

This poster reviews the key concepts in strategic management from an Islamic perspective. In conventional strategy, the aim is to maximize profits. From the Islamic perspective, the aim is to achieve organizational justice. We note that the failure rate in conventional strategy is 90%. We theorize is that when an organization develops organizational justice, the survival rate will be higher.

Keywords : *Strategy, Islamic perspective*

Category : Islamic Finance and Economics

1105

OWNERSHIP IN A MUDARABAH CONTRACT#

Muhammad Yusuf Saleem, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Muhammad Yusuf Saleem, Economics, Kulliyah of Economics and Management Sciences

In a mudharabah contract only the sahib al-mal who advances the capital is considered the owner of the mudharabah asset and not the mudharib who only contributes his efforts. This is in sharp contrast to the interest-based loan where the borrower who uses the loan money to buy certain asset is considered the owner of the asset. However, most contemporary discussions on mudharabah centre on a variable rate of return for the sahib al-mal in contrast to the usury which entitles the lender to a guaranteed return. This is presented as the main difference between the mudharabah contract and the interest-based loan. The right of the sahib al-mal to the ownership of the assets purchased by his fund has not received its due attention both from the academia and the practitioners. Both Islamic banks and Islamic microfinance institutions in their deposit and financing activities have relegated the position of the sahib al-mal to a mere fund provider or a depositor who is only concerned about his/her variable rate of return. This paper is focused on ownership issues in a mudarabah contract and their implications for the mudarabah investment accounts and the two-tier muharabah practised by Islamic banks. Although traditionally mudarabah was practised for trade finance where a mudaharib would purchase goods for a subsequent sale this paper also examines the application of mudarabah to project finance and micro-finance and in particular to small and medium size industries where an entrepreneur may use the capital to purchase machineries, vehicles and other assets used for productive purposes.

Keywords : *Mudarabah, Ownership, Islamic bank, Microfinance, Project finance*

Category : Islamic Finance and Economics

1106

ZAKAT AS A SOURCE FOR MICROFINANCING#

Norma Md Saad, *Economics, Kulliyah of Economics and Management Sciences*
Jarita Duasa, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Norma Md Saad, Economics, Kulliyah of Economics and Management Sciences

Poverty eradication has been a major concern for governments in developing countries. Many of the governments of these countries have initiated some forms of poverty alleviation programs to reduce poverty level in their respective countries. Studies have shown that microfinance is an effective tool to fight poverty in many developing countries. This study explores the possibility of Amanah Ikhtiar Malaysia (AIM), the biggest microfinance institution in Malaysia, being an 'Amil' (zakat collection agent) to mobilise zakat collection among its members. A survey was conducted to obtain primary data on the ability of AIM members to pay zakat. The survey also collected data on economic activities assumed by AIM members and also income obtained from these activities. The results of the survey show that some economic activities carried out AIM members are very profitable and result in high income. The results also show that around 57% of the respondents report they are able to pay zakah. The findings of the study open the door for Amanah Ikhtiar Malaysia to consider itself as an agent for Baitul Mal (zakat collection authority) to collect zakat from its members who are able to pay zakat. This zakat fund, together with micro-credit loans, can in turn be distributed to the deserving AIM members for fulfilling their basic necessities and also as a start-up capital for income generating activities.

Keywords : Zakat, microfinance

Category : Islamic Finance and Economics

**1107 AN ANALYSIS ON THE EFFICIENCY OF TAKAFUL AND INSURANCE COMPANIES IN
MALAYSIA#**

Norma Md Saad, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Norma Md Saad, Economics, Kulliyah of Economics and Management Sciences

This study examines the efficiency of general or non-life takaful and insurance industry in Malaysia during the period 2007 to 2009. In order to measure their efficiencies, the output-input data consists of a panel of 28 general or non-life takaful and insurance companies are used. The most commonly used non-parametric approach, namely, Data Envelopment Analysis (DEA) is adopted to measure the efficiency of the Malaysian takaful and insurance companies. In the DEA technique, efficiency is measured by the Malmquist index. The Malmquist efficiency measures are decomposed into two components: efficiency change and technical change index. Efficiency change is again decomposed into pure efficiency and scale efficiency. It is found that, on average, the TFP of the non-life takaful and insurance industry in Malaysia is mainly due efficiency change and the main sources of the efficiency change are both scale efficiency and pure efficiency.

Keywords : *Takaful, insurance*

Category : Islamic Finance and Economics

1108 THE IMPACT OF CRISIS AND MACROECONOMIC VARIABLES TOWARD ISLAMIC BANKING DEPOSITS#

Muhamad Abduh, *IUM Institute of Islamic Banking and Finance, IUM Institute of Islamic Banking & Finance*
Mohd Azmi Omar, *Finance, Kulliyah of Economics and Management Sciences*
Jarita Duasa, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Muhamad Abduh, IUM Institute of Islamic Banking and Finance, IUM Institute of Islamic Banking & Finance

The nature of Islamic banks is different from conventional banks which may lead to a different deposit behavior of their depositors. This study aims to analyze the dynamic effects of interest and profit rate changes, production level, inflation and financial crisis towards the fluctuation of total deposits in Malaysian Islamic banks. Using monthly data from January 2000 to December 2010, cointegration test and vector error correction model were utilized to uncover the dynamic relationship between macroeconomic variables and crisis with total deposit of Islamic banking. The results show that changes in interest and profit rate as well as production growth has no significant effects. Meanwhile, inflation has negative effect on total deposits of Islamic banks which reflects the changes on depositors' consumption pattern during the recession. Interestingly, financial crisis is positively affecting total deposits in Islamic banks. This study provides evidence of general consumer sentiment and deposit behavior. It indicates that in general, due to the 1997/1998 financial crisis experience, bank depositors have trusted Islamic banking to be more resilient in facing financial crisis and hence, inflow of deposits to Islamic banks was happened during 2007/2008 financial crisis.

Keywords : *financial crisis, Islamic banking, inflation, deposits, Malaysia*

Category : Islamic Finance and Economics

1135 **CONTAGION EFFECT OF SUBPRIME CRISIS ON GCC STOCK MARKETS#**

Hengchao Zhang, *Economics, Kulliyah of Economics and Management Sciences*

Zarinah Hamid, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Zarinah Hamid, Economics, Kulliyah of Economics and Management Sciences

The objectives of this study are twofold: first, it is to investigate whether contagion effect of U.S. subprime crisis present among Gulf Cooperation Council (GCC) stock markets; second, it is to evaluate the impact of U.S subprime crisis on the long-run and short-run dynamic relationships between GCC stock markets and leading conventional and Islamic stock markets around the globe, over the period from July 5, 2004 to August 14, 2010. Tests based on correlation coefficients indicate that contagion from the US subprime crisis occurred in Saudi Arabia, Abu Dhabi, and Qatar. In addition, the cointegration tests reveal that there are consistent and stable cointegration relationships between GCC stock markets and international conventional and Islamic stock markets, regardless the occurrence of subprime crisis. Lastly, the variance decomposition analysis indicates that regional factors play major role in explaining the variations of GCC stock markets in wake of subprime crisis. Thus, this paper suggests GCC countries to mitigate their vulnerability to external shocks through diversification of economy structure and economic integration.

Keywords : *Subprime crisis, GCC Stock Market, Correlation, Cointegration, Diversification benefits*

Category : Islamic Finance and Economics

1142 INVESTIGATING MOBILE MONEY ACCEPTANCE IN SOMALIA: AN EMPIRICAL STUDY#

Hassanuddeen Abd. Aziz, *Finance, Kulliyah of Economics and Management Sciences*

Osman Sayid, *IIBF, IIUM Institute of Islamic Banking & Finance*

Abdelghani Echchabi, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Hassanuddeen Abd. Aziz, Finance, Kulliyah of Economics and Management Sciences

The main purpose of this paper is to study the perception and willingness of Somali customers to adopt mobile money, based on an upgraded version of technology acceptance model. The questionnaire used in this study was distributed to 100 Somali customers, and the data gathered were then analysed using multiple regression and one sample t-test. The results indicate that perceived ease of use has a significant positive influence on the perceived usefulness of mobile money. Moreover, perceived usefulness and security were found to have a significant positive influence on attitude. Finally, social influence together with perceived usefulness both have significant positive influence on the Somali customers' intention to adopt mobile money. This is one of the first studies to be conducted on mobile money in Somalia, the study uses an upgraded version of technology acceptance model and it reports significant findings based on this approach.

Keywords : *Somalia, Mobile money, Multiple regression, TAM*

Category : Islamic Finance and Economics

1143 AN ANALYSIS OF OPERATIONALIZATION AND ACCEPTABILITY OF BUSINESS TO BUSINESS TRANSACTION: A MIXED METHOD APPROACH#

Ahamed Kameel Mydin Meera, *Finance, IIUM Institute of Islamic Banking & Finance*
Muhammad-Bashir Yusuf, *Economics, Kulliyah of Economics and Management Sciences*
Gairuzazmi Mat Ghani, *Economics, Kulliyah of Economics and Management Sciences*
Turkhan Ali Abd Manap, *Economics, Kulliyah of Economics and Management Sciences*
Moussa Larbani, *Business, Kulliyah of Economics and Management Sciences*

Exhibitor : *Ahamed Kameel Mydin Meera, Finance, IIUM Institute of Islamic Banking & Finance*

Business to business barter exchange is a form of transaction that is gaining popularity during the economic downturn despite the fact that money exchange supersede the traditional barter exchange due to a number of inherent problems it has. This study explores the operation and user's acceptance of business to business barter exchange in Malaysia that has made barter exchange feasible in the present day sophisticated financial system. Mixed method data analysis was employed to analyze the qualitative and quantitative data collected for the study. The qualitative data was obtained through in-depth interview, observation and document analysis of BBX Malaysia. The quantitative data was obtained from the survey of the BBX members and analysed using PLS technique. The qualitative part explored the operation of BBX from organization through accountability to challenges. The quantitative aspect examined a number of hypotheses to determine the user's future behavioral intention, premised on a number of previous models. The data was found to fit the model well with all the hypothesized links exhibiting the correct signs and four out of six part coefficients statistically significant. More effort should be made to maximize the factors that determine user's acceptance of barter exchange in order to achieve its potential.

Keywords : *Barter exchange, mixed methods, BBX, Partial least square*

Category : Islamic Finance and Economics

1145 GOLD RESERVE REQUIREMENT AND EFFICIENT TRADE MATRIX FOR COMMODITY TRADE AMONG OIC COUNTRIES.#

Ahamed Kameel Mydin Meera, *Finance, IIUM Institute of Islamic Banking & Finance*
Muhammad-Bashir Yusuf, *Economics, Kulliyah of Economics and Management Sciences*
Gairuzazmi Mat Ghani, *Economics, Kulliyah of Economics and Management Sciences*
Turkhan Ali Abd Manap, *Economics, Kulliyah of Economics and Management Sciences*
Moussa Larbani, *Business, Kulliyah of Economics and Management Sciences*

Exhibitor : *Ahamed Kameel Mydin Meera, Finance, IIUM Institute of Islamic Banking & Finance*

The triple crises of 2008 with its enormous impact on the world trade have made many countries to start to look inward on how to prevent or curtail the future re-occurrence and impact. The Organization of Islamic Cooperation Countries should not be left out of the effort to beat future crises of this nature. To do this, they need to look inward and strengthen the intra trade among one another. To achieve this, they need a common platform in terms of trade coordination and a generally accepted international reserve currency that will be stable and will not be a potential source of crises in itself. All these require a proper strategic planning and evaluation of what is and what is supposed to be. This study is one of the earliest works in that direction. This study used a non linear mathematical programming to analyze the efficient trade matrix among OIC countries and the gold reserve requirements for every single country that participate in that trade. It was discovered that trade among these countries could be maximized based on the output of the analysis. The quantities of gold required by each of the country to participate in the multi-bilateral and multilateral trade were also found out. It was also discovered that the quantity of gold needed for such trade was least in multilateral trade arrangement. This study has a lot of implications in strengthen the cooperation among OIC countries and maximizing the trade relationship among them.

Keywords : *Financial crisis, efficient trade matrix, gold reserve requirement, commodity trade, OIC.*

Category : Islamic Finance and Economics

1157

ISLAMIC COMMERCIAL LAW#

Muhammad Yusuf Saleem, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Muhammad Yusuf Saleem, Economics, Kulliyah of Economics and Management Sciences

This is a textbook style reader on the subject of Islamic commercial law which the author taught at the Faculty of Economics and Management Sciences International Islamic University Malaysia for more than a decade. The book is the outcome of firsthand experience that addresses the needs of the students of Islamic commercial law and provides a pragmatic and suitable treatment of the discipline. The book presents a concise study of the various Islamic transactions. It provides the reader with a solid background which is essential for a comprehensive knowledge of Islamic transactions while at the same time relates Islamic transactions to modern day business practices, banking and finance. The main transactions discussed in this book are sale (bay') and its various types, lease and employment (ijarah), agency (wakalah), loan (qard), deposit (wadi'ah), partnerships (sharikat), silent partnership (mudarabah), pledge (rahn), guarantee (kafalah), transfer of debt (hawalah), absolution (ibra) and set-off (muqassah). This book is a welcome addition on the subject of Islamic commercial law on which reliable texts in the English language are relatively few. It is a useful textbook not only for the university students but also for all those who work in Islamic banks and financial institutions.

Keywords : *Islam, riba, commercial law, contracts*

Category : Islamic Finance and Economics

1171 RIBA, PROFIT RATE, ISLAMIC RATE, AND MARKET EQUILIBRIUM#

Mohammed Yusoff, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Mohammed Yusoff, Economics, Kulliyah of Economics and Management Sciences

Muslim economists have suggested the profit rate to replace riba in an Islamic economic system which is a step in the right direction but it still has problem since not all profits are halal, as for example, profits from gaming and liquor businesses are definitely haram. This paper discusses the concept of riba and differentiate it from the profit rate and Islamic rate. As riba is prohibited in Islam, this paper then explains the concepts of Islamic rate which is lawful in Islam as it is directly derived from the profits of halal business activities. The Islamic rate is the clearing mechanism in the Islamic money market and good market. Specifically, the objectives of this paper are: to explain the concepts of riba, profit rate, and Islamic rate and to find out whether Islamic banking activities in Malaysia are dictated by its conventional counterpart. We employ the Toda-Yamamoto (1995) technique to test the Granger causality in level VAR model using the monthly data of 1 month, 3 month, 6 month, 9 month, and 12 month of investment deposit rates and fixed deposit rates. The results of the Toda-Yamamoto causality tests for 1 month, 3 month, 6 month, 9 month, and 12 month of investment deposit rates and fixed deposit rates are mixed at best. Specifically, it is found that the 1-month fixed deposit rate causes the 1-month investment deposit rate with no feedback; that there exists no causality between the 3-month fixed deposit rate and 3-month investment deposit rate in either direction; for the 6-month case, it is found that the investment deposit rate causes the fixed deposit rate and the causality is unidirectional; and finally, the 9-month and 12-month fixed deposit rates caused their respective 9-month and 12-month investment deposit rate, albeit weakly at 10 percent significant level.

Keywords : *riba, profit rate, Islamic rate, good market and money market equilibrium*

Category : Islamic Finance and Economics

1175

**INTERNAL HUMAN BASED THREATS AND SECURITY CONTROLS IN
COMPUTERIZED BANKING SYSTEMS: EVIDENCE FROM MALAYSIA#**

zaini zainol, accounting, Kulliyah of Economics and Management Sciences
sherliza puat nelson, accounting, Kulliyah of Economics and Management Sciences
abubakar malami, accounting, Kulliyah of Economics and Management Sciences

Exhibitor : zaini zainol, accounting, Kulliyah of Economics and Management Sciences

Malaysia being a unique capital market, practices dual banking system to capture the disaggregation of conventional and Islamic banking systems. However, like most financial institutions, no bank is isolated from security threats, even if, it comes from within the organization. Thus the objective of this study is to examine bank managers' experience on human based security threats and the existence of human based security controls in computerized banking systems (CBS) in Malaysia. Since most major financial institutions operate in the capital city of Kuala Lumpur, questionnaires were sent to some of these bank branches in Kuala Lumpur. Findings revealed that managers recognized the personal policies recruitment procedure, segregation of duties and physical access control as ways to mitigate risks of human security threats. Hence, provide insights of how internal control system of a financial institution can be improved as a means to reduce security threats that have monetary implications. Finally, the study provides a platform for promoting an efficient and effective internal control practices among financial institutions in Malaysia.

Keywords : *human based threats; human based controls; Malaysia; computerized banking system*

Category : Islamic Finance and Economics

1176

MANAGING WAQF PROPERTIES: PRIORITISING BENEFICIARIES#

Ahmad Zamri Osman, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Ahmad Zamri Osman, Accounting, Kulliyah of Economics and Management Sciences

The potential and problem in managing waqf properties catapult interest in waqf research. The steering media (Habermas, 1991) of power, money and law - characterised by bureaucratic procedures, performance target and regulatory requirement seems to always be the 'natural' choice of solution. This hierarchical accountability may not be the only available recourse for the problem. Based on the understanding of the nature of accountability, this paper focuses on downward accountability as a complementary - albeit a powerful one - to the hierarchical accountability. This concept focuses on beneficiaries. It does not see beneficiaries of waqf properties as a problem or a mere passenger - 'waiting to be rescued'. The process involved listening and engaging beneficiaries in order for the waqf officer to be sensitised toward their needs. Since the nature of downward accountability is different from hierarchical accountability, the way accountability is discharged is also perceived differently. While accountability in hierarchical setting is considered discharged when procedures is followed, KPI-like target is met and regulation is adhered to; in downward setting, the notion of listening to beneficiaries may be considered that accountability has already been discharged. Semi structured interviews complemented by observation & document analysis were employed to make sense of the way in which accountability is discharged in managing waqf properties. The findings show that the effort towards corporatizing waqf institution may jeopardise the ability for waqf properties to benefit the intended users, i.e., the beneficiaries. The hierarchical structures established with the intention to ensure efficiency in management seems to distance waqf beneficiaries further. Their voice and opinion was barely listened in this setting. There is a need for an engagement process between beneficiaries and the authority so that the sensitising process can take place and be incorporated in the way waqf properties are managed. In addition, waqf officer or/and entity need to be given some autonomy and room for creativity in order that hierarchical structure does not impede development and management of waqf properties.

Keywords : *Waqf*

Category : Islamic Finance and Economics

1187 RISK EXPOSURE, RISK-BEARING CAPACITY, AND RISK-COPING STRATEGIES: A COMPARATIVE STUDY AMONG URBAN HOUSEHOLDS#

Selamah Abdullah Yusof, *Economics, Kulliyah of Economics and Management Sciences*

Wan Jamaliah Wan Jusoh, *Business Administration, Kulliyah of Economics and Management Sciences*

Rohaiza Abd Rokis, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Selamah Abdullah Yusof, Economics, Kulliyah of Economics and Management Sciences

Household debt in Malaysia has been on an upward trend and increasing at a relatively fast pace. Bank Negara Malaysia recognizes the significance of the accumulation of household debts and anticipates that borrowers in the lower-income categories and residing in urban areas will face more challenges in managing their financial obligations. This study provides the crucial data and an in-depth analysis of the current Malaysian urban households' vulnerabilities and risks. It examines households' perception of risk, their capacity to handle risk, and their coping strategies. This research also evaluates the urban household financial fragility in dealing with small or large shocks and provide an estimate of asset poverty which can be used to assess the ability of urban households to cope with a major financial shock

Keywords : *Malaysia, Urban household, financial risk, coping strategies, asset poverty*

Category : Islamic Finance and Economics

1208

HOW EFFICIENT WAS MALAYSIA'S SECONDARY EDUCATION?#

Mohd Nahar Mohd Arshad, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Mohd Nahar Mohd Arshad, Economics, Kulliyah of Economics and Management Sciences

The purpose of this study is to investigate the level of technical efficiency of Malaysia's secondary education in comparison with other countries. Education efficiency has become an important issue given the pressing levels of public deficit and debt of many countries. Since the educational sector always receives high priority in budget allocations, an evaluation of whether the allocations made for education has been technically efficient is important. With budget constraints and high expectation by the public to see a continuous improvement in students' academic achievement, the educational sector has been put under pressure to deliver. The study employs TIMSS 2007 data, involving 44 countries. The technique used to calculate the level of technical efficiency is Data Envelopment Analysis (DEA). Malaysia is found technically inefficient in terms of utilising its educational resources to achieve better TIMSS results in comparison with the other countries. Even after controlling for the environmental variable, Malaysia's secondary education remains technically inefficient.

Keywords : *Efficiency, secondary education, DEA*

Category : Islamic Finance and Economics

1219 THE ROLE OF A TRUSTEE IN SUKUK : THE MALAYSIAN PERSPECTIVE#

Rusni Hassan, *IIUM Institute of Islamic Banking and Finance, IIUM Institute of Islamic Banking & Finance*

Khairiyah Mat Yaman, *AIKOL, Ahmad Ibrahim Kulliyah of Laws*

Ahmad Azam Othman, *Islamic Law Department, Ahmad Ibrahim Kulliyah of Laws*

Adnan Yusoff, ,

Exhibitor : Rusni Hassan, IIUM Institute of Islamic Banking and Finance, IIUM Institute of Islamic Banking & Finance

In Malaysia, the legal and regulatory framework governing Islamic Capital Market industry provides for trust structure in sukuk. Trustee plays an important role in sukuk. In fact in every sukuk issuance save for the issue or offer which comes under the exceptions provided for under Schedule 8 of the Capital Market Services Act 2007 (“CMSA”), a trustee is required to be appointed and a trust deed to be executed. Thus, trust structure is central in sukuk, so far as Malaysia is concerned. This paper studies the important roles of trustees in sukuk, its nature and the extent of powers and duties of trustees appointed therein. It examines the categories of trustees in sukuk and their designated functions as well the nature and extent of powers and duties of a trustee with an insight on the current practices in the Malaysian Islamic Capital Market industry dealing with trust structure in sukuk. The study also look at other relevant aspects in trust structure, which include the trust deed as the constitutive document and the role of trustee in the event of default of sukuk.

Keywords : *Islamic capital market, sukuk, trustee, event of default*

Category : Islamic Finance and Economics

1220 LEGAL OBSTACLES IN SHARI’AH CORPORATE GOVERNANCE OF ISLAMIC FINANCIAL INSTITUTIONS IN MALAYSIA#

Rusni Hassan, *IUM Institute of Islamic Banking and Finance, IUM Institute of Islamic Banking & Finance*
Aishath Muneeza, , *Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Rusni Hassan, IUM Institute of Islamic Banking and Finance, IUM Institute of Islamic Banking & Finance

Islamic Financial Institutions in Malaysia has their own shari’ah governance structure which is unique from the conventional banks. The regulator of the conventional and Islamic banks of Malaysia, Bank Negara has released the shari’ah corporate governance rules in 2004 (GP1& GPS1). Theoretically speaking, this regulation would have solved the problems encountered in implementation of shari’ah governance in the country. But the reality is that the regulation was just the beginning of the development of shari’ah governance in Malaysia. The legal predicaments in shari’ah corporate governance in Malaysia are none when theoretically speaking. However, in practice, the problems encountered in the current structure needs to be explored. The aim of this paper is not to describe the structure of shari’ah corporate governance in Malaysia, but to emphasize and underscore the legal obstacles in the Shari’ah corporate governance in Malaysia and suggest some practical solutions to curb it.

Keywords : *islamic finance, corporate governance, shariah governance, legal and regulatory framework*

Category : Islamic Finance and Economics

1225 **INTEGRATING LAB KNOWLEDGE INTO FIELD WORK: THE CASE OF
DESIGNING A PROTOTYPE OF MOSQUE FINANCIAL MANAGEMENT SYSTEM#**

zaini zainol, accounting, Kulliyah of Economics and Management Sciences
hawa ahmad@abdul mutalib, accounting, Kulliyah of Economics and Management Sciences

Exhibitor : zaini zainol, accounting, Kulliyah of Economics and Management Sciences

Rapid changes in technology requires that accountants possess various skills to use, process, manage and retrieve information in order to perform their duties. In light with this requirements, the training for future accountants need to be upgraded and new IT skills should be incorporated. Learning and practice the ICT skill are parts of the curriculum in any accounting programme. At IIUM, the final year accounting students who enrolled in Analysis and Design of Accounting Information System (ADAIS) course will have to undergo a group project which needs to be completed at the end of the semester. The objective is to give a good experience to students to practice what they have learnt throughout the semester on how to design a financial management system for the assigned case. In addition, to fulfill one of the course objectives, “to appreciate the importance of well-designed database management system to the effective support of decision making in the organization”. For research design, 4th year students for semester II (2012/2013), are required to study the current practices of financial management system used in the mosques. From this task a problem description is developed. A total of fourteen State Mosques and District Mosques located in the State of Selangor and Federal Territory are selected. From the issues identified, students are required to develop a prototype system known as ‘Mosque Financial Management System’ (MFMS) to ensure the mosque will accrue benefits from the development. The best prototype system will be chosen to meet the need of such system in most of the mosque. From the findings, most accounting activities are done manually and the segregation of duties on the disbursement of funds and receipts on the income are inconsistent. The issue is especially with relation to donations from the public. The study provides insights of how financial management currently practice at selected mosques in Malaysia. Further to this, a proper internal control system can be improved as a means to reduce security threats that have monetary implications. Finally, the study proposed a prototype of MFMS which could automate the procedures for promoting an efficient, effective and transparent financial management practices among mosques in Malaysia.

Keywords : ICT; Mosque; MFMS; Prototype

Category : Islamic Finance and Economics

1236 WOMEN EMPOWERMENT AND ECONOMIC DEVELOPMENT: A STUDY OF SELECTED OIC COUNTRIES#

Afsha Hossain, Economics, Kulliyah of Economics and Management Sciences

Zarinah Hamid, Economics, Kulliyah of Economics and Management Sciences

Exhibitor : Zarinah Hamid, Economics, Kulliyah of Economics and Management Sciences

Today women are equally involved in the process of democratization in the Organization of Islamic Cooperation (OIC) countries. However, there is no visible positive impact resulting from the new system on women. The main purpose of this paper is to empirically investigate the effects of six key variables (Global Gender Gap scores, Gender-related Development Index values, Female Life Expectancy at birth in years, Female Estimated Earned Income in PPP US\$, Female Adult Literacy rate in percentage and Female Gross Enrollment ratio in percentage) on Human Development Index (HDI). Statistical analyses of data are performed using polynomial regression analysis for the year 2007 and 2009. The results indicate that Female Life Expectancy at birth and Female Adult Literacy rate are positively and significantly related to HDI, whereas Gross School Enrollment is negatively and significantly related to HDI. The other three variables, i.e. Global Gender Gap, Gender-related Development Index and Female Estimated Earned Income show insignificant results. The OIC states need to take steps to equip the female population with proper health care, education and awareness of economic, socio-political rights and responsibilities along with their male counterparts in order to integrate the underutilized human capital into the development process.

Keywords : *Women Empowerment, Economic Development, HDI, OIC Countries*

Category : Islamic Finance and Economics

1237 DETERMINING THE RELATIONSHIP BETWEEN CUSTOMER KNOWLEDGE, TRUST, PURCHASE INTENTION AND CUSTOMER LOYALTY IN THE MALAYSIAN TAKAFUL INDUSTRY#

Lailatul Faizah Abu Hassan, *Business, Kulliyah of Economics and Management Sciences*

Wan Jamaliah Wan Jusoh, *Business, Kulliyah of Economics and Management Sciences*

Zarinah Hamid, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Wan Jamaliah Wan Jusoh, Business, Kulliyah of Economics and Management Sciences

This study is undertaken to examine the relationship among customer knowledge, purchase intention and customer loyalty, and the mediating effect of trust in Malaysian Takaful industry. To achieve this aim, customer knowledge has been increasingly recognised as a key strategy in managing customer relationships. The population of the study will consist of customers who have subscribed to the Islamic insurance products and services. Four main regions in Malaysia namely North, South, East and Central will be selected as a study setting for this study. Structural Equation Modeling (SEM) will be applied to test the constructs' relationships. It is expected that findings from this study will contribute to the existing literature to both theoretical and managerial approaches in order to better understand the pattern of customer knowledge management, purchase intention and customer loyalty, especially in Takaful industry settings.

Keywords : *customer knowledge, trust, loyalty, Takaful industry, Malaysia*

Category : Islamic Finance and Economics

1258 THE PROBLEMS FACING THE AGRICULTURAL SECTOR IN NIGERIA AND THE PROSPECT OF ZAKAT - MUZARA'AH - SUPPLY CHAIN MODEL (ZMSCM)#

Moussa Larbani, *Business Administration, Kulliyah of Economics and Management Sciences*

Mustafa Omar Mohammed, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Mustafa Omar Mohammed, Economics, Kulliyah of Economics and Management Sciences

The contribution of agricultural sector to the development of Nigeria is considerable. This important sector was the economic backbone upon which the government of the Federal Republic of Nigeria relied for its foreign exchange and revenue. However, since the discovery of oil in the early 1960, agricultural productivity has continually decreased due to many problems, especially financial ones. A country that was once a net exporter of agricultural products has now to depend totally on food imports to feed its growing population. Several programmes and policies have been adopted by various administrations to find solution to the dwindling agricultural productivity but to no avail. These solutions have mainly focused on alleviating the financial problems the farmers face. Usually financial intermediaries including banks would provide micro-financing to the farmers but with high interest rates coupled with collateral requirements. Hence, this mode of financing has not produced any significant result. This study will therefore examine problems facing agricultural sector in Nigeria with special emphasis on its financial aspect and propose a Zakat-Muzara'ah-Supply Chain model (ZMSCM). Under this model, Zakat resources will be used for the human capital development of the farmers. The relationship between farmers and financial institutions is based on partnership where profit and loss will be shared by both parties. This will enhance commitment by and cooperation among both parties to ensure the success of the business. Furthermore, the issues of collateral and high interest rate that constrain the financial ability of the farmers and their agricultural output are inherently solved by the model. Moreover, the model has features of investment and risk diversification for both the financial institutions and the farmers that will lead to high agricultural productivity and employment generation in the economy.

Keywords : *Agriculture, Zakat, Muzara'ah, Supply Chain*

Category : Islamic Finance and Economics

1259 **DECISION MAKING TOOLS FOR RESOURCE ALLOCATION BASED ON MAQASID AL-SHARIAH#**

Moussa Larbani, *Business Administration, Kulliyah of Economics and Management Sciences*
Mustafa Omar Mohammed, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Moussa Larbani, Business Administration, Kulliyah of Economics and Management Sciences

The major focus of past literature on al-Maqasid was on developing the theory, and most of the discussion centered on its legal dimensions. The pioneering works emanated from scholars such as, Al-Juwayni (n.d), Al-Ghazali (1901), Al-Shatibi (n.d), Ibn ‘Ashur (1998) and Ibn Taymiyyah (al-Raysuni, 1992). Recently, the application of al-Maqasid in various disciplines including economics and finance has been gaining prominence. Among the leading economists who have written on the subject, to mention a few are Chapra (1985; 2004), Biraima M.E. (1991), Siddiqi (2000), Ahmad (2000), Atya (2003), Hasan (2004) and Al-Najjar (2008). Their works however, relate al-Maqasid to the discipline of economics in a broad theoretical framework. Dusuki (2005) went a step further relating al-Maqasid to Corporate Social Responsibility. Hameed et al. (2005) tried to develop what they termed as ‘Islamicity Disclosure Index’ to measure and compare the performances of two Islamic banks. A refined work by Mustafa et al. (2008) developed a quantitative performance measure for Islamic banking from the theory of al-Maqasid. The present study is taking al-Maqasid a step further. It develops a decision making tool based on al-Maqasid al-Shari’ah and their levels of Maslahah for the managers of firms to use in allocating their investible resources to vital sectors of the economy. The developed model can be extended to other decision making problems. Thus, this contribution opens a new direction of research: the analytic operationalization of al-Maqasid al-Shari’ah.

Keywords : *Maqasid al-Shari’ah, decision making, weights, allocation of investible resources*

Category : Islamic Finance and Economics

**1267 INTENTION TO USE ISLAMIC MICRO-INVESTMENT MODEL (IMIM) IN NIGERIA:
EMPIRICAL EVIDENCE#**

Mohamed Aslam Haneef, *Economics, Kulliyah of Economics and Management Sciences*
Mustafa Omar Mohammed, *Economics, Kulliyah of Economics and Management Sciences*
Muhammad Arif Zakaullah, *Graduate School of Management, Management Centre*
Aliyu Dahiru Muhammad, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Mohamed Aslam Haneef, Economics, Kulliyah of Economics and Management Sciences

The inception of conventional microfinance was celebrated as an effective tool for poverty alleviation. Over time, however, this institution continues to face several criticisms. Evidences show that it has been charging fixed and high interest rate, exploiting the poor income earners, indebting the poor borrowers, causing family break-down and causing rising suicide cases among borrowers. This created a need for the development of Islamic microfinance as a viable alternative. However, Islamic microfinance appears too expensive and pursues debt-like contracts that are tantamount to riba. In the case of Nigeria, conventional microfinance has failed to serve the needs of majority poor in the country. An Islamic micro-Investment Model (IMIM) based on genuine partnership contracts especially for Nigeria is deemed appropriate option to overcome the challenges of the existing microfinance institutions. Based on the Theory of Reasoned Action (TRA) this study tests empirically the Islamic Micro-Investment Model (IMIM) developed. The study uses structural equation modeling to test the applicability and acceptance level of the model by micro-investors in Kano State, Nigeria. The result shows that the model fits the data well and attitude is the major determinant of intention to accept the IMIM among users. It was also found that subjective norm does not influence the intention except through attitude.

Keywords : *Islamic micro-investment model, microfinance, micro-entrepreneur, Nigeria*

Category : Islamic Finance and Economics

1275 TESTING THE DIFFUSION OF INNOVATION THEORY ON THE ADOPTION OF DINAR AND DIRHAM AMONG URBAN MUSLIMS IN MALAYSIA#

Wan Jamaliah Wan Jusoh, *Business, Kulliyah of Economics and Management Sciences*

Abideen Adeyemi Adewali, *Finance, Kulliyah of Economics and Management Sciences*

Exhibitor : Wan Jamaliah Wan Jusoh, Business, Kulliyah of Economics and Management Sciences

The aim of this research is to test the diffusion of innovation theory in the adoption of Dinar and Dirham among urban Muslims in Malaysia. The diffusion of innovation model (DOI) was used to examine the relationship between relative advantage, compatibility, complexity, trialability and observability on behavioral intention in the use of Dinar and Dirham as currency in everyday transactions. The DOI model is then tested using Structural Equation Modeling (SEM). A structured questionnaire was developed to gather information on the demographic profile of the respondents as well as the determination of the relationship between the independent and dependent variable were obtained by way of a structured questionnaire. 204 respondents, who were conveniently selected, participated in this survey. Majority of the respondents were male (62%), single (53.9%), between the ages of 19-25 (39%), have at least a bachelor degree qualification (40.7%) and working (49.5%). Findings from this study revealed that 80% of the changes in Behavioral Intention is accounted for by the combined effects of the five indicators of DOI (relative advantage, compatibility, complexity, trialability and observability). The model itself satisfy all fits indices criteria and the constructs are all valid and reliable. The combined DOI indicators also have positive and significant effect on Behavioral Intention. Therefore, DOI explains significant changes in behavioral intention to adopt Dinar and Dirham as currency for everyday transactions among urban Muslims in Malaysia.

Keywords : *Diffusion of Innovation, adoption, Dinar and Dirham, Muslims, Malaysia*

Category : Islamic Finance and Economics

1279 SHARIAH IMPLICATION ON INDONESIAN LISTED COMPANIES' VOLUNTARY DISCLOSURE#

Peni Nugraheni ,

Hairul Azlan Annuar, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Hairul Azlan Annuar, Accounting, Kulliyah of Economics and Management Sciences

As attached in the pdf file below

Keywords : *Shariah and non-Shariah compliant companies, voluntary disclosure, Indonesia*

Category : Islamic Finance and Economics

1288 **STUDY ON AWARENESS AND ADOPTION OF SHARIAH GOVERNANCE
FRAMEWORK 2010 (SGF 2010) BY THE ISLAMIC FINANCIAL INSTITUTIONS
(IFIs) IN MALAYSIA#**

AHMAD AZAM OTHMAN, *ISLAMIC LAW DEPARTMENT, Ahmad Ibrahim Kulliyah of Laws*
RUSNI HASSAN, *ISLAMIC LAW DEPARTMENT, Ahmad Ibrahim Kulliyah of Laws*
MUHAMMAD NAIM OMAR, *ISLAMIC LAW DEPARTMENT, Ahmad Ibrahim Kulliyah of Laws*
MOHAMMAD DEEN MOHD NAPIAH, *ISLAMIC LAW DEPARTMENT, Ahmad Ibrahim Kulliyah of Laws*
MAHAMAD ARIFIN, *ISLAMIC LAW DEPARTMENT, Ahmad Ibrahim Kulliyah of Laws*
ADNAN YUSOFF, ,

Exhibitor : AHMAD AZAM OTHMAN, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

The Central Bank of Malaysia (hereinafter referred to as Central Bank) has introduced the guideline on Shariah Governance Framework for Islamic Financial Institutions (hereinafter referred to as SGF 2010) in October 2010 to have proper Shariah governance. The SGF 2010 has been circulated to all IFIs under the Central Bank jurisdictions to ensure the SGF 2010 is adopted accordingly. The effective date for adoption was on 1st January 2011, giving the IFIs six months to comply with. Within such period, the IFIs need to confirm that they have met all the requirements and are operating in accordance with it. Thus, this article investigates the awareness by the IFIs on the objectives of SGF 2010, perception on the applicability of SGF 2010 and level of adoption of SGF 2010 by the IFIs. This is done through the collection of data and information by distributing the questionnaire to the respondents who involved in IFIs' industries such as the management of the IFIs, be it Islamic banks and Takaful institutions, Shariah Committee and Shariah Officers. Most of the data in this study were collected and analyzed using the Statistical Package for Social Sciences (SPSS) software version 16.0 and Microsoft Excel. Additional the descriptive analysis is used to determine the number of frequencies and percentages. The findings and analysis show that the awareness amongst the respondents on the objectives of SGF 2010, their perception on the applicability of SGF 2010 and the level of adoption of SGF 2010 by the IFIs are very good and positive.

Keywords : *Shariah governance, SGF 2010, Central Bank, Shariah Committee, Shariah Officers, Islamic banks*

Category : Islamic Finance and Economics

1292 COMPLIANCE BY BUSINESSES IN MALAYSIA WITH RESPECT TO GUIDELINES GIVEN IN ISLAMIC MARKETING#

Mohd. Ismail Sayyed Ahmad, *Business, Kulliyah of Economics and Management Sciences*
Wan Jamaliah Wan Jusoh, *Business, Kulliyah of Economics and Management Sciences*
Wan Rohaida Wan Husain, *Business, Kulliyah of Economics and Management Sciences*

Exhibitor : Mohd. Ismail Sayyed Ahmad, Business, Kulliyah of Economics and Management Sciences

The objective of this research is to investigate the perceptions of Muslim businesses regarding the extent to which businesses in Malaysia are carrying out their marketing activities in accordance with the rules, guidelines and recommendations given in Islamic marketing. Using a structured questionnaire, 170 Muslim business owners or managers located in various parts of Peninsula Malaysia were interviewed to obtain their perspectives regarding the adoption and use of Islamic rules and regulations by businesses. Whilst certain rules, such as the ‘Halal’ rules are followed by businesses, others such as Fair Dealings and ‘Tatfif’ was not widely perceived to be practiced. More efforts are needed if businesses wish to adopt Islamic Marketing principles and practices in their business operations.

Keywords : *Islamic marketing, Muslims, syariah compliance, business, Malaysia*

Category : Islamic Finance and Economics

1294 A COMPARATIVE ANALYSIS OF SHARIAH GOVERNANCE IN ISLAMIC BANKING INSTITUTIONS ACROSS JURISDICTIONS#

Aznan Hasan, *IiBF, IIUM Institute of Islamic Banking & Finance*

Rusni Hassan, *IiBF, IIUM Institute of Islamic Banking & Finance*

Nordianawati Irwani Abdullah, *Department of Finance, Kulliyah of Economics and Management Sciences*

Muhammad Fuad Sawari, *Department of Fiqh and Usul, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Uzaimah Ibrahim, *Department of Islamic Law, Ahmad Ibrahim Kulliyah of Laws*

Akhtarzaite Abdul Aziz, *Department of Fiqh and Usul, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Agus Triyanta, ,

Exhibitor : Aznan Hasan, IIUM Institute of Islamic Banking & Finance, IIUM Institute of Islamic Banking & Finance

The Shariah governance framework is a unique institutional structure in the Islamic banks and Islamic Financial Institutions. Its function is to ensure Shariah compliance of the Islamic banking and finance operations. The structure of shariah governance is formalised in different form in different countries based on different legal framework governing the Islamic banking and financial operations in the respective countries. This paper examines the practice of Shari'ah governance in Islamic banks across jurisdictions. The purpose of the study is to provide better understanding of some different practices of shariah governance, highlighting the issues and to provide relevant information in guiding the future development of Shari'ah governance system in the Islamic financial industry. The paper discusses the state of Shari'ah governance practices in nine (9) countries that are, Malaysia, Indonesia, United Kingdom, Pakistan, Kuwait, United Arab Emirates, Bahrain, Brunei and Singapore, all of which are the significant Islamic financial players. The study analyses statutory provisions of respective jurisdiction as primary data. The critical review and analysis of the governing law and regulations governing the Shariah governance in the respective different jurisdictions is vital for this analytical and comparative study. Such primary data are supplemented by the library research and empirical evidence from the unstructured interviews with selected respondents across jurisdictions.

Keywords : *Shariah Governance, Cross border, Regulatory Framework*

Category : Islamic Finance and Economics

1301 SHARIAH GOVERNANCE FOR ISLAMIC FINANCIAL INSTITUTIONS IN MALAYSIA ON THE INDEPENDENCY OF SHARIAH COMMITTEE AND EFFICIENCY OF ITS SHARIAH DECISIONS#

AHMAD AZAM OTHMAN, *ISLAMIC LAW DEPARTMENT, Ahmad Ibrahim Kulliyah of Laws*
RUSNI HASSAN, *ISLAMIC LAW DEPARTMENT, Ahmad Ibrahim Kulliyah of Laws*
MUHAMMAD NAIM OMAR, *ISLAMIC LAW DEPARTMENT, Ahmad Ibrahim Kulliyah of Laws*
MOHAMMAD DEEN MOHD NAPIAH, *ISLAMIC LAW DEPARTMENT, Ahmad Ibrahim Kulliyah of Laws*
MAHAMAD ARIFIN, *ISLAMIC LAW DEPARTMENT, Ahmad Ibrahim Kulliyah of Laws*
ADNAN YUSOFF, ,

Exhibitor : AHMAD AZAM OTHMAN, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

Shariah governance for Islamic Financial Institutions (IFIs) in Malaysia is governed by the Shariah Governance Framework for the Islamic Financial Institutions 2010 (SGF 2010) that was developed and introduced by Central Bank of Malaysia (CBM). SGF 2010 provides that Shariah Committee as an internal Shariah advisory body formed in each respective Islamic financial institution (IFI) is important to ensure the overall Islamic financial practices of such institution operate in accordance with the Shariah principles. Similarly, SGF 2010 provides a comprehensive guidance to the Shariah Committee in discharging its duties and responsibilities in matters relating to Shariah. To ensure that all of its duties and responsibilities are carried out accordingly, Shariah Committee must be independent. Its independency shall be observed at all times while exercising its duties and responsibilities. To ensure Shariah Committee independency, the Board of Directors (Board) needs to be notified on the minutes of Shariah Committee meetings. The Shariah Committee shall also have access to accurate, timely and complete information from the management. Its independency requires the findings of Shariah audit and Shariah review to be tabled before the Shariah Committee members for their comments and endorsements. In a situation where the Shariah Committee has reasons to believe that the IFI has been carrying on Shariah non-compliant activities, the Shariah Committee shall inform the Board and recommend suitable measures to rectify the situation. Independency of Shariah Committee leads to the efficiency of Shariah Committee decisions made during the Shariah Committee meetings. In order to facilitate the Shariah Committee members' decisions, they shall be given the necessary access to files, records, draft materials and conversations, including those categorised as confidential, so long as the information is related to the work undertaken by the Committee. This means that Shariah Committee needs to be given sufficient information, and full disclosure and transparency on all issues during meetings. Not only that, to facilitate and reach good decisions, Shariah research needs to be carried out by the Shariah research officers of the IFI to facilitate Shariah decisions and research conducted by the Shariah research officers would assist the Shariah Committee to reach good decisions.

Keywords : *Shariah Committee, Board, Shariah decisions, Shariah officers, independency, efficiency*

Category : Islamic Finance and Economics

1302 CATEGORIZATION AND PRIORITIZATION OF WAQF LANDS: A MALAYSIAN CASE#

Mustafa Omar Mohammed, *Economics, Kulliyah of Economics and Management Sciences*
Rafikul Islam, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Mustafa Omar Mohammed, Economics, Kulliyah of Economics and Management Sciences

The aim of this paper is to study the current status and development of waqf lands in Malaysia, specifically in the state of Selangor, Malaysia and propose a new model for categorization of its waqf lands. Previous studies on waqf lands and allocation of financial resources on these lands have been general and scanty. They lack the focus of categorizing waqf lands according to sectors, economic attributes and strategic locations so that it was not easy to match these lands to the kind of resources and investment models required for their development. This research hopes to categorize waqf lands and prioritize them according to four major sectors, namely agriculture, commercial, residential and religious. By doing so, these waqf lands can be prioritized based on their importance and thus investment funds can be appropriately allocated for their development. The study is quantitative in nature and uses a multicriteria decision-making method, the Analytic Hierarchy Process (AHP) to prioritize the waqf lands by taking inputs from the officers working in Selangor Islamic Religious Council and some other related organizations. The study concludes with recommendations and suggestions for future research.

Keywords : Waqf land, Categorization, Prioritization, Islamic investment models, AHP

Category : Islamic Finance and Economics

1313 HOUSEHOLD FINANCIAL MANAGEMENT: PROFILES OF URBAN HOUSEHOLDS OF DIFFERENT RELIGIOUS BELIEFS#

Selamah Abdullah Yusof, *Economics, Kulliyah of Economics and Management Sciences*

Wan Jamaliah Wan Jusoh, *Business Administration, Kulliyah of Economics and Management Sciences*

Rohaiza Abd Rokis, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Selamah Abdullah Yusof, Economics, Kulliyah of Economics and Management Sciences

Malaysia is currently facing a significant rising trend in household debt. A critical factor related to this issue is the management of household finances to meet the financial obligations and to ensure financial prudence. An understanding of how Malaysian households manage their finances can provide valuable insights to policy makers in their formulation of effective strategies to assist the households in facing any challenges. This research provides such input by analyzing the profiles of households with different religious beliefs pertaining to their financial management, experiences and expectations. In addition, this study uses data that is very current and representative of the urban population. The research is based on household data that was collected in June to October, 2012. The sampling procedure follows strictly the random process where the selection of households were determined entirely by the Department of Statistics, Malaysia. The 2010 National Census Sampling Frame for Klang Valley was used, and from the five administrative districts of Kuala Lumpur Federal Territory, Gombak, Klang, Petaling and Hulu Langat, enumeration blocks were proportionately determined, and households were then randomly selected. An adult member of each household were interviewed or required to complete a written questionnaire. The following analysis is confined to the sample of Muslim, Christian, Buddhist or Hindu respondents who were currently married, or living with a partner at the time of the survey. T-tests are applied to determine differences across households.

Keywords : *household, financial management, Malaysia, urban, religion*

Category : Islamic Finance and Economics

1324 INTEGRATION OF WAQF AND ISLAMIC MICROFINANCE IN OIC MEMBER COUNTRIES: AN AGENDA FOR POVERTY ALLEVIATION#

Mohamed Aslam Haneef, *Economics, Kulliyah of Economics and Management Sciences*
Ataul Haq Pramanik, *Economics, Kulliyah of Economics and Management Sciences*
Mustafa Omar Mohammad, *Economics, Kulliyah of Economics and Management Sciences*
Aliyu Muhd, *Economics, Kulliyah of Economics and Management Sciences*
Fouad Bin Amin, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Mohamed Aslam Haneef, Economics, Kulliyah of Economics and Management Sciences

The activities of Waqf and IMF institutions vary among the OIC member countries. Some countries such as, Turkey, Egypt, Algeria, Tunisia, Syria, Lebanon, Morocco are very rich in Waqf resources and some other countries like Kuwait and Qatar are considered well endowed to play role in Waqf development. Similarly, there are different stages of IMF development in OIC member states. The practice of IMF in countries like Bangladesh, Pakistan, Indonesia and Malaysia are well developed compared to other countries such as Nigeria and Egypt, where IMF is still either at the developing stage or at the initial stage. Yet, there are studies that indicate the potential of the waqf institution towards the socio-economic development of the Ummah today, but efforts in this area are largely scattered. Therefore there is a need to integrate them so as to enhance their effectiveness and full potential. The research aims to develop an Integrated Waqf based Islamic Microfinance Model (IWIMM) that will address the needs of poor particularly in OIC member countries that are in-line with the shari'ah as well as promote integration between an institution from Islamic heritage and modern Microfinance.

Keywords : Waqf, Islamic Microfinance,

Category : Islamic Finance and Economics

1371 ENTREPRENEURIAL INTENTION (EI) AMONG UNDERGRADUATE STUDENTS IN INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA (IIUM): EMPIRICAL EVIDENCE#

Dzuljastri Abdul Razak, *Finance, Kulliyah of Economics and Management Sciences*
Aliyu Dahiru Muhammad, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Dzuljastri Abdul Razak, Finance, Kulliyah of Economics and Management Sciences

Recently, entrepreneurship receives most attention than ever before. The importance of inculcating entrepreneurship education among young and fresh graduates cannot be over stressed. Similarly, studies show that student who participates in entrepreneurship program is more willing to start his own business than a student who does not undergo any of these programs. The recent financial crisis serves as lessons for employees and potential graduates that should no longer rely on big companies. The objective of this paper is to investigate the factors that determine entrepreneurship intentions among University students. The paper employed Theory of Planned Behavior (TPB), to examine the students' intentions to start up small scale businesses. Based on the sample size of 222, it was found that power of behavioral control and personal attitude are the major determinants to start up. Other interesting findings revealed in the study were the mediating roles of personal attitude and power of behavioral control. The research utilizes Structural Equation Modeling (SEM) in the analysis and Amos software version 18 to test the hypotheses.

Keywords : *Entrepreneurial Intention, Entrepreneurship, start-up, undergraduates, IIUM*

Category : Islamic Finance and Economics

**1383 ANTECEDENTS OF ZAKAT PAYERS' TRUST IN AN EMERGING ZAKAT SECTOR:
THE CASE OF NIGERIA#**

Mustafa Murtala Oladimeji Abioye., *Accounting, Kulliyah of Economics and Management Sciences*
Muslim Har Sani Mohamad, *Accounting, Kulliyah of Economics and Management Sciences*
Muhammad Akhyar Adnan, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Muslim Har Sani Mohamad, Accounting, Kulliyah of Economics and Management Sciences

Purpose- The purpose of this paper is to investigate and explain factors underlying the inclination of zakat payers to trust a particular zakat institution. **Design/ Methodology-** Based on literature review and experience survey, a context specific questionnaire was developed as the main method of quantitative data collection. The instrument was administered to a sample of Muslim professionals who observe religious seclusion in the last ten days of the Islamic fasting month (itqaf) in twelve purposely selected mosques across four states and the federal capital territory. **Findings –** Drawn from resource dependence and legitimacy theories, the study finds that board capital, disclosure practices, governmental model of zakat Institution, and stakeholder management were identified through the use of structural equation modeling as being the antecedents of zakat payers' trust. **Originality-** This paper is the first to report an empirically based model of zakat payers' trust

Keywords : *Board capital, Disclosure Practices, Stakeholder management, Zakat Payers' Trust*

Category : Islamic Finance and Economics

1385 INSPIRING CREATIVITY THROUGH INNOVATIVE STRATEGIES: THE CASE OF APPLE INC.#

Noorihsan Mohamad, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Noorihsan Mohamad, Economics, Kulliyah of Economics and Management Sciences

The first iPhone was unveiled by former Apple Inc. CEO Steve Jobs on January 9, 2007 and released on June 29, 2007. Later in the same year, Apple announced that a software development kit (SDK) would be available to third-party developers to guide the programmers to direct their thoughts in the proper course. In less than six months, the App Store contained 500 third-party applications range from business to game applications, entertainment to educational applications. If a mere decade ago, programming was left to tech people with the highest levels of programming knowledge, now programmers of iPhone applications are as young as nine years old. This paper conceptualizes the inventive aspect of Apple's strategy in educating and inspiring the users to be creative and innovative. Here, it is argued that the innovative aspect of Apple Inc. in staggering and restricting product and system development plays a dominant role in inspiring creativity among the users relative to other factors.

Keywords : *Technology; Innovation; Creativity; Supply Management & Strategies; Education*

Category : Islamic Finance and Economics

**1388 CORPORATE GOVERNANCE OF ISLAMIC FINANCIAL INSTITUTIONS IN MALAYSIA:
BETWEEN THE “DESIRABLE” AND THE “ACTUAL”#**

Maliah Sulaiman, *Accounting, Kulliyah of Economics and Management Sciences*
Norakma Abdul Majid, ,

Noraini Mohd Ariffin, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Maliah Sulaiman, Accounting, Kulliyah of Economics and Management Sciences

Corporate governance of Islamic Financial Institutions in Malaysia: Between the “Desirable” and the “Actual” Given the phenomenal increase in Islamic banking activities globally, it is important that there exists good governance practices of Islamic financial institutions (IFIs). This is primarily to ensure its sustainability in the long run. More importantly, in order for Islamic banks to play an optimum role in the development of Islamic countries, it is pertinent to develop regulatory structures to control fraud, exploitation, and un-Islamic behaviour. Additionally, the development of strong governance practices will win public confidence and thereby promote trust amongst equity holders, investors and other parties dealing with these IFIs. However, promulgating and developing standards and guidelines on corporate governance (CG) may not be adequate. What is needed is to examine the extent IFIs are actually following such guidelines. This is precisely what we have attempted to do. There are two stages to the study. A disclosure index is first developed using the guidelines issued by the Central Bank of Malaysia (BNM), the standard on CG promulgated by the Accounting and Auditing Organization of Islamic Financial Institutions (AAOIFI) and the framework introduced by the Islamic Financial Services Board (IFSB). In order to provide an opportunity to understand the inclination of the type of CG information being disclosed by IFIs in Malaysia, the 14 dimensions that made up the index was split into 10 dimensions of general-governance related information and 4 dimensions of specific-governance related information. Specifically, the specific CG information (SCGi) constitute dimensions that align with the unique characteristics of IFIs such as Shariah compliance, Shariah committee, Governance committee (specifically indicated in the IFSB guidelines) and Investment account holders (IAH). The index developed in the first stage is then used to assess the annual reports of all 16 IFIs operating in Malaysia. This paper reports on the second stage of the study. The results do not appear too promising. On a scale of 0 to 100, the CG disclosure index ranges from a low of 42.28 to a high of 68.29, with the average score hovering around 51.42. The challenge before IFIs today is to improve all crucial aspects of CG that are unique to them as in the specific CG information that have been suggested in this study. More specifically, IFIs should focus on information pertaining to the the Shariah committee/ SSB, specific matters on internal audit and control, customers/ investment account holders, detailed information on governance committees and Shariah compliance aspects. Various banking crisis over time have dramatically illustrated the catastrophic consequences flowing from the poor corporate governance of banks (Yunis, 2007). To provide a cushion against these flaws, there is a need to have a rigorous re-evaluation of CG principles of IFIs. This is important as CG may be regarded as a key factor in understanding the institution and its management. Good CG is pertinent as this will enhance investor confidence in the decision taken by the managers -more so in the case of IFIs.

Keywords : *Malaysia, Islamic Financial Institutions, corporate governance, disclosure index*

Category : Islamic Finance and Economics

1392 CONSTRAINTS AND OPPORTUNITIES IN HARMONISATION OF CIVIL LAW AND SHARIAH IN THE ISLAMIC FINANCIAL SERVICES INDUSTRY#

Engku Rabiah Adawiah Engku Ali, , *IIUM Institute of Islamic Banking & Finance*

Exhibitor : Engku Rabiah Adawiah Engku Ali, IIUM Institute of Islamic Banking and Finance, IIUM Institute of Islamic Banking & Finance

Islamic financial services are expected from the out-set to comply with the Islamic legal rules in all their dealings. In addition to the Islamic legal rules, the Islamic financial institutions are also governed by the laws of the countries in which they operate. In the case of cross-border transactions, the parties are further subjected to conflicts of law issues especially in ensuring that their transactions would be valid and enforceable in the relevant jurisdictions that they have chosen to operate in. Thus, one of the challenges in Islamic financial services industry is to develop financial services and instruments that are Shariah compliant, commercially viable, valid and enforceable based on the prevailing governing law. When a financial institution wishes to offer Islamic financial services, it must abide by the financial regulations applicable in the country of residence. Different countries may have different legal and regulatory frameworks. There have been efforts by a number of countries to develop a facilitative legal framework that harmonises between the civil law and the Shariah requirements, to enhance and accelerate the Islamic financial services industry. Nonetheless, there are obviously legal hiccups and tensions in the implementation of Islamic financial services in the global, regional as well as domestic market. The degree of the problems faced may differ from one country to the other. This article studies the constraints & opportunities in harmonisation of civil law and Shariah in the Islamic financial services industry, with lessons learnt from the Malaysian legal framework and case laws from Malaysia and the UK.

Keywords : *harmonisation of Shariah and Civil law in Islamic Financial Services*

Category : Islamic Finance and Economics

1400 PROFILES OF EARLY ADOPTERS OF DINAR AND DIRHAM AMONG URBAN MUSLIMS IN MALAYSIA#

Wan Jamaliah Wan Jusoh, *Business, Kulliyah of Economics and Management Sciences*

Abideen Adeyemi Adewale, *Finance, Kulliyah of Economics and Management Sciences*

Exhibitor : Abideen Adeyemi Adewale, Finance, Kulliyah of Economics and Management Sciences

The aim of this research is to investigate the factors that differentiate between early adopters from later adopters of Dinar and Dirham among urban Muslims in Malaysia. A structured questionnaire was developed to gather information on the demographic profile of the respondents as well as to determine the antecedents of the Dinar and Dirham adoption process. 204 respondents who were conveniently selected participated in this survey. Majority of the respondents were male (62%), single (53.9%), between the ages of 19-25 (39%), have a bachelor degree qualification (40.7%) and working (49.5%). Findings from this study revealed that there are significant differences between early and later adopters of Dinar and Dirham in terms of the level of attitude, social influence, perceived behavioral control, religiosity, self-efficacy and behavioral intention to adopt Dinar and Dirham as currency for everyday transactions. This study contributes to the greater understanding of the factors that enhance the adoption of Dinar and Dirham among Muslims in urban Malaysia.

Keywords : *early adopters, Dinar and Dirham, theory of planned behavior, muslims, Malaysia*

Category : Islamic Finance and Economics

1435 MUSHARAKAH FINANCING FOR WORKING CAPITAL NEEDS OF BUSINESSES#

Sayyid Tahir, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Sayyid Tahir, Economics, Kulliyah of Economics and Management Sciences

ABSTRACT: This poster is based on a study on ALTERNATIVE STRUCTURES FOR FINANCING BY ISLAMIC BANKS done for IRTI, research arm of the Islamic Development Bank, in July 2012. This poster highlights, among others, three things: Musharakah means an Islamic Bank (IB) sharing its resources with the client (Business – Bu), not “giving” money to the client on a profit-&-loss sharing basis.—Practically, rather than giving funds, IB gets Bu share its resources with IB. IB maintains the accounts of the joint venture, and Bu looks after operational matters. All business operations are to take place under JV’s name. With role functions of IB and Bu and operational matters clearly defined, the probability of losses becomes negligible. Outline of the relevant financing instrument in this respect is also provided.

Keywords : *Islamic Bank, Musharakah, Working Capital*

Category : Islamic Finance and Economics

**1481 EFFECTS OF CREDIT CARDS ON CUSTOMER SPENDING IN THE KLANG VALLEY
MALAYSIA: A COMPARATIVE ANALYSIS OF ISLAMIC AND CONVENTIONAL CREDIT CARDS#**

UMAR IDRIS, *IiBF, IIUM Institute of Islamic Banking & Finance*

Exhibitor : UMAR IDRIS, IIUM Institute of Islamic Banking & Finance, IIUM Institute of Islamic Banking & Finance

Abstract This perhaps better disseminate the attitude of Malaysian credit card holder towards spending and settlement behavior. In wake of this excessive burden of debt accumulating the Malaysian economy, it is an attempt to provide the effect of Islamic credit card to the spending behavior of consumers. While Islamic banking practice peak to grow in Malaysia as to diversify their products to cater the needs of the consumer, Islamic credit is also seen as an alternative catering the same purpose like conventional credit card with the due consideration of avoiding riba in the transaction. So, a hypothesize the assumption that Islamic credit card holders seems to behave Islamically (not extravagant spending). Hence, with the use of Islamic card, ideally, it should reflect the psychological and moral aspect of Islamic teaching towards spending pattern of consumers. Thus, to achieve this aim, we conducted a survey by using a structured questionnaires' in the range of 100:100 sample of conventional and Islamic credit card holders in the Klang valley of Kuala Lumpur. Statistically, we found that there is no as such effect of religion into the usage of credit holders whether Islamic or conventional. But in terms of perception, benefits and quality service of Islamic and conventional credit card, they direct same advantage, with the fact that Islamic credit card is new to the system and placing to grasp the market. The Risk factor for availing either of the service shows that conventional banks outweighs with the Islamic due to the fact that they are in operation for the long period and hence gain the trust of the public.

Keywords : : *Credit card, customer, behavior, spending, effect.*

Category : Islamic Finance and Economics

1483 ASSET, ITS CONCEPT, LEGALITY AND FEATURES FOR DEVELOPING ISLAMIC FINANCE PRODUCT#

UMAR IDRIS, *IiBF, IIUM Institute of Islamic Banking & Finance*

Exhibitor : UMAR IDRIS, IIUM Institute of Islamic Banking & Finance, IIUM Institute of Islamic Banking & Finance

There have been increasing contentions on the way Islamic banking products are developed in the market. There seems to be an implicit majority view that Islamic finance products are replica of the conventional ones. Whereas many studies have focused on the technicalities of developing these Islamic finance products, the question of what determines a viable asset for these products remain largely neglected. The present study aims at exploring modern juristic views on the concept and characteristics of an asset from an Islamic perspective in the current financial setting in order to arrive at a definition under which the development of certain Islamic finance products is possible. The study adopts the inductive approach to present views of scholars in the Islamic heritage, in books of contemporary jurisprudence, traditional finance, other relevant research and studies that are conducted on the topic of asset. The study also adopts the comparative and analytical approaches to the views of the various scholars under review to arrive at a clear concept of an asset. In this study, the term “asset” is attributed to anything tangible and non- tangible that has a lawful benefit within the boundaries of the Shariah, common law and accepted custom, and can be disposed of within these boundaries. The study adopts the theory of contract for asset possession based on three elements: existence of financial value in the item, fulfillment of the ownership of the plaintiff in the item and the plaintiffs’ right and ability to use the item. The author hypothesized that Islamic finance products can be developed based on anything that fulfills the identified characteristics of an asset as long as it does not lead to prohibition. The study provides some Shariah guidelines to the determinants and uses of assets in every stage of Islamic finance product development.

Keywords : *Asset, Its Concept, Legality and Features for Developing Islamic Finance Product*

Category : Islamic Finance and Economics

1484

EQUITY OR DEBT FOR ISLAMIC BANKS?#

LAMA AL-KAYED, , *IUM Institute of Islamic Banking & Finance*
Sharifah Raihan Syed Mohd Zain, *Finance, Kulliyah of Economics and Management Sciences*
Jarita Duasa, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Sharifah Raihan Syed Mohd Zain, Finance, Kulliyah of Economics and Management Sciences

As new comers to the market, Islamic Banks (IBs) are facing a trade-off. They can either employ high capital ratios which increase the soundness and safety of the bank and lowers the required return (risk) by investors, or depend on deposits and Islamic bonds which are considered cheaper sources of funds due to their tax deductibility. IBs' management must carefully decide upon the appropriate mix of debt and equity, namely, capital structure, in order to maximize the value of the bank. This study examines the effect of capital structure on IBs' performance in an attempt to provide guidance to managers in the issue of raising capital. Using a sample of 85 IBs covering 19 banking systems, the study uses a Two-Stage Least Squares (2SLS) method to examine the performance determinants of IBs' in order to control for the reverse causality from performance to capital structure. After controlling for macroeconomic environment, financial market structure and taxation, results indicate that IBs' performance (profitability) measures respond positively to increases in equity (capital ratio). The result is consistent with the signaling theory which predicts that banks expected to have better performance credibly transmit this information through higher capital. Results of optimal capital structure find a non-monotonic U-shaped relationship between the capital-asset ratio and profitability, supporting the efficiency risk and franchise value hypotheses.

Keywords : *Capital Structure, Islamic Banks, Performance, Optimal Capital Structure.*

Category : Islamic Finance and Economics

1485 DIVIDEND POLICY IN LIGHT OF BEHAVIOURAL FINANCE APPROACH: A CONCEPTUAL ANALYSIS#

Hassanuddeen Abd. Aziz, *Finance, Kulliyah of Economics and Management Sciences*
Abdelghani Echchabi, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Hassanuddeen Abd. Aziz, Finance, Kulliyah of Economics and Management Sciences

Modern finance theory existed for more than 60 years, starting with the early works of Dean (1951), Markowitz (1952), Modigliani and Miller (1958), Miller and Modigliani (1961), Sharpe (1964), Lintner (1965), Fama (1970), Jensen and Mackling (1976), Ross (1976), etc. These scholars have contributed to various areas of financial theory, including capital budgeting, portfolio theory, capital structure, dividend policy, capital asset pricing, capital markets efficiency, option pricing, agency theory, etc. These theoretical advances were followed by a growing body of empirical studies to test the above theories. These studies found differing and inconsistent results, which made the current state of modern finance theory to be dissatisfactory (McMahon, nd). These empirical studies have also identified several “puzzles” that could not be explained up to date, including the equity premium puzzle, the dividend puzzle, predictable excess return puzzle, etc. According to De Bondt and Thaler (1995), a new facet of financial theory, called “behavioural finance” can resolve the dual purpose used in the modern finance theory i.e. characterising optimal decision and describing actual decision. Hence, the current paper argues that the existing finance puzzle should be further studied in the context of behavioural finance theory, since it covers the irrational aspect of the investment behaviour. The focus is made in this paper on the dividend puzzle.

Keywords : *Dividend Policy, Dividend Puzzle, Behavioural Finance*

Category : Islamic Finance and Economics

1486

DETERMINANTS OF THE ADOPTION OF GOLD DINAR IN KELENTA#

Ahamed Kameel Mydin Meera, *Finance, IIUM Institute of Islamic Banking & Finance*
Muhammad-Bashir Yusuf, *Economics, Kulliyah of Economics and Management Sciences*
Gairuzazmi Mat Ghani, *Economics, Kulliyah of Economics and Management Sciences*
Turkhan Ali Abd Manap, *Economics, Kulliyah of Economics and Management Sciences*
Moussa Larbani, *Business, Kulliyah of Economics and Management Sciences*

Exhibitor : Gairuzazmi Mat Ghani, Economics, Kulliyah of Economics and Management Sciences

Abstract The goal of this study is to examine the determinants of gold dinar adoption in Kelantan, Malaysia, using an extended adoption model. The model consists of seven factors: relative advantage, result visibility, result demonstration, facilitating condition, anxiety, trial ability and institutional trust. Survey data collected from gold users in Kelantan was used for this study to identify the components of the gold dinar adoption and its determinants. Structural equation modeling technique was employed in the study to test whether the hypothesized model fit the data collected. Overall, it was discovered that all the indicators have good loading on their factors suggesting that they measure what they are supposed to measure. Six out of the seven constructs specified to influence the adoption of the gold dinar were found to be practically and statistically significant and exhibit the correct signs. The study has therefore contributed to knowledge in a number of ways and has a lot of policy implications.

Keywords : Gold dinar, Kelantan, Adoption, SEM

Category : Islamic Finance and Economics

1528 CUSTOMERS' ATTITUDE TOWARDS DIMINISHING PARTNERSHIP HOME FINANCING IN ISLAMIC BANKING#

Muhamad Abduh, *IUM Institute of Islamic Banking and Finance, IUM Institute of Islamic Banking & Finance*
Dzuljastri Abdul Razak, *Finance, Kulliyah of Economics and Management Sciences*

Exhibitor : *Muhamad Abduh, IUM Institute of Islamic Banking and Finance, IUM Institute of Islamic Banking & Finance*

Problem statement: Diminishing partnership or musharakah mutanaqisah contract in home financing is recently introduced by the Islamic banking industry as an alternative of the bay bi'thaman ajil contract which has received many criticism from shariah scholars as mimicking conventional loan. This study aims to examine customers' attitude upon diminishing partnership home financing and their intention to subscribe into the financing scheme. Approach: This study gauges customers' perception on the salient features of diminishing partnership home financing from Islamic banks through a survey of 504 respondents comprise officers, managers and academician in Kuala Lumpur. The structural equation modeling was utilized to find out factors that influence customers' intention for diminishing partnership home financing under the framework of the theory of reasoned action. Results: The main finding indicates that customers perceived the equity sharing features in diminishing partnership home financing mode differ from the conventional loan and other existing Islamic home financing modes. The result from structural equation modeling shows that customers' intention for diminishing partnership is more influenced by their subjective norms compared to their attitude toward diminishing partnership home financing. Conclusion: The customers have perceived diminishing partnership as more shariah compliant than bay bi'thaman ajil. Afterwards, opinions from people perceived important by customers are giving more influence towards their decision making process.

Keywords : *Islamic banking, musharakah mutanaqisah, structural equation model, theory of reasoned action, Malaysia*

Category : Islamic Finance and Economics

1533 MODELING VOLATILITY USING GARCH (1, 1) MODEL: THE CASE OF KUALA LUMPUR COMPOSITE INDEX (KLCI)#

Mohd. Aminul Islam, *Computational and Theoretical Sciences, Kulliyah of Science*

Exhibitor : Mohd. Aminul Islam, Computational and Theoretical Sciences, Kulliyah of Science

The aim of this paper is to modeling volatility and explaining the financial market risk. We use daily data of Kuala Lumpur Composite Index (FTSE-KLCI) covering the period October 23, 2007 to October 24, 2012. This comprises 1238 daily observations over five year period. Closing prices for stock index are extracted from yahoo online database. We employed Generalized Autoregressive Conditional Heteroscedasticity or best known as the GARCH (1, 1) model proposed by Bollerslev (1986) which is by far the most common and popular of the GARCH models. The distinctive feature of this model is that it recognizes that volatility and correlation are not constant. It follows stochastic process. During some periods, a particular volatility or correlation may be relatively low, whereas during other periods, it may be relatively high. GARCH (1, 1) model is capable of capturing such changes in time series financial returns data. Our result shows that most of the time, the GARCH (1, 1) volatility during the 5-year period covered by the data, was less than 2.5% per day, but volatilities as high as 5% to 8% were experienced in some periods. This shows that daily returns can be characterized by the GARCH (1, 1) model.

Keywords : KLCI, GARCH (1, 1) model, Volatility, Financial market, Financial risk

Category : Islamic Finance and Economics

1537 THE SUCCESS OF BRI UNIT IN IMPROVING THE PERFORMANCE OF MICROENTERPRISES#

Alias Mat Derus, *Economics, Kulliyah of Economics and Management Sciences*
Weni Hawariyuni, *Economics, Kulliyah of Economics and Management Sciences*
Gairuzazmi Mat Ghani, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Alias Mat Derus, Economics, Kulliyah of Economics and Management Sciences

The purpose of this paper is to explore the success of BRI Unit in improving the performance of microenterprises in terms of microenterprises income, fixed assets, and household expenditures before and after receiving loan. This study employs the survey during the period of November 2009 to December 2009 by selecting randomly 400 clients of BRI Unit originated from eleven BRI Units in Medan city, Indonesia. These eleven BRI Units are organized by BRI Putri Hijau. The results indicate that BRI Unit improves the performance of microenterprises in terms of maximum value in nominal terms. The findings from this paper provides policy maker with valuable information regarded the role of BRI Unit in improving the performance of microenterprises. To the best of the author's knowledge, this is the first paper to explore the success of BRI Unit in improving the performance of microenterprises in Medan city, Indonesia.

Keywords : *BRI Unit, Microenterprise, Loan, Microenterprise income, Fixed assets, Household expenditures.*

Category : Islamic Finance and Economics

1550 THE ROLE OF ZAKAT AND ITS EFFECTIVENESS IN ALLEVIATING PAKISTAN'S REGIONAL POVERTY AND INEQUALITIES: A MEASUREMENT USING A NEWLY DEVELOPED TECHNIQUE#

Alias Mat Derus, *Economics, Kulliyah of Economics and Management Sciences*
Naziruddin Abdullah, *Economics, Kulliyah of Economics and Management Sciences*
Husam Al-Malkawi, ,

Exhibitor : Alias Mat Derus, Economics, Kulliyah of Economics and Management Sciences

This paper looked at the role of zakat in alleviating poverty by developing a new mathematical model to measure basic need deficiency index. Pakistan data was use for the study. This paper makes three major contributions. First, it develops a new methodology to measure poverty alleviation in Pakistan, focusing on the poor householdsconsumption/expenditure on basic needs, government spending in terms of zakat and the number of zakat recipients as the three main determinants.Based on the results and findings of the study, we submit the following policy recommendations. First and foremost, as zakat proves to be a very effective way of helping the poor to rid them of severe poverty, the collections and disbursements of zakat must be pursued.

Keywords : *Zakat, Inequality, BNDI*

Category : Islamic Finance and Economics

1559 **EXPLORING THE NEED TO SHIFT FROM DEBT-BASED FINANCING TO EQUITY-BASED FINANCING IN ISLAMIC BANKS: THE CASE OF MALAYSIA#**

Noraini Mohd Ariffin, *Accounting, Kulliyah of Economics and Management Sciences*

Salina Kassim, *Economics, Kulliyah of Economics and Management Sciences*

Dzuljastri Abdul Razak, *Finance, Kulliyah of Economics and Management Sciences*

Exhibitor : Noraini Mohd Ariffin, Accounting, Kulliyah of Economics and Management Sciences

Due to the prohibition of interest in the Islamic banking transactions, the Islamic banks should be involved in equity-based financing which rely on the concept of risk and profit sharing. As such, financing instruments such as Mudarabah and Musharakah supposedly become the major financing instruments offered by the Islamic banks. However, as argued in the literature, the Islamic banks today concentrate more on the debt based financing, in particular Murabahah and Ijarah contracts compared to equity based financing (Mohd. Ariffin, 2006; Khan and Ahmed, 2001; Al-Omar and Iqbal, 2000; and Al-Omar and Abdel Haq, 1996). This study aims to investigate the use of various modes of financing by several Islamic banks in Malaysia, particularly the extent of equity based financing and to empirically test the hypothesis that the equity based financing is not popular among the Islamic banks. The study relies on data from the annual reports and survey questionnaire on 16 Islamic banks in Malaysia. In addition, the study examines the current practice of Musharakah Mutanaqisah that has been applied by a few Islamic banks. Based on the findings, the study provides recommendations in order to encourage the Islamic banks to use more of the equity based financing. Findings of the study has important policy implications to the regulators, industry players and standard-setters.

Keywords : *equity based financing, debt based financing, Islamic banking, Malaysia*

Category : Islamic Finance and Economics

1569 PERFORMANCE OF ISLAMIC UNIT TRUST FUNDS IN 2005-2011 PERIOD: A REGIONAL COMPARISON#

Salina Hj. Kassim, *Economics, Kulliyah of Economics and Management Sciences*
Yasin Mahmoud Ibar, *Master of Finance,*

Exhibitor : Salina Hj. Kassim, Economics, Kulliyah of Economics and Management Sciences

This study attempts to compare the performance of the Islamic unit trust funds across selected regions, namely, America, Europe, Asia and GCC in 2005-2011 period. The sample size of the study is 42 Islamic unit trust funds across these regions with 7 funds from America, 5 funds from Europe, 10 funds from GCC, while 20 funds are from Asia. In particular, this study embarks on the following specific objectives: (i) Analyze the performance of Islamic unit trust funds across selected regions using various performance measures, namely, Sharpe index, Treynor index and the Jensen Alpha index; and (ii) Compare and contrast the Islamic unit trust funds against their primary benchmarks such as FTSE Global Islamic Index series, Dow Jones Islamic Market index (DJIM), GCC Shari'ah Composite Index and the FTSE Bursa Malaysia EMAS Shari'ah index respectively. The study aims to contribute towards enriching the literature on Islamic unit trust funds and enhance the empirical analysis on the performance of the Islamic equity unit trusts funds in a cross regional scenario. The study also presents an outlook of the performance of Islamic unit trust funds and assists investors to select the best region and fund manager performances that might affect not only its investment performance but also the selection of the securities in the investments.

Keywords : *Islamic unit trusts, performance, regions, financial crisis*

Category : Islamic Finance and Economics

1571 **APPLICATIONS OF DECREASING PARTNERSHIP (AL-MUSHĀRAKAH AL-MUTANĀQISAH)
IN ISLAMIC BANKING: SOME RELEVANT SHARI'AH ASPECTS#**

Muhammad Abdurrahman Sadique, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Muhammad Abdurrahman Sadique, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

Equity based structures could be adopted with advantage for financing projects in a variety of situations. Being expressly designed for financing, these could replace in many instances debt based modes that have been tailored to fit in artificially. Decreasing partnership, when used in asset financing, merely facilitates common ownership of the asset while allowing one partner to gain from the other, in the form of lease rentals and sale of the share. Therefore, although resulting in some advantages to the client partner as well as the bank, it may not be regarded as a method that is fully reflective of the equity relationship. The possibility of it being construed or abused as an interest-bearing mode should not be underestimated. Its justification essentially depends on the proper and independent functioning of the component contracts. Therefore, measures should be taken for manifesting the different capacities of the parties in a robust manner, especially through fulfilling the duties pertaining to ownership and lease, and accepting the liabilities involved. The pricing of units and lease rentals should be made independent and more realistic. Ensuring the bank's title to the asset should not be through the sole means of a legal mortgage. Gaining legal recognition, where possible, could be ideal. Amendments proposed in order to emphasise the sale and lease transactions could be considered. Granting the client an option to purchase the units may greatly enhance the reality of the contracts, in addition to signifying a breakaway from conventional banking practices. Decreasing partnership in ventures could be an important means for financing projects. The equity structure should not be based on terms favourable to one party, in a manner complementing the existing conventional modes. Replacing the legally binding promise to purchase with an understanding to that effect, giving the partners a choice in the matter, could be more conducive towards the equity relationship. In this regard, the steps proposed in the paper could be taken into consideration.

Keywords : *Islamic, equity, project, venture, asset, financing, decreasing, diminishing, partnership*

Category : Islamic Finance and Economics

1574

**CONCEPTUALIZING THE INTEGRATED DEVELOPMENT INDEX (I-DEX): A
COMPREHENSIVE APPROACH TO MEASURING HUMAN DEVELOPMENT#**

Ruzita Mohd Amin, *Economics, Kulliyah of Economics and Management Sciences*
Mohamed Aslam Haneef, *Economics, Kulliyah of Economics and Management Sciences*
Mustafa Omar Mohammed, *Economics, Kulliyah of Economics and Management Sciences*
Selamah Abdullah Yusof, *Economics, Kulliyah of Economics and Management Sciences*
Gapur Oziev, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Ruzita Mohd Amin, Economics, Kulliyah of Economics and Management Sciences

Standard economics and policy prescriptions adopt the modernization thesis at its base, which says that developing countries can modernize by undergoing secularization and westernization. However, Muslim countries, including Malaysia, have shown that more economic development and progress can take place together with a renewed manifestation of Islamic values and norms. This important departure from the modernization thesis reflects a potential alternative transformational development model. However, conceptual and theoretical frameworks of this alternative development model is still lacking. There is an urgent need for Muslim countries to develop this alternative model that represents a more holistic and inclusive concept of development that integrates the physical/material, intellectual and spiritual dimensions of human beings. This study proposes to develop an integrated Islamic development framework and index based on, and representing the Maqasid al-Shari'ah or noble objectives of the Shari'ah and to compute this index for OIC and non-OIC countries. The final expected outcome of this study is a Maqasid-based Integrated Development Index (I-Dex) that will better represent holistic development and well-being according to Islamic benchmarks, hence providing academics, students and policymakers in Muslim countries with an alternative measurement of progress.

Keywords : *Maqasid al-Shari'ah, Integrated development framework, Development Index*

Category : Islamic Finance and Economics

1575 **CONCEPTUALISING A STRATEGIC FRAMEWORK FOR SOCIAL RESPONSIBILITY IN ISLAMIC ECONOMICS#**

Mohd Nizam Barom, *Department of Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Mohd Nizam Barom, Department of Economics, Kulliyah of Economics and Management Sciences

In developing Islamic economics as a new discipline with the core foundation is the realization of socio-economic justice and overall human wellbeing, its proponents have emphasised on the role of religious and normative postulations in shaping the economic and financial choices of individuals. Nevertheless, recent debates have highlighted the growing frustration on the failure of Islamic finance in addressing ethical and socially responsible issues beyond the legal realm of Shari'ah-compliance. Likewise, the survey of the literature concerning the multiple aspects to individuals' motivations for the support towards Islamic finance have also revealed mixed results. While the religious aspect has been shown to be a primary concern among the users of Islamic financial services in numerous studies, economic consideration remains an essential component in such decisions, and in many instances overwhelmed the normative dimension. Based on these observations, perhaps it is wise to reflect the applicability of Islamic economic theory in the context of the contemporary reality of the Muslim society. In the transitional state where the economic dimension remains as a dominant factor in individuals' decisions, the crucial challenge is to reconcile self-interest motives with the social interest. One of the prospective means to reduce the potential conflict between the two can be found in the literature of strategic or instrumental theory of ethics. This paper seeks to discuss this issue from an Islamic perspective within the transformative paradigm of Islamic economics. The strategic framework of social responsibility is outlined based on a synthesis of the normative and positive dimensions of human instincts, the notion of *falah*, the moral and price filters of market and the theory of instrumental ethics. The paper argues that a strategic understanding of social responsibility issues and commitment is not in conflict with Islamic teachings. Nevertheless, it should not be taken as a theory independent of its normative foundation as normally construed in the Western literature. Instead, the strategic theory in Islamic perspective should be seen as complementary in nature with the normative underpinnings as the core, providing additional incentive and motivation for individuals to address social responsibility issues. Additionally, it has also been argued that these normative goals can be facilitated by the presence of an appropriate socio-economic environment. Recognising that the notions of corporate social responsibility (CSR) and socially responsible investing (SRI) have been often celebrated as a force to tame the vigour of egoistic orientation under Western capitalism, similar 'enabling environment' can also be introduced in the context of an Islamic economy. This necessarily provides additional economic incentive for businesses to address broader social, ethical, and environmental issues, and reinforce further the strategic understanding of social responsibility and its practice among individuals, businesses and the society as a whole.

Keywords : *strategic or instrumental theory, social responsibility, ethics, transformative paradigm*

Category : Islamic Finance and Economics

1592 **THE IMPACT OF SHARIAH-COMPLIANCE EXTENSIVENESS SCREENING ON THE INITIAL PERFORMANCE OF MALAYSIAN IPOs#**

Nor Azizan Che Embi, *Finance, Kulliyah of Economics and Management Sciences*
Ruzita Abdul Rahim, *School of Management, Faculty of Economics and Management, UKM,*
Izani Ibrahim, *Graduate School of Business, UKM,*

Exhibitor : Nor Azizan Che Embi, Finance, Kulliyah of Economics and Management Sciences

Bursa Malaysia is unique in the sense that it mainly consists of public listed companies that holds Shariah-compliant status. The free Shariah-compliant screening by Shariah Advisory Council (SAC) of Malaysia helps investors to segregate between the public listed companies with Shariah permissible activities with the one which basically against Shariah principles. The risk control elements found in Shariah-compliance screening process substantially attract Muslim and non-Muslim investors. Consistently, Malaysian Islamic Equity Market records the increasing number of listed companies that are being traded with Shariah-compliant status. However, in reality the Shariah-compliant status does not seem to contribute to any IPO initial return performance differential between Shariah-compliant companies and non-Shariah counterparts. It has been highlighted by the past studies and supported by a few evidence of IPO's performance. This study suspects that relying on the Shariah screening process on financial aspects by SAC may not be sufficient. There are two important ratios (Debt ratio and ARTA ratio) highlighted by Council of Islamic Fiqh Academy (CIFA) have not been used. Therefore, the main objective of this study is to identify the impact of extensiveness of Shariah-compliance screening process on the initial performance of IPOs. The research sample consists of 347 Shariah-compliant companies and 37 non-compliant Shariah companies that issued IPOs from January 1999 until December 2008. Obviously, when the Shariah IPOs samples are ranked based on the level of extensiveness, the difference in the initial returns between the most extensive Shariah IPOs and non-Shariah compliant IPOs prevails. The mean initial return of the most extensive Shariah IPOs group is 42.42% while that of the non-Shariah compliant IPOs is only 26.76%. The results of regression analyses validate the importance of Shariah extensiveness in explaining the IPO initial performance. Overall, this study contributes by providing evidence that the existing Shariah screening criteria should incorporates the two financial ratios (debt and ARTA) in order to distinguish the Shariah IPOs from their non-Shariah counterpart.

Keywords : *Initial public offering, Shariah compliant status, Underpricing, Shariah extensiveness*

Category : Islamic Sciences and Disciplines

1014 VIRTUAL TUTOR ®: AN INTERACTIVE LEARNING PROGRAMME FOR ARABIC LANGUAGE FOR NON-NATIVE SPEAKERS#

Ahmed Ragheb Ahmed Mahmoud, *Department of Arabic Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Muhammad Sabri Sahrir, *Department of Arabic Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Rahmah Ahmad H. Osman, *Department of Arabic Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : *Ahmed Ragheb Ahmed Mahmoud, Arabic Language & Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

The purpose of this research is to establish the idea of an interactive program for teaching Arabic language for the non-native speakers. This program is established based on complete awareness of language contents and its four learning skills (phonological, morphological, syntactical and semantic) with a clear focus on the most prominent foundations and theories concerned with the academic accomplishment under the purview e-learning applications. The research has been established on textual and phonological database, comprehending the vocabulary of the language and pronunciation and inferring the most important errors expected from the non-native speakers of Arabic. More than 120 multi users have participated in the process, under the supervision of specialized teamwork - administrative, linguistic, educational and engineering. The tentative results has statistically reflected the program efficiency and its distinctive role in prompting the academic process and the increase of the cognitive outcome for the specimen of students by comparing the results between experimental and control groups. The design framework of this research may be useful for designing interactive Arabic a-learning tools in other educational settings and environment. As it is contributing towards increasing the motivation and positive perception among non-native speakers in learning Arabic which is not their mother tongue and primary language in daily communication.

Keywords : *design framework, Arabic language learning, interactive program, non-native speakers, design and development process*

Category : Islamic Sciences and Disciplines

1018

INTERACTIVE PROGRAM TO TEACH TAJWEED#

Ahmed Ragheb Ahmed Mahmoud, *Department of Arabic Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Muhsin Rashwan, ,

Exhibitor : Ahmed Ragheb Ahmed Mahmoud, Arabic Language & Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Tajweed Automated instructor: The basic idea of this program is to imitate Quran memorization as in real life, whereby the Sheikh recites verses from the Quran and everyone repeats with him, it will then correct those who have made an error and praises the best. The program will also read the verse and ask the learner to recite after, then corrects his faults orally and in writing, and will ask the learner to recite again; it will continue training until he is done with all the recitation provisions successfully. This program is considered helpful to Sheikhs and teachers, and not a competitor to them, as it helps the learner in training and auditing of what he had learned with Sheikh at any time. It is of a great assistance to any Muslim yearning for a great reward reciting verses from the Quran Al- Karim and doing it the right way as revealed by Allah. It will shove the hustle and eliminates all the requirements of life which is accelerating and increasing day by day. This program is distinctive because it relies on artificial intelligence; it identifies the acoustic properties of each learner then analyzes it mathematically, and judges them automatically. The program responds to all Arab and non-Arab voices, and deals with all groups regardless of their age and kind, and can respond to different dialects of certain countries, as it is characterized for its simplicity and speed when dealing with it.

Keywords : *Interactive program, Tajweed, Adaptation.*

Category : Islamic Sciences and Disciplines

1020 AN EVALUATION OF ARABIC PHONOLOGY COURSE AMONG SCHOOL TEACHERS IN A HYBRID LEARNING ENVIRONMENT#

Muhammad Sabri Sahrir, *Department of Arabic Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Nurkhamimi Zainuddin, *Quranic Language Department, Center for Language and Pre University Acad. Development*

Amani Nawi, *Quranic Language Department, Center for Language and Pre University Acad. Development*

Nur Arifah Samat, *Quranic Language Department, Center for Language and Pre University Acad. Development*

Exhibitor : *Muhammad Sabri Sahrir, Arabic Language & Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

The purpose of this research is to conduct an evaluation of an Arabic Phonology course taken by primary school teachers from different locations in Klang Valley and Selangor. The participants in this research are in service teachers enrolling in a part time degree in the Bachelor of Education (Islamic Studies). The degree programme is specially structured for diploma qualified teachers, aiming at upgrading their academic qualification. The programme is a collaboration between the Ministry of Education, Malaysia and the Institute of Education (INSTED), IIUM and is known as Program Pengsiswazahan Guru (PPG). The learning sessions are conducted during weekends (Saturday and Sunday) in a hybrid learning environment mode (face-to-face and e-learning through the Learning Management System – LMS). The participants selected are from 2 sections out of a total of 6 sections comprising of 57 teachers in academic semester 1, 2012/2013. They were required to respond in a mixed mode survey on the effectiveness of the Arabic Phonology course and the instructors involved. The results show that the course evaluation obtained a mean score of moderate high for evaluation of 3 main criterions with the qualitative feedbacks for course improvement and modifications to suit their diverse level of background in the teaching profession in schools.

Keywords : *Arabic phonology, course evaluation, Arabic for specific purposes, adult learning, hybrid learning.*

Category : Islamic Sciences and Disciplines

1041 THE CRITICS OF MUSLIM SOURCES ON THE ORIGINS OF ARAB PEOPLE#

Solehah Yaacob, *Arabic Language & Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Solehah Yaacob, Arabic Language & Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Evidence for this division (on Arab geneology) is recorded in Ibn Ishaq's and Ibn Hisham's Biography of the Prophet (al-sirah al-nabawiyyah) and Tabari's History of the Communities and Kingdoms (Ta'rikh al--umam wa-l-muluk). However, other scholars such as 'Abd al-Salam al-Jumahi (a critic of early poetry) disagreed with Ibn Ishaq that poems by Ad and Thamud proved the existence of the Arabs as a people before the time of Prophet Ibrahim (a.s). The biographer Ibn Nadim considered the verses cited by Ibn Ishaq as fraudulent and not genuine. It is a well-established fact that the corpus of ancient Arabic poetry had suffered a lot at the hands of forgers, plagiarists, misguided philologists, and dishonest narrators.

Keywords : *Extinction and Existence*

Category : Islamic Sciences and Disciplines

1042 #أنموذجاً غولدتسبيهر: ربيبة اللغة من المستشرقين موقف

Solehah Yaacob, *Arabic Language & Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Solehah Yaacob, Arabic Language & Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences

أشكال تكن لم أنها العربية اللغوية الدراسات بدايات حول غولدتسبيهر إجتس مزاعم وضع إلى الدراسة هذه تهدف، السريانية من مأخوذة برأيه هي بل، أصيلة عربية (والسكون والكسرة والفتحة الضمة: الحركات) القصيرة العلة حروف علوم من أنها مسبقا افترض حيث (والحرف والفعل الاسم): الثلاثة الكلم بأقسام يتعلق فيما نفسه الشيء وزعم بذكر الصلة هذه غولدتسبيهر شرح حيث، باطلة (وجهه الله كرم) علي إلى نسبتها وأن التفسيرات كتاب في أرسطو بين العقديّة الخلافات إلى خاصة إشارة مع، الهجري الأول القرن في المختلفة المدارس علماء بين الحاصلة الخلافات المسيحيين بين مختلفة دينية معتقدات عن لاهوتية مناظرات تعقد كانت نفسه الوقت وفي لأته، والقدرية المرجئة المناظرات هذه لكون مرتبطة غولدتسبيهر يرى كما المناظرات هذه إن. الدمشقي يوحنا تعاليم إلى استنادا الشرقيين ولما. أرسطو من الأفكار هذه أخذ قد يكون وأن بد لا الدمشقي يوحنا القديس بأن إيمانه عن فضلا، نفسه الزمان في حاصلة بأخذها الإقرار رفضت الإسلامية المصادر أن مفادها التي الخاصة شكوكه بنى الصلة هذه عن عربي مصدر أي يتحدث لم، ونحوها العربية اللغة قواعد أصل بخصوص مزاعمه مصداقية من التحقق غرضها الدراسة هذه إن. المسيحية من الأفكار هذه دراسات إلى استنادا وتحليليا نظريا منها ذلك في الباحثة وستعتمد، العلمية غولدتسبيهر حيادية من والتحقق هذه في تحليلهما تم التاريخية والخلفية اللغوية البنية فإن، النزاع هذا بخصوص متوازن حكم إلى وللوصول لغوية كذلك الدراسة

Keywords : والفلسفة، واللاهوت، والشؤون، سياسات، الجندل

Category : Islamic Sciences and Disciplines

**1050 HOLISTIC ACADEMIC DEVELOPMENT FROM THE ULŪ AL-ALBĀB APPROACH:
CHALLENGES AND OPPORTUNITIES#**

Suhaimi Mhd Sarif, *Business Administration, Kulliyah of Economics and Management Sciences*

Yusof Ismail, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Suhaimi Mhd Sarif, Business Administration, Kulliyah of Economics and Management Sciences

Objective: This paper explores the challenges and opportunities from using the Ulū al-Albāb (men of the understanding) approach as a mean for holistic academic development. Significance of the study: The Ulū al-Albāb approach integrates individual and collective physical, intellectual and spiritual dimensions to produce academicians that are thoughtful, conscious, and dynamic in the academic world. The conventional paradigm emphasises on physical and material aspects with some superficial inclusion of spirituality, which contributes to imbalance human growth in the academic field. The significant gap between conventional and the Ulū al-Albāb approach is the emphasis on the understanding about the essence of life, particularly in academic development. Methodology: An opinion survey with academicians from selected public universities in Malaysia who are familiar with conventional academic development and the Islamic education scheme to answer “what are the challenges and opportunities for implementing holistic academic development approach?” There is no right or wrong answer. Respondents are free to express their views. Findings: The results show that the informants perceived that the Ulū al-Albāb approach is commendable insights to nurture academics into holistic and dynamic modern academic development. The challenges include ethical issues intensity, individual factors, organizational factors, and industrial factors. Despite the challenges, respondents suggested that the opportunities can be obtained from good relationship among colleagues/co-workers, professional networking, and pressures from the stakeholders. Limitations: However, the views of the academicians are not comprehensive and rigorous without the views from other stakeholders. Nevertheless, higher education policy makers can apply the Ulū al-Albāb approach into the existing academic development programs.

Keywords : *Academic development, Higher education, Malaysia*

Category : Islamic Sciences and Disciplines

1090 ضوء في التميز صناعة مسالك في دراسة للفعالية والنفسية العقائدية الأصول
في النبو الوحي

Salah ben Tahar Machouche, *General Studies (IRK), Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Salah Machouche, ,
Salah Machouche, ,

Exhibitor : Salah ben Tahar Machouche, General Studies (IRK), Kulliyah of Islamic Revealed Knowledge and Human Sciences

العقيدة وتصورات شروط وفق للمسلم المتميزة الشخصية بناء في النبوية السنة دور إبراز إلى البحث يهدف وأحوال المسلم يعتقد كعقيدة التميز وبواعث جذور على البحث ويستدل البشرية للنفس الفطري القدرة ومخزون تأسيس إن والجماعي الفردي السلوك دائرة في عنها للتعبير جاهدا، يوظفها ومواهب وقدرات ويحيها يعيشها نفسية مجالات في النبوي الهدي باستلهم تسمح علمية بمنهجية منضبطاً يكون أن ينبغي النبوية السنة ضوء في الدراسة السنة من للاستفادة جديدة أبواب طرق إلى الباحث يتجه. الاجتماعي ونشاطه الإنسان بحركة الخاص والحكمة المعرفة الفعالية بجانب تعنى التي النبوية الأحاديث من جملة وتحليل عرض خلال من المسلم شخصية بناء في النبوية بعرض الباحث يقوم السلوك وأنظمة التفكير وأساليب النفسية الأحوال من تحمله وما، الجماعة النفس في والتميز بل، للفرد الذاتية التجربة مستوى على فقط ليس "الفعالة الشخصية" بناء في النبوية الحكمة امتداد وتفسير العرض عند يتوقف أن دون من لكن التميز نسبة وتضاعف تحقق التي الجماعة إدارة في آثارها قراءة إلى أيضا يسعى في تجلت كما والتميز الفعالية نماذج في آثارها ينتبع بل، النبوة عصر في أحداث وسير الأحاديث لسرد المجرد ضوء في للفعالية والنفسية العقائدية الأصول استجلاء إلى البحث يتجه. عنهم الله رضي الصحابة شخصيات ضوء في والتميز الفعالية في الإنسانية الإرادة وقوانين المقاييس من جملة وإبراز الشريفة النبوية السنة التي المادية والتفسيرات للتميز النبوي المفهوم بين المنهجي الفصل على القارئ سبعين مما، النبوية الأحاديث الدراسة هذه أهداف لتحقيق الباحث يستعين. والاقتصاد والسياسة التربية في المعاصرة العلمانية النظم لها تروج بينت التي الآيات ضمن الوحي مصادر خلال من والتميز للفعالية والاجتماعية والفكرية النفسية الأصول باستنباط الفعالية مفهوم تبيان إلى البحث توصل. والشعور والتفكير الاعتقاد خصائص من تحمله وما الإنسانية الفطرة أن إلى البحث خلص. الإنسانية الفطرة مركب وفق وأشكاله طبيعته وإبراز، النبوي الهدي منظور من وسننه والتميز على والجماعة للفرد الذاتي البناء على تطبق النبوية السنة بينتها التي التميز وأشكال الفعالية قوانين السواء.

Keywords : النبوية السنة، العقيدة، المقاييس، التميز، الفطرة، الفعالية

Category : Islamic Sciences and Disciplines

1091

EVALUATING CHRIS ARGYRIS'S IDEAS: AN ISLAMIC PERSPECTIVE#

Ridhwan Fontaine, *Business Administration, Kulliyah of Economics and Management Sciences*

Gapur Oziev, *Economics, Kulliyah of Economics and Management Sciences*

Hussein Hassan-Hussein, *Business, Taylor's University, Sunway, Malaysia,*

Exhibitor : Gapur Oziev, Economics, Kulliyah of Economics and Management Sciences

Much research has been done in the area of Islamic management. However, there is still a lot of research in conventional management which can be beneficial for Muslims and need to be explored by Muslim scholars. We propose to view Chris Argyris's work on organisational defensive routines and single loop learning (Argyris, 1992) from Islamic perspective. Argyris (1992) found that almost all members of an organisation make excuses to avoid being embarrassed and to avoid embarrassing others. Very often subordinates are aware of problems and they are aware of potential solutions but they keep quiet to avoid embarrassing their superiors. The fact that members in organizations are avoiding embarrassing issues often becomes taboo. However such an organizational culture often leads the failure of the organisation's vision and mission. Using Islamic principles such as of Al-Amr bil-Ma'ruf wal-Nahyi 'an Al-Munkar as well as others, we analyse the work of Chris Argyris and discuss the implications for the leadership style of Muslim leaders.

Keywords : *Islamic management, organisational defence routines, single loop learning, organisational culture, leadership style, fiqh*

Category : Islamic Sciences and Disciplines

1092

ISLAMIC LEADERSHIP COMPARED#

Khaliq Ahmad, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Khaliq Ahmad, Business Administration, Kulliyah of Economics and Management Sciences

The research highlights some contemporary issues in areas of servant leadership, spiritual leadership and Islamic leadership principles. Furthermore, Islamic leadership theories are hardly being supported by empirical data, the present study tests the authenticity of such leadership styles in Muslim Societies. This type of studies may stimulate further research scope in the field and pave a way for more empirical researches on leadership needs of Muslim minority communities in non-Muslim countries since this study has limited scope by comparing two Muslim majority countries-Malaysia vis a vis Saudi Arabia. Findings: Leadership styles: transformational, transactional, and servant-leadership were not very clear within the institution in Saudi Arabia. However, analyzing the degree at which these styles supersede each other, the administrators in the Saudi institution used most often the Transformational leadership. The case of Malaysia indicated that the administrators in Malaysia used most often the Servant leadership style. The mean score for each approach in both countries are as captured in Table-2. This implies that, to a certain extent in Malaysia, servant leadership is practiced by the institution's administrators. The other implication is that transformational leadership, to a certain extent, complements servant leadership. This finding is in agreement with the conclusions of Beekun (1998). Transactional leadership is not really very popular and practiced in their institutions in both the countries.

Keywords : *Islamic leadership, Servant leadership, Islamic management.*

Category : Islamic Sciences and Disciplines

1094 LECTURES IN THE THEORY OF LAW AND
THE PRINCIPLES OF ISLAMIC LAW#
مصادر حكم ال نظرية في محاضرات

Saim Kayadibi, Economics, Kulliyah of Economics and Management Sciences
Ammar Abdullah Nashih 'Ulwan, Fiqh Usul,

Exhibitor : Saim Kayadibi, Economics, Kulliyah of Economics and Management Sciences

بجامعة الإسلامية الدراسات أكاديمية لطلاب المقرر المنهج وفق على كتبنا الفقه أصول في مختصر كتاب فهذا الطلاب أغلب يستطيع للمعنى جامعة العبارة سهلة الحكم لنظرية الفقه أصول علم مادة على منه يحصلوا لكي ملايا جليل علما لنا ورثوا -تعالى الله رحمةم -الإسلامية الشريعة علماء فإن .الفقه أصول في الحكم نظرية وسميناه ، فهمها تراثا لنا وضعوا قد - الله رحمةم- السابقين فالعلماء الآخرين أمم عند له مثل لا القيم عظيم و الفائدة كثير القدر الحديثة التربوية بالطرق المعلومة فهم وتسهيل التراث هذا ترتيب سوى -المعاصرين نحن علينا فما- مكتملا عظيما لهم تدريس منهجية أنسب الطلبة فهؤلاء.العربية اللغة بغير للناطقين الإسلامية الدراسات لطلبة ملانمة لتكون هذا في فوتتنا ولا .لهم تعقل ولا تفهم لا معلومات من قطار من خير المعاني جليلا العبارة مفهومة مركزة يسيرة معلومة الأصول علم من الأصول كتاب منها المعاصرة الأصولية الكتب من استقدنا قد أننا الإشارة العلمية الأمانة باب من المقام الطلاب تعريف و زيدان الكريم عبد للدكتور الفقه أصول في الوجيز و - الله رحمة-العثيمين صالح بن محمد للشريح علم الجديع يوسف بن الله لعبد الفقه أصول علم تيسير ،السعيدان راشد بن لوليد وجواب سؤال في الفقه بأصول شعبان الدين لزكي الإسلامي الفقه أصول ،الزحيلي لوهبة الإسلامي الفقه أصول ،خلاف الوهاب لعبد الفقه أصول لينالوا تعالى الله النبوة إخلاص بوجوب الطلبة الأخوة تذكير المقدمة هذه في فوتتنا ولا .الأصولية الكتب من غيرها فإن ،عزوجل الله كتاب فقه بمعرفة لصلتها الله عند درجات أعظم من الفقه أصول معرفة إن وليعلموا العلم هذا بركة القرآن يتدبرون أفلا " : أخرى آية وفي " الألباب أولو وليتذكر آياته ليديروا مبارك إليك أنزلناه كتاب "فقال خطابه بتدبير أمر تعالى الله الفقه أصول علم الطالب يفقه لم إن الله كتاب في التفقه يحصل وكيف " كثير اختلافاً فيه لوجدوا الله غير عند من كان ولو فنسأل. " الذين في يفقه خيراً به يُرد الله من " وسلم عليه الله صلى النبي قول في- كما - خير كثير فيه الدين في الفقه مجيب قريب إنه ،الله لعباد نافعاً الله خالصاً عملنا يجعل أن تعالى الله

Keywords : theory of law; Principles of Islamic law; Nazariyat al-Hukm; Usul al-Fiqh

Category : Islamic Sciences and Disciplines

1096 ARCHEOLOGICAL INSPECTION OF THE OLDEST MOSQUES AND ISLAMIC INSCRIPTIONS IN ACEH AND NORTH SUMATRA (2008)#

Ataullah Bogdan Kopanski, *of History & Civilization, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Ataullah Bogdan Kopanski, History and Civilization, Kulliyah of Islamic Revealed Knowledge and Human Sciences

There are approximately 400 Islamic monuments with Arabic, Old Javi, Acehinese, Farsi and Gujarati inscriptions in Aceh and the other parts of Sumatra. Archaeological studies of these relics are in embryonic stage of projects and outlines presented during the international conferences. Recently, two European scholars, Claude Guillot and Ludwik Kalus, prepare a general inventory of the archaeological sites and relics in Aceh. This study bases mainly on the topographic trip to Aceh and the Northern Sumatra which I and my assistant, the native Acehinese student of history, Ihwatul, carried out in April 2008 (Rabiul Akhir 1429 H). Our objective was to see, in which stage of “vanishing from history” those monuments are in the post-tsunami Aceh, also constantly changed by the intensive industrialization and creeping urbanization. We traveled from the city Medan to Banda Aceh via Deli Tua, (the former capital of the sultanate Aru conquered by the Acehinese in 1536 CE), Samudra-Pasai, Lhokseumawe, Tamiang (Langsa), Peureulak, Jambuaye, Lhoksuku, Minye Tojoh, Metangkuli, Blangme, Samalanga, Pidie, Sigili, Bireuen, Meureudu, Kota Bate, Benteng Kuta Asan, Meulaboh, Menasa Kot, Kayee Kuniet, Klibeuet, Tangse, Indrapuri. Near Banda Aceh, in Payakameng, Bentang Indra Patra and Bentang Indra Islander, we explored three bulwarks of the Acehinese citadel from the 17th century. In kampong Kutala Seumana we visited the mausoleum of renewed alim Abdur Rauf al-Singel, who translated the Qur’an into Acehinese language. Between the strategically located Island Weh and the port Banda Aceh are situated tiny islets with unexplored ruins of probably one of the earliest settlements of Muslim traders, sailors and Islamic preachers from Hadramaut and Gujarat. In Lamaro is very old mesjid Indrapatua. This town was known to the Arab Muslim sailors as the port Lamri or Lamuri as well as Ramni. The local legend indicates the existence of probably the oldest mesjid of Aceh, today under waters of the Indian Ocean. Indeed, on the bottom of the bay, near small islets, tombstones and visible slabs of larger architectural constructions are very visible from fisherman's boat. On these islets we found hundreds pieces of broken china, tombstones (nisan-nisan) and old brown human bones from the tombs under the sea surface, re-opened by the violent tsunami deadly gigant wave. Local fishermen call this place Kuala Pancu. On Pulau Tuan (isle of Angkasa) are visible ruins of very old mesjid. This isle was uses also by the Portuguse pirates and corsairs. In result of their unwanted presence many Acehinese men and women form islands of Breueh and Peunasu have “blue eyes” inherited genetically from these Iberian mariners. Our expedition and its results was photographed and filmed by the author of this study. I donated to our RC and IUM Library archives 350 photographs and 25 10-minute-long flims. My study was partially supported by long-term grant from the Research Centre of IUM

Keywords : *Islamic archeology, batu nisan, mosques, Islamic inscriptions, Aceh, Sumatra, Malay architecture, Muslim sepulchra*

Category : Islamic Sciences and Disciplines

1097 OPERATION DEVIL'S WIND: THE BRITISH WAR CRIMES DURING THE INDIAN GREAT UPRISING OF 1857 AND AFTERMATH#

Ataullah Bogdan Kopanski, *of History & Civilization, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : *Ataullah Bogdan Kopanski, History and Civilization, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

The anti-British Great Uprising 1857 CE, known to the Indian historians as The First War of Independence and still called by the British scholars the Sepoy Mutiny, the Great Indian Mutiny, the Indian Rebellion, the Indian Uprising, the Sepoy Rebellion, or the Revolt of 1857 was badly commanded armed resistance against the Christian European occupation in several regions of the subcontinent. The instigating to unrest, cryptic soothsaying, sporadic acts of arson as well as threats of lynching in military bases started in January 1857. Later, a large scale insubordination of Sepoys broke out in May and turned into what we call the spontaneous Great Uprising. This failed anti-colonial revolt ended the indirect British East India Company's rule over India, and led to direct rule by the British government (British Raj) of much of the Indian subcontinent until 1948, although some vassal states like Awadh, Beoni, Rampur, Palanpur, Bhopal, Bahawalpur, Kumbay or Taikait Ganj retained ceremonial self-government of pro-British maharajas, nawabs, nizams, mirs, and begums. The uprising coincided with the defensive Jihad-guerrilla warfare and civil war in Afghanistan which was invaded by the British troops and their Muslim, Sikh and Hindu mercenaries in 1839. Definitely, the political fiasco of pro-British puppet-regime of Shah Shuja ul-Mulk in Kabul and Kandahar, and crushing defeat of the retreating British occupational forces profoundly influenced the outbreak of anti-Christian hostility in India, at least among the Muslims. For sure, the results of Crimean War (1853-56) and the Second Opium War (1856-58, the so-called Arrow War of Anglo-French alliance against China) solidified the British imperialism and gave the Victorian generals new combat experience in the colonial warfare against native insurgencies, riots and rebellions. Such "violence" was called hool, balwa, bidroha or dhang by the pro-British zamindars, sarkaris and sahu-karis.

Keywords : *war crimes, British, sipoys, India of 1857, Muslim troops, colonial atrocities, East India Company*

Category : Islamic Sciences and Disciplines

**1167 WILL OF ENTRUSTMENT AS A MEANS OF PROTECTION OF THE CHILD'S
RIGHT TO PROPERTY IN ISLAMIC LAW#**

Badruddin Hj Ibrahim, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Badruddin Hj Ibrahim, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

Children are the future of a Nation. Due to vulnerability, they require protection in many aspects of their life. Parents are main supporters and sustainers of the children during their lifetime. After the parents' death, their property that are left for their children may provide a continuous financial support for the children maintenance, education and welfare. The issue arises as to the protection and administration of the property, as children due to their deficiencies, are not able to manage them wisely. If a qualified person is not appointed to carry out the task, it will lead to misappropriation and embezzlement of property. Therefore, in order to protect the children's rights to property, it is very significant to appoint a person as a trustee, so that the children's property may be properly safeguarded and administered. This paper seeks to examine means of protection of child's right to property after the death of his parents in Islamic law through the instrument of will of entrustment (al-wisoyah). The research is basically a library research. It is undertaken on the premise that Islamic law has certain mechanism for providing a solution for protection of the child's right to property after the death of his parent.

Keywords : *will of entrustment, Islamic law, minor, property, executor*

Category : Islamic Sciences and Disciplines

1168 **TOWARDS AN ISLAMIC LAW OF WILLS FOR THE ADMINISTRATION OF
MUSLIM ESTATE IN MALAYSIA#**

Badruddin Hj Ibrahim, *Islamic law, Ahmad Ibrahim Kulliyah of Laws*
Azizah Mohd, *Islamic law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Badruddin Hj Ibrahim, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

This paper examines rules of Islamic law of wills in Malaysia in respect of testamentary provisions giving directions as to the administration of the estate and other matters. This is done in the context of the will of entrustment (al-wisoyah) in particular. The paper will examine the meaning of the will of entrustment, its characteristics, its legality and its creation which deals with four essential elements: testator (musi), executor (wasi), subject matter of will (muso bih) and formation (sighah). The discussion will also highlight the issues of testacy and intestacy with regard to the Muslim estate. In what sense are these two terms to be taken by Muslims? The study attempts to examine various state enactments relating to Islamic law of wills. Some suggestions for amendment of the existing provisions or additional provisions will be made where the present law is unclear or inadequate. The emphasis is on writing an Islamic will that may be probated. This is necessary as the substantive law of wills is Islamic law but the adjective law is civil law. This requires some reference to the meaning of Islamic wills as understood at present and wills under civil law.

Keywords : wills, Islamic law, executor (wasi), administration, estate, testate and intestate

Category : Islamic Sciences and Disciplines

1169 SUCKLING (RADA'AH) AND IT'S SIGNIFICANT IN CHILDREN FOSTER CARE /FOSTER RELATIONSHIP: LEGAL PRINCIPLES UNDER ISLAMIC LAW AND THE LAW IN MALAYSIA#

*Azizah Mohd, Islamic law, Ahmad Ibrahim Kulliyah of Laws
Siti Zainab Abdul Rashid, Islamic Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Azizah Mohd, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

This study deals with the concept of suckling and its significance pertaining to foster relationship under the Islamic law on the premises that there is no clear rules and regulation regarding suckling in Malaysia. Analysis focuses on the concept of suckling in Islamic law and its significant in creating legal relationship in foster care. The practice of suckling of non-biologically related child and its effect have also been examined as to present a clear picture of this practice and its significance in foster care. The study further investigates on several related provision in suckling under the law in Malaysia. For the purpose of comparison, the laws regulating on suckling in several Muslim countries have also been highlighted. As suckling is closely related with children protection, this study analyzed the concept of foster care under Islamic law and its distinction with adoption. To provide a sample of application of foster care in Islamic law, the study further highlights and analyses several provision on foster care under the law governing Muslim in Malaysia as well as some Muslim countries like Syria, Morocco and Algeria. This study reveals that the absence of the law pertaining to suckling has resulted to the inadequacy of the law. Therefore, this study suggests a proper law regulating suckling should be introduced to improve the current trends and system of child care and protection. As suckling involves people in many ways, this study recommends for each and every parties involved to play a vital role in order to ensure that every child, regardless their status, may enjoy their right to be suckled, whether in the family environment or in foster care.

Keywords : *Suckling, Islamic law, foster care, Malaysian law, Muslim Countries*

Category : Islamic Sciences and Disciplines

**1183 MODELING ENVIRONMENTAL IMPACTS (PARTICULATE MATTER & NOISE) OF AIRPORT
INFRASTRUCTURE UPGRADING: A CASE STUDY OF KLIA 2#**

Syazwani Sahrir, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Syahriah Bachok, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Mariana Mohamed Osman, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Syazwani Sahrir, Urban and Regional Planning, Kulliyah of Architecture & Environmental Design

Keywords : environment, noise, air pollution, airport, KLIA2

Category : Islamic Sciences and Disciplines

1196 PERCEPTIONS AND ATTITUDES OF NON-MUSLIM CONSUMERS' TOWARD THE CONCEPT OF HALAL AND HALAL FOOD PRODUCTS IN MALAYSIA#

AKM. Ahasanul Haque, *Business Administration, Kulliyah of Economics and Management Sciences*
Khaliq Ahmad, *Business Administration, Kulliyah of Economics and Management Sciences*
Abdullah Al-Mamun, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : AKM. Ahasanul Haque, Business Administration, Kulliyah of Economics and Management Sciences

ABSTRACT Purpose – The purpose of this study was to determine factors that are likely to influence non-Muslim consumers' perceptions and attitudes towards Halal concept and Halal food products in Malaysia. Design/methodology/approach – Data were collected through a random distribution of self-administered questionnaire to 150 non-Muslim respondents from various locations in Malaysia. Regression analysis was employed for testing the hypothesis of this research after extraction of three independent variables from factor analysis. Findings – This study indicated that non-Muslim consumer perception toward Halal products influence by attitude, subjective norm and perceive behavior control have significant impact on the non Muslim consumers' perception toward Halal product in Malaysia. Practical implications – This study can provide industrial food makers an understanding of the why and how regarding consumers' perceptions of Halal food products which can lead manufacturers to increase their level of awareness and knowledge on Halal principles and the Halal food process in order to gain the most efficient way of promoting and marketing information to their consumers. Originality/value – This is the first research that studied Non-Muslim consumers' perception toward Halal products. This paper shows that perceived behavior control such as food safety, animals' welfare and environment-friendliness is very important to influence non-Muslim consumers but not as much as positive attitude and social influence.

Keywords : *Halal, Non-Muslim, Attitude, Subjective norm, Perceive behavior control, Halal product, Malaysia*

Category : Islamic Sciences and Disciplines

1197 NOMENCLATURE OF CUSTOMER LOYALTY FOR SOCIAL NETWORKING SITES: A STRUCTURE EQUATION MODELING APPROACH TO MALAYSIAN YOUNG MUSLIM FACEBOOK USERS#

AKM. Ahasanul Haque, *Business Administration, Kulliyah of Economics and Management Sciences*

Ismail Sayyed Ahmed, *Business Administration, Kulliyah of Economics and Management Sciences*

Abdul Momen, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : AKM. Ahasanul Haque, Business Administration, Kulliyah of Economics and Management Sciences

Abstract Social network sites constitute a rapidly growing phenomenon which has attracted the attention of the academicians recently. Thus, understanding this phenomenon becomes essential. Recognizing this present needs, this study aimed to systematically classify the factors related to customer loyalty in online social networkingsites to retain them online. The objectives of the study were to determine how privacy, features, sharing social information, and accessibility are important determinants of customer loyalty in an online social networking website. A self-administered questionnaire survey was conducted. Questionnaires were systematically distributed utilizing a convenience sampling from the educational institutions. A total of 422-sample sizes found valid out of total 600 distributed questionnaires which represents a success rate of 70.33%. Finally, research findings are discussed and recommendations are made for future research. It is hoped that, the social network sites firms will be able to get some important information regarding the user's perception on loyalty for Social Networking Sites, especially for Facebook in Malaysia.

Keywords : Young Muslim Customer, Customer Loyalty, Social Networking, Facebook and SEM

Category : Islamic Sciences and Disciplines

1250 SCIENCE OF THE SELF (NAFS) AS REFLECTED IN RUMI'S MATHNAWI#

Amir Hossein Zekrgoo, , *International Institute of Islamic Thought and Civilization*

Leyla HajimehdiTajer, , *International Institute of Islamic Thought and Civilization*

Exhibitor : Amir Hossein Zekrgoo, ISTAC, *International Institute of Islamic Thought and Civilization*

Abstract: The notion of “self” in Rumi’s Mathnawi is in fact an elaboration, or rather a commentary on the concept of “nafs” (نفس) as explained in the Qur’an with a flavor of Sufi poetic tradition. Islamic concepts of the self/soul have various dimensions ranging from Islamic theology (kalam) to Islamic philosophy (falsafah) and mysticism (Sufism). Rumi’s Mathnawi reflects nearly all earlier works of Islamic masters from Quranic commentaries to the Sufi treatise (of Sana’i, Attar, Ibn Arabi, and Suhrawardi). The term “nafs” or human soul has three characteristics in the Qur’anic terminology: ammara bi-al- su’ (commanding to evil), lawwama (upbraid), and mutma’inna (tranquil). Rumi refers to the ‘self’ in his works using Persian terms khud (خود) , khish (شِیخو), man (من), as well as the Arabic nafs (نفس). Through acquiring the “knowledge of the self” (‘ilm al-naf) the seeker will be equipped to elevate his state of being to its highest. This ultimate goal of ‘self-realization’ is a state in which all barriers dividing the “individual self” and the “Divine Self” are removed and, as a result, the human soul can experience the tranquil state of al-nafs al- i mutma’inna. At this stage the spiritual traveler’s self will rest in peace. A person with a “self at-peace” is the one in a state of selflessness. Man’s experience of the state of selflessness may be compared to a clear mirror with no individual identity in itself. According to a prophetic hadith “the path to the state of God-realization passes through the realization of one’s self.” By realizing the transient nature of the individual self (ego), the seer will realize that the rays of the true Self will not shine unless the distracting sparkles of the ego are extinguished. In other words “selflessness” leads to “Self-realization”. The Mathnawi, using the Qur’anic guidelines and based on observing man’s reaction to various situations formulates a science of the self. It elaborates the stages of man’s ego and the sources of their inspirations. Jalaluddin Rumi uses metaphors and symbols known in the Persian mystic literature to picture various faces of nafs relating each aspect, metaphorically, to a certain animal. He elaborates each of these in one or few stories and establishes a profound, yet easy-to-understand, relation with his audience. The present study is the 4th phase of a 7 phase project concerning the Islamization of human knowledge. It is mostly focused on the symbols and metaphors that explain various layers of human ego as illustrated in the Mathnawi of Jalaluddin Muhammad Balkhi, also known as Rumi.

Keywords : *Mathnawi, Self, Nafs, Symbolism*

Category : Islamic Sciences and Disciplines

1252 ANTHROPOLOGY OF PERFECTION IN TRADITIONAL COSMOLOGY#

Amir Hossein Zekrgoo, , *International Institute of Islamic Thought and Civilization*

Exhibitor : *Amir Hossein Zekrgoo, ISTAC, International Institute of Islamic Thought and Civilization*

Abstract: The present study is aimed at identifying the attributes of perfection in traditional doctrines. It will address the archetypal qualities by which certain individuals throughout the history of East and West – also within the worldviews of ancient myths, spiritual orders and official religions – were regarded as heroes, sages, saints or prophets. In the same line the terminologies related to human perfection in various faiths - such as Ibn Arabi's "Perfect Man" (al-Insān al-Kāmil) or "Exalted Man" (al-Insān al-Arfā') Hindu's Jivan-mukta, Buddhist's Chakravartin etc. will be introduced. The scope of the study will also extend to modern conception of perfection as manifested in the imaginative attributes of the superhero characters. The objective of this research is to study the exalted universal qualities (individual, social as well as spiritual) of man as reflected in ancient traditions and established religions and to compare them with the modern values. The research has focused at studying the anthropology of perfection in perennial philosophy. It has addressed issues such as the nature of 'self and the states of self-realization', 'selflessness and selfishness', 'the categories of man', 'the process of exaltation', 'attributes', 'qualities', 'rights and obligations of the superior man in traditional worldview. In various places of the study we have resorted to artworks belonging to various traditions and different times to communicate the ideas and worldviews. They show how essential the role of artists and the art they produce is in keeping alive the reverence for perfection and continuity of tradition through their inspired imagination. The superior qualities are not necessarily those of rulers and conquerors. They are rather to be found in mythical heroes, prophets of God and sages of various traditions; those who, in Ghazali's words, "possess inner vision". Such individuals hold attributes of perfection; their bodies die, yet their characters live beyond time and space inspiring generations after generations.

Keywords : *Keywords: Self Realization, Religion of Time, Religion of Eternity, Chakravartin, Jivan Mukta. Insal al-Kamil*

Category : Islamic Sciences and Disciplines

1317

UNIQUE FEATURES OF THE QURAN-ANALYTICAL STUDY#

RADWAN JAMAL ELATRASH, *QURAN AND SUNNAH, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : RADWAN JAMAL ELATRASH, Qur'an and Sunnah Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences

،خالدة إعجازية وجوه من السماوية والرسالات الكتب من غيره عن الكريم القرآن به تميز ما بيان إلى الكتاب هذا يهدف لموضوع التاريخي التأصيل قضية: الأولى، محوريتين قضيتين يتناول البحث هذا في الموضوع صلب أن ذلك على التعرج ثم كمفسرين الدراسات لمثل وحاجتنا وأهميته الإعجاز لمفهوم اللانقطة التعاريف خلال من ذلك، الإعجاز أوجه بيان: والثانية، المعتبرة الإعجاز أوجه في أصحابها وأقوال، الإسلام قرون عبر الإعجاز تناولت التي المصنفات كانوا، القرآن هذا استقبلوا الذين العرب إن: هي باختصار البحث نتائج أهم ومن العلماء أقوال حولها دارت التي الإعجاز، البشر كلام من ليس القرآن أن فعرفوا، الكلام موازين تميز على القدرة الله وأعطاهم، البيان والفصاحة البلاغة أئمة كله وهو، عاقل يقبله لا، تخريفي أمر بالصرفة القول إن. والشعوذة الكهان كلام من ولا سحراً ولا نثراً ولا شعراً هو فما انهيار سجل حين القرآن إن ذلك على الله فالحمد، معارضته استطاعوا وما، المعارضة أدوات كل امتلكوا العرب لأن، باطل من الآيات حكته ما هذا. الانهيار بهذا اعترافهم مع الكفر في بمغالاتهم وتنديداً لكفرهم إدانة عدّه القرآن بأسلوب العرب به وانبهر □ النبي من القرآن سمع حين المغيرة بن الوليد قصة عن تحدثت التي المدثر سورة

Keywords : *Uniqueness, features, Quran, and Inimitability*

Category : Islamic Sciences and Disciplines

1345 THE QUR`ANIC APPROACH ON NATURE AS SOURCE OF IDEAS AND RESEARCH MOTIVATION#

Ibrahim Shogar, *Computational and Theoretical Sciences, Kulliyah of Science*

Exhibitor : Ibrahim Shogar, Computational and Theoretical Sciences, Kulliyah of Science

Creative thinking, research and innovation are the vital source of the development and progress in human community. The two generative factors that are essential for investigation, especially in the natural phenomena, are curiosity and motivational force. The dawn of scientific research has begun with curiosity and observation. Driven by these two factors, mankind has been trying to find unity and regularity in the diversity of the natural process. The holy Qur`an has addressed various topics about physical and metaphysical worlds to achieve its religious goals. It also has played a crucial role to establish curiosity, wisdom, and spirit of research on pre-Islam Arab community to shift them from the status of "Jahiliyyah" to the leaders of knowledge, humanity, and civilization. The scientific spirit in Islam today, once again, needs reactivation for research in the natural phenomena as the case in the early history of Islamic civilization. Albert Einstein said: science can be created only by those who are thoroughly imbued with the aspiration toward truth and understanding, and such feelings lies in the sphere of religion. This statement seems to be paradox of the contemporary Muslim communities which are based in religious teachings. The central point of the research is based on the view that research spirit is a subject matter of worldview, which is originally articulated by religious and culture aspects. Therefore the Holy Qur`an is considered as vital source of research motivation; it invites the intellect to reflect and study the natural phenomena. It also presents scientific knowledge in various forms, such as providing the general principals, systemization of knowledge inquiry, and introducing inspiring concepts; and some detailed information.

Keywords : *Qur`anic approach, scientific spirit, systemization of knowledge, nature, philosophy of science, motivation, inspiration.*

Category : Islamic Sciences and Disciplines

1352

FOUNDATIONS OF ISLAMIC ANTI-DRUG ABUSE EDUCATION#

Abdurezak Abdulahi Hashi, *Biotechnology, Kulliyah of Science*
Syed Zahir Idid Idid, *Biomedical Science, Kulliyah of Science*

Exhibitor : Abdurezak Abdulahi Hashi, Biotechnology, Kulliyah of Science

Among the basic objectives of the Islamic SharĒ'ah is to protect the human life and human intellect – as such, the consumption of mind-altering and intoxicative substances is prohibited in Islam. Furthermore, Islam imposes criminal penalties on those who consume intoxicative substances such as wine. Muslim jurists (fuqahā) have provided descriptive accounts on the foundations of the Islamic antidrug abuse teachings, categories of mind-altering substances, and preventive laws. They also identified three categories of mind-altering substances: al-muskirāt, al-mukhaddirāt, and al-muftiraāt. This paper aims to explore the rationale and jurisprudential foundations of Islamic antidrug abuse education. While highlighting the philosophical background of the Islamic antidrug teachings, the paper presents the jurisprudential foundations of the legal penalties for drug abusers. The Qur'ānic terms and the Prophetic statements related to the subject will be referred to, while the opinions of Muslim jurists and theologians on the subject will be unveiled.

Keywords : Principles, drug-abuse, Islamic Antidrug abuse, Jurisprudence

Category : Islamic Sciences and Disciplines

1353 IQBAL'S EGO PHILOSOPHY AND ITS IMPORTANCE IN AWAKENING MAN'S RELIGIOSITY#

Mohd Abbas Abdul Razak, *Department of General Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Mohd Abbas Abdul Razak, *Department of General Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Abstract History reveals the fact that the coming of modernity and secularism has allured modern man towards a materialistic concept of life at the expense of neglecting his spiritual needs and role as the vicegerent of God. This predicament has not only marred man's relationship with God but has also failed man from understanding his true nature and mission in life. The consequences of people not living the ideal religious life regardless of being in the East or West, have lately witnessed the erosion of human and spiritual values, severe degradation of the environment, racism, terrorism, outbreak of wars, poor state of mental health and a whole lot of other psychopathological illnesses. In view of these human conditions, this philosophical paper intends to explore and draw out conclusions from the philosophical thoughts of Muhammad Iqbal (1877-1938) with regards to his ego philosophy that explains the relationship between man, God and the universe. The lessons drawn out from Iqbal's ideas can be of great use in awakening man's religiosity towards God and improving his quality of life by striking a harmonious relationship with God, environment and fellow human beings.

Keywords : *Iqbal, Ego Philosophy, Man, Religiosity*

Category : Islamic Sciences and Disciplines

1362

#الهوية وحفظ التفاهم بناء بين الديني الحوار

Anis Malik Thoha, *Usuluddin and Comparative Religion, Kulliyyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Anis Malik Thoha, Usuluddin and Comparative Religion, Kulliyyah of Islamic Revealed Knowledge and Human Sciences

التحليل عند الحوار هذا فيغدو المعينة الأيديولوجية الهيمنة طابع عليه يغلب اليوم الأديان بين الحوار واقع الإنسان هوية ولتمييع معينة أيديولوجية مصلحة، لانتصار بالأحرى أو، لخدمة مخططة منظمة وسيلة إلا ليس، الأخير صلة وتوثيق التفاهم بناء وهي، المزعومة رسالته عن بعيدا، (War of Ideas) "الأفكار حرب" لها يقال حرب معترك في تقديم محاولا الغربية الظاهرة هذه تحليل إلى يسعى البحث فهذا، هنا ومن ببعض بعضهم الأديان أتباع بين المحبة الإنسان هوية بقاء مع المذكورة النبيلة رسالته تحقيق يضمن الذي الحوار ومسار مفهوم لتصبح مناسب بديل حل الوقت نفس في المحترمة.

Keywords : العالمي السلام، الأيديولوجي الصراع، الأفكار حرب، الديني الحوار، الدينونة التعددية، الديني التسامح

Category : Islamic Sciences and Disciplines

1373

GLOBALIZATION AND THE MUSLIM WORLD#

Mohd Abbas Abdul Razak, *Department of General Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Mohd Abbas Abdul Razak, *Department of General Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

History indicates that before the coming of modern globalization, the Muslims had their own version of globalization. During the Muslim era of globalization which coincides with the Golden Age of the Muslims, the West benefited immensely from the scholastic work done by Muslim scientists and scholars. Modern globalization which started during the era of Western colonization of the East has now gone to every nook and corner of the world. The usage of internet and other modern electronic media directly or indirectly has speed up the process of transporting modern globalization to the world community. Since modern globalization is mainly coming from the West, this paper intends to explore and investigate: in what ways Muslim globalization is different when compared to modern globalization, to look into some of the meanings given to modern globalization, the shifting aims of education, the marginalization of local culture and language, brain drain due to globalization, how should Muslims react to globalization and finally on the question, as to whether globalization is identical to re-colonization.

Keywords : *Muslim globalization, modern globalization, Muslim world, re-colonization*

Category : Islamic Sciences and Disciplines

1377 **COMPARATIVE REVIEW BETWEEN ISLAMIC COMPLIANCE MEAT PRODUCTION AND THE CURRENT POULTRY MEAT PROCESSING#**

Intan Azura Shahdan, *Biomedical Science, Kulliyah of Allied Health Sciences*
Ibrahim Adam Shogar, *Computational and Theoretical Sciences, Kulliyah of Science*
Abu Saim Md. Shahabuddin, ,
Mohammad Tariqur Rahman, *Biotechnology Department, Kulliyah of Science*

Exhibitor : Mohammad Tariqur Rahman, Biotechnology, Kulliyah of Science

The market for religiously slaughtered meat is quite lucrative. In 2010, halal (Arabic term for lawful) food market was reported as US\$ 661.6 billion, which saw a 4.2% increase from the previous year, and a 12.6% increase since 2004. With the increasing demand of religious branded food, the challenge for the halal meat industry is to find ways to increase their productions without jeopardising the religious value. Against the backdrop of increasing demand of chicken meat, policies were brought in plants which slaughtered chickens for halal meat in Malaysia. In 1988, the National Council for Islamic Religious Affairs Malaysia decided to allow water-bath electrical stunner for poultry (JAKIM 1988). In 2005, the same Council made further decision to allow any anaesthetic drugs or carbon dioxide to be used for poultry (JAKIM 2005). The year before, the first accreditation on halal food known as the Malaysian Standard (MS - an accreditation body initiated by the Malaysian Ministry of Science, Technology and Innovation for providing guidelines for the poultry industry on halal animal slaughtering) was launched. In its second edition, specifications on stunning broilers and ruminants were described (MS 1500:2009). It is important to reiterate that Malaysian authorities recognize that stunning prior to slaughtering chicken is not recommended, but allowed. Previous studies confirmed the need for continuous improvement in the current meat processing. Shackling and stunning have been shown to reduce meat quality and increase plasma corticosterone in the chickens. Cultures of *Campylobacter*, *Salmonella* and *E. coli* which cause microbial spoilage of the meat had been isolated from the scalding water. Scalding with viscera also allows the mixing of dirt and faecal materials in the scalding tank which may adulterate the edible parts of the chickens. It is thus evident that slaughter plants which produce halal poultry meat have adapted variable adjustments to meet the economic demand. Such variation however needs to be founded on the religious guidelines, in order to meet satisfaction for the consumers opting for halal meat. When deterioration of meat quality, chance of slaughtering dead chickens, and carcasses adulterated with forbidden ingredients are potential concomitants of large scale halal meat processing, adopting technology may seem like a deviation from the ideals. The Islamic teaching refrain the Muslims from suspicious things (Bukhari Book 2, No. 49). If the ideal religious slaughter is compromised on economic expediency for a method of slaughter which is suspicious on reasonable grounds, a plant would be considered as wrongly allows economic calculation to compromise their genuine religious concerns. This study provides an important guideline for an Islamic compliance meat processing plant, based on the teaching of mercy to animals, importance of hygiene and nutritional aspects of slaughter, as guided in the Qur'an and sunnah (living examples from Prophet Muhammad). The current meat processing can still be adopted and this paper is only suggesting non-radical changes to be considered in the plants so that the meat produced is not only economically motivated, but religiously guided.

Keywords : *poultry processing, halal, stunning, scalding*

Category : Islamic Sciences and Disciplines

1458 E-MYATET : AN EVALUATION TOOL FOR ARABIC LANGUAGE TEACHING TEXTBOOKS#

ABDUL RAHMAN CHIK, *ARABIC LANGUAGE AND LITERATURE*, *Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : ABDUL RAHMAN CHIK, ARABIC LANGUAGE AND LITERATURE, Kulliyah of Islamic Revealed Knowledge and Human Sciences

The poster is an output of academic research funded by IIUM EDW A12-550-1341 entitled "Developing Criteria and Designing A Tool for Evaluating textbooks of Teaching Arabic to Non Native Speakers : An Analysis of Malaysian Experts' Views". The objective of this poster is to highlight the academic review process conducted on the evaluation criteria of assessing Arabic as Second Language (ASL) textbooks. For this purpose, both analytical and evaluative methods are adopted, by analysing various sets of evaluation criteria used for English, Malay and Arabic textbooks. In addition, a survey was conducted to obtain views and assessments of Arabic experts from Malaysian higher learning institutions regarding Rushdi Tu'aimah's criteria and tool of evaluation. A comprehensive tool of evaluation using excel program in the form of CD and website was produced. Many textbooks were evaluated by using this tool.

Keywords : *Evaluation, Tool, Arabic Language, Textbook, e-MyATET.*

Category : Islamic Sciences and Disciplines

1538 (DICTIONARY) انجليزي-ملايوي-عربي لغوية ووظائف موضوعات :الوظيفي القاموس
OF THEMES & LANGUAGE FUNCTIONS)#

ABDUL RAHMAN CHIK, *ARABIC LANGUAGE AND LITERATURE*, Kulliyah of Islamic Revealed Knowledge and Human Sciences

ABDUL HALIM SALEH, *ARABIC LANGUAGE AND LITERATURE*, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Exhibitor : ABDUL RAHMAN CHIK, *ARABIC LANGUAGE AND LITERATURE*, Kulliyah of Islamic Revealed Knowledge and Human Sciences

مواقع وتقادي ،التعلّيم الصعوبات لمعالجة خصيصاً ألف أنه في نوعه من الفريد الوظيفي القاموس هذا يتميّز :وهما التعلّم وظائف من وظيفتين أهم غير وذلك ،أوبعدها العربية اللغة تعلّم في ممارستهم أثناء الطلبة لدى الضعف هذا فإن هذا وعلى المجال هذا في الأكاديمية والبحوث للدراسات وفقاً وذلك ،الكلام مهارة ووظيفة ،الكتابة مهارة ووظيفة " الموضوعات قاموس " عبر وذلك الكتابية التعبيرية بالوظيفة الاهتمام :وهما ،رئيسيتين بميزتين يتميّز القاموس دلالية حقول أو مجالات في التنظيم أو التصنيف أساس على تقوم التي المفردات من كبير عدد على يحتوي حيث قاموس " عبر وذلك الكلامية التعبيرية بالوظيفة الاهتمام موضوعاً أربعين نحو الموضوعات عدد ويقدر ،معينة الأحداث أو الظروف أو للمواقف وفقاً الشبّعة المتنوعة والعبارات ،الأساليب من عدد على ويحتوي ،" اللغوية الوظائف مميزات هناك الميزتين تلك بجانب وظيفة وعشرون ثلاث نحو اللغوية الوظائف عدد ويتراوح ،المختلفة الكلامية حسب القاموس هذا رُتب .الإنجليزية واللغة ،الملايوية واللغة ،العربية اللغة :وهي لغات ثلاث القاموس اذ يضم :منها أخرى زُود .والتأنيث والتذكير ،والجمع الأفراد وصيغ ،ومرادفاتهما ،الكلمة بتصاريق القاموس زُود .الألفبائي الترتيب المتعلمين يناسب القاموس هذا النبوية والأحاديث ،القرآنية والآيات ،العبارات السياقي بالاستعمال القاموس ،طريقة أسهل في المناسبة المستخدمة الكلمة إلى الوصول على يساعد لأنه رئيساً مرجعاً بوصفه ،واحد أن في والمعلمين الإنتاج وهذا .وسريعة وجيزة مدة في مباشرة غير فعالة بطريقة اللغوية الثروة تنمية على يساعد نفسه الوقت وفي في العربي التعلّم في الشخصية التجارب إلى الدتوراه رسالة من بدءا العلمي البحث في طوال سنوات جهو من المعاجم من الصنف هذا تألّف ضرورة إلى دعا مما العربية غير البيئية

Keywords : لغوية وظائف ،موضوعات ،المعاني معجم ،الوظيفي ،القاموس

Category : Science, Engineering and Technology

1003 WHICH BLOOD GROUP WILL DOMINATE IN MALAYSIA IN THE FUTURE#

Nasir Ganikhodjaev, *Computational & Theoretical Science, Kulliyah of Science*

Mansoor Saburov, *Computational & Theoretical Science, Kulliyah of Science*

Exhibitor : Mansoor Saburov, Computational & Theoretical Science, Kulliyah of Science

A blood group provides an ideal opportunity for the study of human variation without cultural prejudice. It can be easily classified for many different genetically inherited blood typing systems. Also significant is the fact that we rarely take blood types into consideration in selecting mates. A few people know their own type today and no one did prior to 1900. As a result, differences in blood type frequencies around the world are most likely due to other factors than social discrimination. All human populations share the same 29 known blood systems, although they differ in the frequencies of specific types. When we donate blood or have surgery, a small sample is usually taken in advance for at least ABO and Rh systems typing. You inherited your blood types from your parents and the environment in which you live cannot change them. We have learned a good deal about how common each of the ABO blood types is around the world. It is quite clear that the distribution patterns are complex. About 21% of all people in the world share the A allele. The highest frequencies of A are found in small, unrelated populations, especially the Blackfoot Indians of Montana (30-35%), the Australian Aborigines (many groups are 40-53%). Overall in the world, B is the rarest ABO blood allele. Only 16% of humanity have it. Note that it is highest in Central Asia and lowest among the indigenous peoples of the Americas and Australia. The O blood type is very common around the world. About 63% of humans share it. Type O is particularly high in frequency among the indigenous populations of Central and South America, where it approaches 100%. The rest of people in the world are sharing AB blood allele. One of the interesting problems in blood group distributions is that if we know the current blood group distributions of the society then can we predict the blood groups distributions in the future. By concerning this problem, we collected some data from Pahang and Kuala Lumpur states of Malaysia and provided a mathematical model of the human blood group transmission. By means of his model, he tried to predict the future blood group distributions in Malaysia (Pahang and Kuala Lumpur states). In this poster, we are going to present our results.

Keywords : *ABO Blood Group; Mathematical Model; Quadratic Stochastic Operator*

Category : Science, Engineering and Technology

1027 ENHANCING MECHANICAL AND STRUCTURAL PROPERTIES OF TiC TOOL INSERT VIA HYBRID MICROWAVE SINTERING#

Tasnim Firdaus Ariff, *Manufacturing & Materials Engineering, Kulliyah of Engineering*
A.N. Mustafizul Karim, *Manufacturing & Materials Engineering, Kulliyah of Engineering*
Shahdura Hammad Thauri, *Manufacturing & Materials Engineering, Kulliyah of Engineering*

Exhibitor : Tasnim Firdaus Ariff, Manufacturing & Materials Engineering, Kulliyah of Engineering

Processing of ceramics using microwave energy is emerging fast as a new field of ceramic processing and material synthesis. The past year has witnessed significant progress in the aspects of commercialization and application of the technology to new areas. Titanium Carbide (TiC) is among one of the best cutting tool available due to its high melting point and high hot hardness. This project aims to show the difference in mechanical and structural properties of TiC inserts that have been produced from conventional sintering, microwave sintering and Hot Isostatic Pressing (HIP). Two different compositions of TiC inserts consisting of 97TiC3Ni and 93TiC7Ni were compacted using a load of 103 MPa and sintered using conventional furnace, microwave furnace and HIP. The influence of sintering time and sintering temperature on the mechanical and structural properties of this TiC inserts were examined. Different time-temperature combinations were used for the heat treatments. 97TiC3Ni composition produced inserts with higher density, hardness and strength compared to the 93TiC7Ni composition for all three different sintering methods. Meanwhile, hybrid microwave sintering produced TiC inserts with the highest density, hardness and strength compared to conventional sintering and HIP. Improved mechanical and structural properties were observed in samples sintered using microwave energy for just 10 minutes compared to 10 minutes using HIP and 30 minutes of conventional sintering.

Keywords : *hybrid microwave sintering, conventional sintering, HIP, TiC insert, mechanical and structural properties*

Category : Science, Engineering and Technology

1028 ECO-FRIENDLY MACHINING OF T6061 ALUMINIUM ALLOY USING TITANIUM CARBONITRIDE (TiCN) COATED TOOLS#

Tasnim Firdaus Ariff, *Manufacturing & Materials Engineering, Kulliyah of Engineering*
Mohamad Yazid Sabiyah, *Manufacturing & Materials Engineering, Kulliyah of Engineering*
Mohd Amirul Adam, *Manufacturing & Materials Engineering, Kulliyah of Engineering*
Mohd Anuar Nor, *Manufacturing & Materials Engineering, Kulliyah of Engineering*

Exhibitor : Tasnim Firdaus Ariff, Manufacturing & Materials Engineering, Kulliyah of Engineering

Traditional wet machining methods using oil based cutting fluids and water based cutting fluids are currently being used widely in the industry. Since oil based cutting fluids contributes to environmental problems, water based cutting fluids were introduced to minimize these effects even though not extensively used everywhere in all parts of the world. Eco-friendly machining is introduced for making the environment a better and healthier place by reducing the amount of contaminants and pollution into the water system. Two biodegradable cutting fluids have been chosen in this study; vegetable oil (palm oil) and water based cutting fluids. The wear behavior of TiCN coated tools is studied for three different cutting speeds (333, 415 and 517 m/min) and at two different cutting parameters; depth-of-cut, d and feed rate, f ($d = 0.2$ mm, $f = 0.4$ mm/rev and $d = 0.4$ mm, $f = 0.6$ mm/rev). Wear rate for machining using palm oil cutting fluid is lower (longer tool life) than the wear rate obtained from using water based coolants. Palm oil has better lubrication properties compared to water based coolants which have better cooling effects. The optimum cutting parameters for machining T6061 Aluminium alloy using TiCN coated tool is found; 333 m/min (water based) and 415 m/min (palm oil) at a depth of cut of 0.4 mm and feed rate of 0.6 mm/rev.

Keywords : *Eco-friendly machining, biodegradable cutting fluids, water based cutting fluid, palm oil, optimum cutting parameters, TiCN coated tools, T6061 aluminium alloy*

Category : Science, Engineering and Technology

1029 A COUNTING PROBLEM OF FINITE CONNECTED SUBTREE OF CAYLEY TREE OF ORDER k

Chin Hee Pah, *Department of Computational and Theoretical Sciences, Kulliyah of Science*

Exhibitor : *Chin Hee Pah, Computational and Theoretical Sciences, Kulliyah of Science*

Using Fuss Catalan numbers, which is the solution to a counting problem of finite connected sub-tree on rooted Cayley tree of order k , we solve another counting problem on non-rooted Cayley tree of order k . The both solutions are some Raney numbers. We also give combinatoric interpretation for the Raney numbers based on observation above.

Keywords : *Raney numbers, Fuss-Catalan numbers, Cayley tree, k -nary tree.*

Category : Science, Engineering and Technology

1030

RANDOM BINOMIAL TREE MODELS#

Nasir Ganikhodjaev, *CTS, Kulliyah of Science*

Kamola Bayram, *CTS, Kulliyah of Science*

Exhibitor : Nasir Ganikhodjaev, Computational and Theoretical Sciences, Kulliyah of Science

We introduce and study the simplest random binomial tree model. Usual binomial tree model is prescribed by pair of numbers (u, d) , where u denotes the increase rate of the stock over the fixed period of time and d denotes the decrease rate, with $0 < d < 1 < u$ (see [1-3]). We call the pair (u, d) an environment of the binomial tree model. A pair (U_n, D_n) , where $\{U_n\}$ and $\{D_n\}$ are the sequences of independent, identically distributed random variables with $U_n > 1$ and $0 < D_n < 1 < U_n$ for all n , is called a random environment (see [4]) and binomial tree model with random environment is called random binomial tree model. In this paper we define and study American put and European put options for such models. The random binomial tree model produces more accurate results than the binomial tree model when fewer time steps are modelled. The model is soluble and there exist analytic pricing formulae for various options. References [1] Cox, J.C., Ross, S. A. and Rubinstein, M. 1979. Option Pricing: A Simplified Approach. *Journal of Financial Economics*, 7: 229-263. [2] Rendleman, R. J. and Bartter, B. J. 1979. Two-State Option Pricing. *Journal of Finance*, 24:1093-1110. [3] Black, F. and Scholes, M. 1973. The Pricing of Options and Corporate Liabilities. *J. Political Economy*, 81:637-654. [4] Solomon, F. 1975. Random walks in a random environment. *The Annals of Probability*, 3, No.1, pp 1-31.

Keywords : *Binomial Tree Model; Random Walk in Random Environment; Vanilla Options*

Category : Science, Engineering and Technology

1044 SIMPLE & SUSTAIN TECHNOLOGY COMPOSTING OF EMPTY FRUIT BUNCHES, POME AND CAKE USING LOCALLY ISOLATED FUNGI STRAINS#

Nassereldeen Kabbashi, *Biotechnology Engineering, Kulliyah of Engineering*

Mohammed Mirghani, *Biotechnology Engineering, Kulliyah of Engineering*

Norzalina Noruldin, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Nassereldeen Kabbashi, Biotechnology Engineering, Kulliyah of Engineering

Palm oil industry is among the 12 National Key Economic Areas (NKEAs) areas which are at the core of the Economics Transformation Program (ETP). Malaysia's palm oil industry is the fourth largest contributor to the national economy and currently accounts for RM53 billion in gross national income (GNI). Crude palm oil is extracted from the fresh fruit bunches (FFB) at the palm oil mills. A palm oil mill not only produces crude palm oil and kernels, as primary products but also biomass as secondary product. The capacity of mills varies between 60-100 tons FFB/h. Wastes from oil palm industries are generated everyday and every year becoming a great concern consequently, an urgent development of bio-composting process has been researched This project will introduce new and simple composting process using substrate that has been selected in this experiment which are EFB, POME and CAKE whereas the co-substrate is sawdust. *Phanerochaete chrysosporium* was inoculated in compost trays and the growth can be seen clearly in day 15. It is a white fungus that was serves to degrade the lignin of the substrate. At day 15 *Tricorderma Viride* was inoculated while *Aspergillus Niger* was inoculated at day 30. *Pennicillium* was inoculated at day 45 to destroy the toxicity of the compost. Tray bioreactor was used to test the efficiency of composting process by solid state fermentation process. The composting period for this process is 60 days and some parameters are needed to be determined to evaluate the compost quality. The maturity of the composting could be reflected by the best C/N ratio obtained was run 6 which are 16.51, pH, and germination index result of 154%. This simple technology urge to enhance the productivity and sustainability of the Malaysian palm oil milling industry by improving the local isolated fungal strains and increasing composting utilization.

Keywords : *compost, EFB, local strain, sustainability*

Category : Science, Engineering and Technology

1045 STUDIES AND ADOPTION OF THE FORMULATION OF 14001 FOR SOLID WASTE MANAGEMENT#

Nassereldeen Kabbashi, *Biotechnology Engineering, Kulliyah of Engineering*
Mohammed Mirghani, *Biotechnology Engineering, Kulliyah of Engineering*
Norliana Mohd Kassim, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Nassereldeen Kabbashi, Biotechnology Engineering, Kulliyah of Engineering

This study consists of both fundamental scientific and engineering approaches. The development of ISO 14001 has been implemented widely however in Malaysia; the percentage of organizations implementing this standard is way too small which is only 0.46%. Thus, this study was carried out as to determine and analyze the adoption of ISO 14001 standard especially in Malaysian organization. Both certified and uncertified companies will be compared as to identify the difference of the implementation of ISO 14001. In order to complete this research successfully and efficiently, qualitative research will be carried out through personnel interviews and questionnaires. In addition, the performance of the ISO14001 will be evaluated under Visual Basic expert system that used as a tool to aid the company to achieve their environmental mission step by step. For validation process, all requirements need to be validated before the organization proceeds with the application process. The main interface

Keywords : ISO14001, Solid waste management, ES, Visual basic

Category : Science, Engineering and Technology

1058

HIERARCHICAL 3D-MESH NETWORK#

M.M. Hafizur Rahman, *Dept. of Computer Science, Kulliyah of Information & Communication Technology*
Asadullah Shah, *Dept. of Computer Science, Kulliyah of Information & Communication Technology*
Yasushi Inoguchi, *Research Center for Advanced Computing Infrastructure, JAIST,*

Exhibitor : M.M. Hafizur Rahman, Computer Science, Kulliyah of Information & Communication Technology

A Hierarchical 3D-Mesh (H3DM) Network is a 2D-mesh network of multiple basic modules, in which the basic modules are 3D-torus networks that are hierarchically interconnected for higher-level networks. In this paper, we evaluate the dynamic communication performance of a H3DM network using a deadlock-free routing algorithm with minimum number of virtual channels under the uniform and non-uniform traffic patterns; and compare it with other networks to show the superiority of the H3DM network over other networks. We have also evaluated the dynamic communication performance of the mesh and torus networks. It is shown that H3DM network yields low average transfer time than that of mesh and torus networks. The trade-off between throughput and latency of these networks shown that H3DM network provide better dynamic communication performance than that of mesh and torus networks before saturation.

Keywords : *Interconnection network, H3DM network, Deadlock-free routing algorithm, Traffic patterns, Dynamic communication performance.*

Category : Science, Engineering and Technology

1059 PARAMETRIC STUDY OF EARTH-TO-AIR HEAT EXCHANGER IN MALAYSIAN CLIMATE#

Md Najib Md Najib, *Applied Art and Design, Kulliyah of Architecture & Environmental Design*

Aliyah Nur Zafirah Sanusi, *Architecture, Kulliyah of Architecture & Environmental Design*

Soran Hama Aziz Ahmed, *Kulliyah of Architecture & Environmental Design*

Exhibitor : Md Najib Md Najib, Applied Art and Design, Kulliyah of Architecture & Environmental Design

The technology, where the ground was used as a heat sink to produce cooler air, has been an area of interest in this country even before National Green Technology Policy was launched in 2009. This simulation study is based on ASHRAE Weather database, local data collected in previous field studies at UTM Skudai Campus and IIUM Gombak Campus. This study investigates the parameters influencing the cooling potential of Earth-to-Air Heat Exchanger (EAHE).

Keywords : *green technology, passive cooling, ground cooling*

Category : Science, Engineering and Technology

1073 A DYNAMICAL SYSTEM APPROACH TO PHASE TRANSITIONS FOR P-ADIC POTTS MODEL#

Farrukh Mukhamedov, *CTS, Kulliyah of Science*

Exhibitor : Farrukh Mukhamedov, Computational and Theoretical Sciences, Kulliyah of Science

In the present paper, we introduce a new kind of p -adic measures for $q+1$ -state Potts model, called {it generalized p -adic quasi Gibbs measure}. For such a model, we derive a recursive relations with respect to boundary conditions. We employ a dynamical system approach to establish a phase transition phenomena for the given model. Namely, using the derived recursive relations we define one dimensional fractional p -adic dynamical system. We show that if q is divisible by p , then such a dynamical system has two repelling and one attractive fixed points. In this case, there exists the strong phase transition. If q is not divisible by p , then the fixed points are neutral, and this yields that the existence of the quasi phase transition.

Keywords : *p -adic numbers, Potts model; p -adic quasi Gibbs measure, phase transition.*

Category : Science, Engineering and Technology

1083 Potts Model with Next-Nearest-Neighbor Ternary Interactions on an Arbitrary-Order Cayley Tree#

Nasir Ganikhodjaev, *Computational and Theoretical Sciences, Kulliyah of Science*
Ashraf Mohamed Nawi, *Computational and Theoretical Sciences, Kulliyah of Science*
Mohd Hirzie Mohd Rodzhan, *Computational and Theoretical Sciences, Kulliyah of Science*

Exhibitor : Mohd Hirzie Mohd Rodzhan, *Computational and Theoretical Sciences, Kulliyah of Science*

We study the phase diagrams for the Potts model with restricted competing nearest-neighbor interactions J_1 and ternary interactions J_{pt} on a Cayley tree of arbitrary order k . At vanishing temperature, the phase diagram is fully determined for all values and signs of J_{pt}/J_1 and T/J_1 . The phase diagrams are obtained from stability conditions, and characteristic points in the iteration scheme are numerically analyzed. The wavevectors versus temperature are plotted for some critical points in the modulated phases. Then, we use the Lyapunov exponent to verify the stability of the periods.

Keywords : Potts model, Cayley tree, ternary interactions, phase diagram, modulated phases, average magnetization, Lyapunov exponent

Category : Science, Engineering and Technology

1084

QUANTUM QUADRATIC OPERATORS ON $M_2(\mathbb{C})$

Farrukh Mukhamedov, *CTS, Kulliyah of Science*

Abduaziz Abduganiev, *CST, Kulliyah of Science*

Exhibitor : Farrukh Mukhamedov, Computational and Theoretical Sciences, Kulliyah of Science

Keywords : quantum quadratic operator; positivity; Kadison-Schwarz;

Category : Science, Engineering and Technology

1098 ALTERNATIVE METHOD TO ESTIMATE TRANSACTION COSTS: AN EMPIRICAL INVESTIGATION PRE- , DURING AND POST- FINANCIAL CRISIS#

Mimi Hafizah Abdullah, *Computational and Theoretical Sciences, Kulliyah of Science*
Steven Li, ,

Exhibitor : Mimi Hafizah Abdullah, Computational and Theoretical Sciences, Kulliyah of Science

Estimation of transaction costs in stock market is an important issue for stock trading, asset pricing, and stock market regulation etc. and it is often done by combining the bid-ask spread estimate with commissions and other fees provided by market participants which can be subjective. This study aims to offer an alternative to estimate transaction costs in stock trading via the implied transaction costs by using the Leland option pricing model. The effectiveness of this new approach is tested by using the S&P/ASX 200 index call options data. On the basis of the actual transaction costs estimates on the Australian Securities Exchange (ASX) documented by previous studies and Roll's model, the empirical results reveal that this new approach can provide a reliable transaction costs estimate on stock trading in the ASX. Furthermore, the accuracy of the implied transaction costs across option moneyness and maturity and the variation of the implied transaction costs during the recent global financial crisis period are investigated.

Keywords : *implied transaction costs, Leland model, index options, empirical*

Category : Science, Engineering and Technology

1103 ELECTRICITY GENERATION FROM NANO-ROD SEMICONDUCTOR#

Souad A. M. Al-Bat'hi, *Manufacturing and Materials Engineering, Kulliyah of Engineering*
Umer Mushtaq, *Manufacturing and Materials Emgineering, Kulliyah of Engineering*

Exhibitor : Souad A. M. Al-Bat'hi, Manufacturing & Materials Engineering, Kulliyah of Engineering

Hexagonal nanorods of ZnCdO thin films, i.e., ZnCdO nanorods were synthesized simultaneously by electrodeposition technique using 0.6% of ZnCl₂ and 0.4% of CdCl₂ electrolytes. The synthesized ZnCdO nanorods have uniform hexagonal crystallographic planes, and their diameters are about 30 nm. The Cd content of ZnCdO nanorods was as high as (about) 16.7 at%. Remarkably, the ultra-violet (UV) near-band-edge (NBE) emission was red-shifted from 3.21 eV to 3.04 eV due to the direct modulation of band gap caused by Zn/Cd substitution. Temperature is deemed as a key parameter for the formation of different morphologies of ZnCdO nanostructures. The FESEM images of ZnCdO which shows that hexagonal nanobar tubes were first time synthesized via electrodeposition technique at temperature of 90 oC and the size of each nanorods is about 30nm. The characterization's for ZnCdO and PEO was used in order to optimize the results and the temperature of 90 oC and Composition of Zn_{0.6}Cd_{0.4}O was found. Finally, ZnCdO/PEO cell is used to produce energy by absorbing the energy from the sun, this single junction cells have been put forward as a potential low-cost alternative to the widely used solar cells. However, the cost effectiveness is due to the ZnCdO nanorods one electrode and polymer used as another electrode.

Keywords : *Electrodeposition, Nano-Rods, Semiconductors, Photovoltaic, Solar Cells,*

Category : Science, Engineering and Technology

1104

ELECTRICITY FROM COLOURING PLANTS#

Souad A. M. Al-Bat'hi, *Manufacturing and Materials Engineering, Kulliyyah of Engineering*

Exhibitor : *Souad A. M. Al-Bat'hi, Manufacturing & Materials Engineering, Kulliyyah of Engineering*

Dye-sensitized solar cells (DSSCs) were constructed by using the Lawsonia inermis leaves, Sumac/Rhus fruits, and Curcuma longa roots as natural sensitizers of anatase-based nanostructure TiO₂ thin film Paint-coated on ITO conducting glass. The orange-red Lawsone, red purple anthocyanin and yellow Curcumin are the main components in the natural dyes obtained from these natural products. A blend of 50 wt% chitosan and 50 wt% polyethylene oxide (PEO) was used as a solid state thin film electrolyte. The polymer blend was complexed with ammonium iodide (NH₄I) and some iodine crystals were added to the polymer-NH₄I solution to provide I⁻/I₃⁻ redox couple. The ionic conductivity of the polymer electrolyte is 1.18x10⁻⁵ S cm⁻¹ at room temperature. Structural and optical properties of the semiconductor thin films were characterized by X-ray diffractometer and UV-VIS spectrophotometer. The XRD shows nanocrystalline structures for TiO₂ thin films (D=13nm). The photovoltaic properties of the cell have been studied and the best overall solar energy conversion efficiency of 1.75% was obtained, under AM 1.5 irradiation, with the red purple Sumac/Rhus extract, that showed a reasonable current density (J_{sc} = 0.93 mA/cm²).

Keywords : *Natural dyes, PEO, Photovoltaic, Solar cells, Renewable Energy*

Category : Science, Engineering and Technology

1109 DEMAND FEEDING SYSTEM FOR JUVENILES OF BROWN-MARBLED GROUPER AND ORANGE-SPOTTED GROUPER#

Yukinori Mukai, *INOCEM, Kulliyah of Science*

Nai Han Tan, , *Kulliyah of Science*

Rian Freddie Firdaus, , *Kulliyah of Science*

Chung Fan Liao, ,

Exhibitor : Yukinori Mukai, INOCEM, Kulliyah of Science

Demand feeding is a new feeding system that fish can feed themselves. Fish switch on the feeding device when they require food. This system has several advantages because the fish can eat when they are most motivated to feed. The system can thus minimize feed loss and reduce water pollution. The demand feeding system has been studied for ten years, but so far, there are only a few commercialized feeding devices. Currently, the most urgent issue facing the aquaculture industry in Malaysia is seed production, especially, groupers. This study was conducted to examine juvenile rearing by demand feeding system with brown-marbled grouper, *Epinephelus fuscoguttatus* and orange-spotted grouper, *Epinephelus coioides*. 10 juveniles were kept in a 500 L round polyethylene tank (nine tanks, 90 fish). The tanks had water running system with water change (90%) every morning. Throughout the experiment, fish were exposed to natural photoperiod. Water temperature was 26.5 – 30.5 °C and salinity was 26-29 ppt. During rearing experiment, the fish were fed with pellets (Otohime EP3, Marubeni Nisshin Feed Co. Ltd.). Three experimental groups, pendulum demand feeder group (PDF, FH221, Aquatic Eco-Systems, Inc.), infrared sensor demand feeder group (IRDF) and automatic feeder group (AF) were set with three replicates. The IRDF consisted of an infrared sensor (infrared light 860 nm) ending in a red pellet-like knob with food container. Both demand feeders (PDF and IRDF) were set to dispense 10-15 pellets when fish activated the trigger (pendulum rod and infrared sensor respectively) located 2 cm below the water surface. The automatic feeder (AF) was set to dispense 130-150 pellets at 08:00 and 17:00 h. The experiment lasted for 20 days. Fish growth rates; total length (TL) and body weight (BW) were compared. Fish growth of three experimental groups of each grouper was obtained. In the experiment of brown marbled grouper, total length of IRDF group was higher than that of PDF group ($P < 0.05$). BW growth rates of three groups were not significantly different. In the experiment of orange-spotted grouper, there were no significant differences, but TL and BW growth rates of IRDF group showed higher tendency than that of AF and PDF groups. Therefore, IRDF demand feeding devices were considered to be suitable for juvenile rearing of groupers.

Keywords : groupers, juveniles, fish rearing, growth rates, demand feeding

Category : Science, Engineering and Technology

1110 CIRCADIAN RHYTHM OF JUVENILES OF BROWN-MARbled GROUPER#

Yukinori Mukai, *INOCEM, Kulliyah of Science*
Nai Tan Fan, , *Kulliyah of Science*
Siti Nasihin Mohammad Seth, , *Kulliyah of Science*
Rian Freddie Firdaus, , *Kulliyah of Science*

Exhibitor : Yukinori Mukai, INOCEM, Kulliyah of Science

There are several methods to give feed to fish, for example manual feeding, automatic feeding (using timer feeder) and demand feeding (self feeding). Recently automatic feeding and demand feeding are expected as new feeding methods in aquaculture. Because these feeding methods have advantages, such as, the staffs of fish farms do not need feeding at night time, if fish farms use these new methods. However, there are no data about fish circadian rhythms about both of brown-marbled grouper *Epinephelus fuscoguttatus* and orange-spotted grouper, *Epinephelus coioides*. Therefore this study was conducted to obtain the basic data about feeding activity during 24 hours for new feeding methods. The recording of circadian rhythms was done in the hatchery of INOCEM, IIUM Kuantan Campus. During the experiment under natural photoperiod, 15 juveniles were placed in 200 L gray rectangular fibreglass tank [0.8 m (L) x 0.4 m (W) x 0.7 m (H)]. Swimming activities of juveniles during night time were recorded by a colour CCD camera (WAT-232/NTSC, DC 12V) connected to a television and a DVD recorder under an infrared ray LED 850 nm (WTW, SM-104-850). The activities during daytime were recorded by a Sony handycam camcorder (Sony HDR-SR10). The swimming activities of the juveniles were recorded for 24 hours. The juveniles of brown-marbled grouper and orange-spotted grouper were obtained from private fish farms. Both of grouper species show higher activities in the daytime than the night time. These grouper species seems to be typical diurnal species. These data are useful basic information to develop the feeding devices. For example, we can use these data to set up the time for automatic feeding devices.

Keywords : *Circadian Rhythm, groupers, fish rearing, fish activity*

Category : Science, Engineering and Technology

1112 MICROHYDRO CONTRIBUTIONS AS TROUBLESHOOTER AND THE RIGHT SOLUTION AT THE ENERGY CRISIS WHEN NATURAL DISASTER#

Syahrial Shaddiq, *Electrical Engineering, Kulliyah of Engineering*

Dewi Kusumastuti, *Medical Education, Kulliyah of Medicine*

Fadholi Zulfan Ahmad, *Electrical Engineering, Kulliyah of Engineering*

Exhibitor : Syahrial Shaddiq, Electrical and Computer Engineering, Kulliyah of Engineering

Natural disasters usually result in many losses, losses caused by natural disasters are usually material and nonmaterial. Disasters are usually deadly natural disasters besides also alter ecosystems that exist in the area of the unfortunate disaster. Natural disasters often destroy vital infrastructure and generally trashed the place contained energy sources, such as destroying the PLN substation. Thus causing energy supplies, particularly energy electricity were used so that the public can not lose because there was no power supply in the area where they live. Therefore we need a new breakthrough in the form of a power plant that can be used after the post-disaster. Without us knowing it was a lot of energy that has not been fully utilized, for example water. Water is a natural resource which is very much there in the face of the earth. Approximately 2/3 of the earth is water. With this in mind we wanted to create a new alternative in the form of tools that harness the kinetic energy of flowing water. Microhydro is a tool that can be used as a trigger source of energy that can be utilized by the public in the event of a natural disaster. Microhydro power is renewable energy. Microhydro it works when there is a stream running water discharge has a certain kind of about 1000 kg/m³ period so as to produce a great power for the operation of microhydro. Microhydro harnessing the kinetic energy of flowing water stream. Microhydro is an appropriate solution when the energy crisis in the disaster stricken areas. The rivers that were affected areas can be utilized by microhydro as a source of energy. Microhydro memberian very helpful and a very real contribution to communities affected by natural disasters. It took a solid partnership to build this tool, with a solid cooperation Insha Allah this tool can work well in the raft and have a positive effect in the midst of people affected by natural disasters.

Keywords : *Microhydro, Natural Disasters, Power, Renewable Energy, Energy Electricity*

Category : Science, Engineering and Technology

1113 MORINGA OLEIFERA SEED EXTRACT: A NOVEL PHYTO-DISINFECTANT FOR DRINKING WATER#

SULEYMAN AREMU MUYIBI, *Biotechnology Engineering, Kulliyah of Engineering*
MUNIRAT ABOLORE IDRIS, *Biotechnology Engineering, Kulliyah of Engineering*
PARVEEN JAMAL, *Biotechnology Engineering, Kulliyah of Engineering*
MOHAMMED SAEDI JAMI, *Biotechnology Engineering, Kulliyah of Engineering*
MOHD ISMAIL ABDUL KARIM, *Biotechnology Engineering, Kulliyah of Engineering*
HAMZAH MOHD. SALLEH, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : SULEYMAN AREMU MUYIBI, *Biotechnology Engineering, Kulliyah of Engineering*

Background: Availability of potable water to satisfy daily requirement is a difficult task for most water supply agencies due to increase in industrialization, high population and high standard of living. Most importantly, high cost of treating water especially in the developing country makes it imperative to look for cheaper alternatives. Moringa Oleifera seed extracts have shown excellent coagulation properties and earlier research revealed that it also possesses antimicrobial property. Objectives: To assess the antibacterial activity of Moringa Oleifera seed extract against Escherichia Coli (e.coli) and pseudomonas aeruginosa, to evaluate the performance of different extracts of Moringa Oleifera seed from six different extraction methods that can be applied to water and to carry out the kill-time study of the most promising extracts against the selected bacterial strains. Methods: In this research, six methods of extracting the active ingredients from the Moringa Oleifera seed powder were considered. They were: Normal aqueous extraction (E1), Salt extraction (E2), Oil removal (defatting) followed by aqueous extraction (E3), oil removal followed by salt extraction (E4), oil removal followed by aqueous extraction and microfiltration (E5), and oil removal followed by salt extraction and microfiltration (E6). The antibacterial action of each extract on e. coli and Pseudomonas aeruginosa was determined using agar well methods. The spread plate method was used to determine the minimum inhibitory concentration (MIC) as well as the minimum bactericidal concentration(MBC). The kill time study was done to know the exact time the bacterial strains are killed during the disinfection process. Results: All extracts exhibited antibacterial action against the bacterial strains but extract E3 and E4 exhibited strong bactericidal action of MBC/MIC ratio of 1, hence the two extracts were selected as the promising extracts for the kill-time study. The kill-time study for extract E3 shows that there was more than 99.98% kill of e.coli cells at 30 to 120 minutes with e. coli bacterial cells reduced from 350, 000 cells/ml to 100 cells/ml. Also, for pseudomonas aeruginosa, the cells were reduced to about 1000 cells/ml from 300, 000 cells/ml which indicates about 99.97% reduction. Conclusions: The results of this research show that Moringa Oleifera seed extracts exhibit disinfectant property, which can be harnessed as a disinfectant in water. Extensive research is still going on to make it a potential substitute/complement for chlorine especially in the developing countries where there is limited access to good drinking water.

Keywords : *processed Moringa Oleifera seed, phyto-disinfectant, drinking water*

Category : Science, Engineering and Technology

**1116 DESIGN AND IMPLEMENTATION OF ROBOT LEARNING MODULE FOR
PRIMARY SCHOOL STUDENTS#**

Nur Hidayatullah, *Department of Electrical Engineering, Kulliyah of Engineering*
Iswanto -, *Department of Electrical Engineering, Reseach Institute*

Exhibitor : Nur Hidayatullah, Department of Electrical Engineering, Kulliyah of Engineering

Robotics is a very complex science, so as to introduce the science of robotics for kindergarten and elementary students that will be presented in a way that is easily understood by children. Robotics science that is easily understood by children is logic as introduced in the form of robot motion movement forward, backward, turn right, turn left, and others. With the above background, we created a medium that facilitates the learning of primary school students to make logical robot programmer and download the program to the microcontroller. Module learning robotics logic used for elementary school children should be easy to use and easy to understand. This learning module using AT89S51 microcontroller and borland delphi visual programming. This module is a very easy learning, so students can run the robot application program. Applications such as robot program including such figures mileage distance the robot forward, backward distance, distance, and the distance left. After entering the number, and then compile the program and submit your program to the mobile robot.

Keywords : *Robots, microcontrollers, logic, delphi, learning Module*

Category : Science, Engineering and Technology

1121 MODELING OF FOG-SEWAGE FLOW IN SEWER PIPELINES USING CFD#

Ma'an Alkhatib, *Biotechnology Engineering, Kulliyah of Engineering*
Asif Hoda, *Mechanical Engineering, Kulliyah of Engineering*
Mohammed Saedi Jami, *Biotechnology Engineering, Kulliyah of Engineering*
Mohamed Elwathig, *Biotechnology Engineering, Kulliyah of Engineering*
Zaki Zainudin, *Biotechnology Engineering, Kulliyah of Engineering*
Iman Husain, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Ma'an Alkhatib, Biotechnology Engineering, Kulliyah of Engineering

The release of fat, oil, and grease (FOG) into collection systems results in the blockage of pipes and subsequent sanitary sewer overflows (SSOs). SSOs are a risk to public health and the environment. Currently, municipalities such as Indah Water Consortium (IWK) who are responsible for maintaining these collection systems have little guidance as there is a substantial lack of scientifically-based information regarding the effective control method of FOG. In this study, sewage flow laden with FOG is modeled using ANSYS CFX by applying the Finite volume method. The FOG particles will be tracked in order to understand the mechanism of the FOG deposit build-up. The results of the simulation will be compared with experimental data obtained from the pilot scale model.

Keywords : FOG, sewer, CFD, ANSYS CFX,

Category : Science, Engineering and Technology

**1122 SOLUTIONS OF ASTRO TV LOW RELIABILITY DURING THUNDERSTORM
RAINFALLS IN MALAYSIA#**

SAAD BASHIR, *ELECTRICAL AND COMPUTER ENGINEERING, Kulliyah of Engineering*
AMIRAH CHE MOHD NURODDIN, *ELECTRICAL AND COMPUTER ENGINEERING, Kulliyah of Engineering*
INTAN SAFINAZ YUSNI, *ELECTRICAL AND COMPUTER ENGINEERING, Kulliyah of Engineering*

Exhibitor : SAAD BASHIR, Electrical and Computer Engineering, Kulliyah of Engineering

This project is a first attempt for the investigation of the low reliability of the ASTRO domestic TV reception during rainfalls in Malaysia. An ASTRO ground station was installed in the roof beside the rain gauge at Satellite Laboratory, International Islamic University Malaysia (IIUM). The simultaneous observations of the fade depth, the TV outage of duration and rain intensity were recorded for three month and some broad solutions were pointed out. However, such work needs long term statistical data and a complete equipment set up to pin point the exact solutions.

Keywords : *Rain attenuation, ASTRO reliability, Mitigations of outages*

Category : Science, Engineering and Technology

1123 PREDICTION OF PROBABILITY OF BIT ERROR RATE IN DIGITAL COMMUNICATION SYSTEMS#

Saad Bashir, *Electrical and Computer Engineering, Kulliyah of Engineering*
Abdallah Mohammed Tawfeeq Zyoud, *Electrical and Computer Engineering, Kulliyah of Engineering*
Beshir Salah Eldin Mahmoud Sidahmed, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : Saad Bashir, Electrical and Computer Engineering, Kulliyah of Engineering

Abstract The probability of bit error is one of the most important performance parameters in accessing a digital communication system. This project presented a formal definition of performance parameter and the important formulae to calculate the probability of bit error from some known digital modulation techniques are derived. Then, it show the effect of factors such as noise, interference, fading and error correcting codes on the bit error rate of these chosen modulation techniques. Using MATLAB software, a simulator called the BER Analyzer that produces key graphs was developed to extensively see and compare the bit error rates of digital communication systems under the aforementioned factors for the chosen modulation techniques, all done for the single purpose to analyze the probability of bit error rate more confidently. This project secured highest score during evaluation and winning IEEE Communications and Vehicular Technology 2012 as Excellent Project Award.

Keywords : *prediction, BER, Digital Modulation*

Category : Science, Engineering and Technology

1126 ANALYSIS AND APPLICATION OF AN OUTSOURCING RISK FRAMEWORK#

Lili Marziana Abdullah, *Information System, Kulliyyah of Information & Communication Technology*

Exhibitor : *Lili Marziana Abdullah, Information System, Kulliyyah of Information & Communication Technology*

There is much reported research on risk, and risk management but research on strategic IT system development outsourcing risk, from the client perspective, remains unclear. A literature-based conceptual risk framework for strategic IT system development outsourcing from the client perspective has been developed. We then investigate, 1) critical client risks for strategic IT system development outsourcing projects, and 2) the most common critical client risk factors for such projects. In order to identify any serious omissions in our framework an initial validation of the risk framework is provided through a review of nine published cases of unsuccessful strategic IT system development outsourcing projects. The risks critical to a client are associated with complexity, contract, execution, financial, legal, the organizational environment, planning and control, scope and requirements, the team, and the user. Risks manifest in all nine published cases, include 1) complexity and 2) the team. Three risk factors not previously identified in the initial framework are included in a revised framework. The risk framework assisted us in identifying a number of critical risk factors affecting the outcome of strategic IT system development outsourcing projects.

Keywords : *Risks; strategic IT development project; outsourcing; client perspective*

Category : Science, Engineering and Technology

1127

MICROSOFT WORD THESIS TEMPLATE FOR IIUM#

Nour El Huda Abd Rahim, *Basic Medical Sciences, Kulliyah of Medicine*
Wan Muhamad Salahudin Wan Salleh, *Basic Medical Sciences, Kulliyah of Medicine*
Hidayatul Radziah Ismawi, *Basic Medical Sciences, Kulliyah of Medicine*

Exhibitor : Nour El Huda Abd Rahim, Basic Medical Sciences, Kulliyah of Medicine

Thesis formatting is the crux of any thesis writing process by both undergraduate and postgraduate students during thesis write up. The IIUM Thesis/Dissertation Manual currently available online at (<http://www.iium.edu.my/cps/resource-centre/media-downloads>) serves as a guideline for IIUM students but the thesis formatting still has to be done manually. The aim of this work was to design a Microsoft Word Thesis Template (MWTT) to make thesis formatting easier, faster and less tedious. MWTT was developed using Microsoft Word 2007 based on the IIUM Thesis/Dissertation Manual 2009 published by the Centre for Postgraduate Studies, IIUM. The students are required to install MWTT and attach it to the Microsoft Word. There will be predefined Styles with specific fonts, sizes and spacing according to the relevant thesis content. The MWTT can immediately be applied to any text. It uses “fill in the blanks” concept for the Cover, Title, Approval, Declaration and Copyright pages. The other advantages of MWTT include Generating Table of Contents/Figures/Tables with page numbers; Automatic page and heading numbering; and Pre-set page margins. It is hoped that MWTT will serve as a universal thesis template for all IIUM students by providing an automatic formatting alternative to the tedious manual approach.

Keywords : IIUM, Microsoft Word, Template, Thesis

Category : Science, Engineering and Technology

1128 DESIGN AND APPLICATION OF 80 WATTS FLOATING PHOTOVOLTAIC (FPV)#

Zafri Azran Abdul Majid, Department of Diagnostic Imaging and Radiotherapy, Kulliyah of Allied Health Sciences

Exhibitor : Zafri Azran Abdul Majid, Department of Diagnostic Imaging and Radiotherapy, Kulliyah of Allied Health Sciences

Photovoltaic is used to generate electric power. The surface temperature will affect the photovoltaic efficiency; the increment of temperature will decrease their efficiency and total power gain. Floating photovoltaic (FPV) with heat sink placed at the bottom of the photovoltaic panel will reduce the surface temperature when placed on water surface. This increase the efficiency and total power gain of the photovoltaic by 5.93 %. In this invention will innovate a design of photovoltaic panel frame which is able to float on water and capable to transfer heat at the back of the photovoltaic surface. The material chosen has the ability to float and transfer heat. This system is applicable on lakes, ponds or dams. The materials used to develop the system can be easily obtained from local markets, thus reducing the cost of developing the system which is making it suitable for commercialization and locally manufactured.

Keywords : Floating Photovoltaic

Category : Science, Engineering and Technology

1140 ENHANCEMENT OF SURFACE WEAR PROPERTIES OF TITANIUM ALLOY (Ti-6Al-4V) USING PM COMPACTED ELECTRODES WITH UREA DIELECTRIC FLUID DURING ELECTRICAL DISCHARGE MACHINING (EDM) #

Mohammed Baba Ndaliman, *Manufacturing and Materials Engineering, Kulliyah of Engineering*

Ahsan Ali Khan, *Manufacturing and Materials Engineering, Kulliyah of Engineering*

Mohammad Yeakub Ali, *Manufacturing and Materials Engineering, Kulliyah of Engineering*

Zakaria Mohd Zain, *Manufacturing and Materials Engineering, Kulliyah of Engineering*

Exhibitor : Ahsan Ali Khan, Manufacturing & Materials Engineering, Kulliyah of Engineering

Alpha-beta titanium (Ti-6Al-4V) alloy is the most commonly used titanium alloy. Over 70 % of all titanium alloy grades are products of the sub-grade of this alloy. It is widely used in aerospace, biomedical and corrosive environments. However, its poor abrasive and adhesive wear resistance makes it susceptible to premature failure in applications where the surface is in sliding or rolling contact with metals. Such surfaces would therefore need strengthening to prevent such early failures. Studies have revealed that the wear rate of Ti-6Al-4V alloy under minimum sliding conditions (0.3m/s, 50N) is well above 10^{-3} mm³/m which is the normal upper limit for mild wear of materials. Since electrical discharge machining (EDM) is one of the major non conventional techniques used in machining this alloy, the possibility of enhancing its surface wear properties through manipulation of its (EDM) process parameters is therefore explored. The conventional EDM method was modified with the incorporation of a new Cu-TaC composite powder metallurgy (PM) compacted electrode used in machining with urea solution in distilled water as dielectric fluid. SEM/EDX and XRD analyses; and micro-hardness with wear rate tests were finally conducted on the EDMed surfaces. Results indicate the presence of hard ceramic compounds (the oxides, nitrides and carbides of titanium and tantalum) on the EDMed surface, all formed during a single machining process. Enhanced micro-hardness and comparatively lower surface wear rates were achieved. Using the Cu-TaC electrode and 10g/l of urea concentration in distilled water, the highest micro-hardness of 1795 Hv and lowest surface wear rate of 1.2×10^{-5} mm³/min were attained with the peak current of 4.5 A, pulse duration of 4.30 μ sec and duty factor of 50%. This very small value translates to about 0.0044% of the pre-EDM wear rate, and is well below mild wear region

Keywords : EDM, Ti-6Al-4V alloy, Cu-TaC electrode, Urea dielectric, Micro-hardness, Wear rate

Category : Science, Engineering and Technology

1147 DATA CONFIDENTIALITY AND SECURITY IN VIEW OF CLOUD COMPUTING ENVIRONMENTS#

Rashidah Funke Olanrewaju, *Electrical and Computer Engineering, Kulliyah of Engineering*
Othman Khalifa, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : Rashidah Funke Olanrewaju, Electrical and Computer Engineering, Kulliyah of Engineering

Cloud computing is an information technology deployment model that involves entrusting data to information systems managed by external parties on remote servers or “in the cloud.” In cloud, resources, in terms of infrastructure, applications and data are deployed via the internet as a distributed service by service provider, which are use of applications without installations. This technology allows much more efficient computation by centralizing storage, memory, and processing and band width. However, despite the surge in activity and interest, there are significant, persistent concerns about confidentiality and security of data in cloud computing that prevented businesses from fully accepting cloud platforms. In this paper, we characterize the problems and their impact on adoption. In addition, and equally importantly, we developed a digital watermarking software that can be use between service providers and data owners to safeguard multi-way authentications and tighten access control for sensitive data in both public and private clouds.

Keywords : *cloud computing; data privacy and security; digital watermarking*

Category : Science, Engineering and Technology

1150 ENERGY SAVING COMPOSITE AUTOMOTIVE BRAKE ROTOR PROTOTYPE#

M. A. Maleque, *Manufacturing & Materials Engineering, Kulliyah of Engineering*

A. A. Adebisi, *Manufacturing & Materials Engineering, Kulliyah of Engineering*

Q. H. Shah, *Mechanical Engineering, Kulliyah of Engineering*

Exhibitor : M. A. Maleque, Manufacturing & Materials Engineering, Kulliyah of Engineering

Light weight composite materials for automotive application influence on energy saving as well as performance in automotive systems. Brake rotor is identified as a crucial system which halts the kinetic action in vehicles when the situation becomes unsafe due to undesirable conditions. Currently, cast iron is widely used for rotor application but it has been recognized to have a high density, massive and weighty component compared to eco-friendly light weight materials. In this study, a prototype composite brake rotor is fabricated in order to investigate the performance stability and also developed a mathematical model to predict the influence of weight reduction on energy savings. The brake rotor was fabricated using the stir casting technique and the performance test was conducted using a Proton Wira 1.3 brake system rig set up. The result shows that composite brake rotor achieved a weight reduction of about 50% without sacrificing braking performance and 19% energy savings. The friction coefficient of the AMC under different loading is observed to be within the required deviation band for automotive braking system. The thermal response during braking shows that temperature rise for composite rotor is lower with uniform contour trend unlike the cast iron rotors with regions of intermittent hot spot which is detrimental to braking conditions. The finite element simulation analysis results are in good agreement with the actual operating test measurements. In conclusion, it can be said that this composite automotive brake rotor prototype is a novel, energy saving, light weight and eco-friendly brake rotor which is also commercially viable and feasible to replace the existing cast iron brake rotor.

Keywords : *Energy saving composite, Brake rotor, Prototype Eco-friendly*

Category : Science, Engineering and Technology

1164 NITROGEN-SULFUR COMPOUNDS: CYTOTOXIC STUDY AND THEIR POTENTIAL APPLICATION#

Fiona How, *Chemistry, Kulliyah of Science*
Rahima Z.A, *Biotechnology, Kulliyah of Science*
Siti Nadiah Abdul Halim, ,

Exhibitor : Fiona How, Chemistry, Kulliyah of Science

Nitrogen-sulfur based compounds derivatives e.g. thioureas, dithiocarbamates and dithiocarbazates are interesting series of ligands whose properties can be greatly modified by introducing different organic substituents. These compounds can be customized designed, synthesized and characterized with spectroscopic analytical methods accompanied with single-crystal X-ray diffraction, a non-destructive analytical technique that provides very detailed information about the internal lattice of crystalline substances. To date, there is no overall picture that can identify the parameters to correlate structure with biological activities. It was noted that even a small modification of the molecular structure can result in vast change of biological activities. Therefore, systematic modification of the structure were initiated to correlate these structural changes with the biological properties possessed by the formation of these specific modified compounds. Their intermolecular interactions generate different physical and chemical properties as compared to the parent compounds are well known for their cytotoxic properties, electrochemical properties, fluorescence properties, nonlinear optical properties (NLO) and polymeric properties that will certainly benefit the all industries e.g. crystal engineering and pharmaceutical.

Keywords : *Nitrogen sulfur compounds; cytotoxic study; crystallographic study*

Category : Science, Engineering and Technology

1174 TRIPHASIC CALCIUM PHOSPHATE-CARBON NANOTUBES COMPOSITE FOR BONE GRAFT MATERIALS APPLICATION#

Iis Sopyan, *Department of Manufacturing and Materials Engineering, Kulliyah of Engineering*
Gunawan Gunawan, *Department of Manufacturing and Materials Engineering, Kulliyah of Engineering*
Siti Nurfaezah, *Department of Manufacturing and Materials Engineering, Kulliyah of Engineering*
Mohammad 'Ammar, *Department of Manufacturing and Materials Engineering, Kulliyah of Engineering*

Exhibitor : Iis Sopyan, Department of Manufacturing and Materials Engineering, Kulliyah of Engineering

Recently, the number of orthopaedic surgeries involving bone graft materials already reached more than two million per year globally. Although both natural and synthetic materials have been used as bone graft, problems such as limited availability and donor site complications from autograft transplantation triggered the development of artificial bone implants. In this work, we have succeeded in developing of HA/TCP-CNT composite. Triphasic calcium phosphate (HA/TCP) has been synthesized via hydrothermal method, and then mixed with 1wt% multiwall carbon nanotubes to prepare HA/TCP-CNT composite through ultrasonification dispersion method. XRD results confirmed the formation of HA, α -TCP and β -TCP in both as-prepared powder and composite samples. The graphite peaks appeared in the composite samples as well. The FTIR spectra show vibrational characteristic of apatite phase. HA/TCP-CNT composite was found to have a significant of Vickers Hardness of 1.98 GPa after 1100oC sintering. The morphology analysis showed that current dispersion technique provides homogeneous dispersion of CNT in the calcium phosphate matrix.

Keywords : Calcium phosphate, carbon nanotube, composite, bone graft

Category : Science, Engineering and Technology

1177 DEVELOPMENT OF IIUM CIRCULAR WING UNMANNED AERIAL VEHICLE (IIU-CWUAV) #

Ashraf A. Omar, *Mechanical, Kulliyah of Engineering*
Ahmed Zaahin Bin Simat@Mohd Akhir, *Mechanical, Kulliyah of Engineering*
Nur Azam Bin Abdullah, *Mechanical, Kulliyah of Engineering*

Exhibitor : Ashraf A. Omar, Mechanical, Kulliyah of Engineering

In this work, the first IIUM Circular Wing Unmanned Aerial Vehicle (IIUM-CWUAV) model was successfully designed, built and tested by the team from the Department of Mechanical Engineering, IIUM. The designing process started with gathering historical data and performing the conceptual design calculations. The maximum diameter and weight of IIUM-CWUAV are 1 m and 900 grams, respectively. Foam was the main material used to construct the IIUM-CWUAV. Flight tests were conducted successfully and IIUM-CWUAV was found to be stable. Based on the flight tests results, design modifications were carried out to improve the stability and the performance. The final configuration of the IIUM-CWUAV was successfully tested.

Keywords : UAV, circular wing aircraft, aircraft design, fabrication, flying test.

Category : Science, Engineering and Technology

1181 NEW FAULT AUTOMATION SYSTEM FOR DISTRIBUTION SYSTEMS#

Musse Ahmed, *ECE, Kulliyah of Engineering*

Exhibitor : Musse Ahmed, Electrical and Computer Engineering, Kulliyah of Engineering

This project has developed a customized distribution automation system (DAS) for secure automated fault operation system tested in the Malaysian utility distribution system, Tenaga Nasional Berhad (TNB). It is one part of a project developed to present distribution automation system concept in Malaysia as the first practical research work on customer side automated fault operation system based on DAS. The DAS system detects, identifies isolates & clears the faults in few seconds by just clicking the mouse. Supervisory Control and Data Acquisition (SCADA) technique has been utilized to build Human Machine Interface (HMI) that provides Graphical User Interface (GUI) functions for the easy use of engineers and technicians who operate the distribution system. Remote monitoring devices have been used to customize the hardware part that is integrated to the software system. Practical Power Line Carrier (PLC) has been used as communication media between the two sides. As a result, complete DAS for fault isolation work has been developed for cost reduction, maintenance time saving & less human intervention during faults conditions. The distribution hardware has been modified to suit the DAS as shown in Figure 1. (a &b). The developed system has been explained in the following parts.

Keywords : *Distribution Automation System (DAS), Automated Fault Operation System, Innovated New system, SCADA, HMI, GUI.*

Category : Science, Engineering and Technology

1189 DEVELOPMENT OF AN AUTOMATED LOW COST PETROL PUMP CONTROL SYSTEM (ALCPPCS)#

Musse Ahmed, *ECE Department, Kulliyah of Engineering*

Ahmed Munir, *ECE Department, Kulliyah of Engineering*

ROZAKWAN (0731925) ABDUL WAHAB, *ECE Department, Kulliyah of Engineering*

Exhibitor : Musse Ahmed, Electrical and Computer Engineering, Kulliyah of Engineering

In this project, Petrol Pump Control System has been designed using liquid level sensor. The concept of level measurement, liquid level control system, sensor technology and automation system have been utilized for the project development and implementation. Both hardware and software systems are developed and implemented. In the hardware part, a complete vending machine control system has been constructed and integrated with the software part. In the software part, programming using C language has been used as an integrator code. The main idea in this project is to construct low cost, portable, effective liquid (Petrol) controller for automated petrol pump application purpose to be used in the remote areas and also low cost and mobile petrol pump for every where.

Keywords : *Petrol Station, Petrol Pump, Sensor, Automated Low Cost Petrol Pump Control System (ALCPPCS), Automation System.*

Category : Science, Engineering and Technology

1190 REMOTE ALERT SPO2 MONITORING SYSTEM FOR EARLY DETECTION OF CRITICAL CONGENITAL HEART DISEASE.#

Othman Khalifa, *Electrical and Computer Engineering, Kulliyah of Engineering*
TASKIA AHAMMAD KHAN, *Electrical and Computer Engineering, Kulliyah of Engineering*
Hajir Muataz, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : Othman Khalifa, Electrical and Computer Engineering, Kulliyah of Engineering

Pulse oximetry provides an estimation of arterial oxyhemoglobin saturation by utilizing selected wavelengths of light. It is a medical device that monitors the level of oxygen in a patient's blood and alert if the oxygen level drops below a safe level. Blood oxygen saturation (SpO2) is an important indicator directly related to heart pulmonary system. Monitoring of SpO2 offers a good indication of heart functionality. This project aims to develop a remote alert monitoring of SpO2 level. A hardware implementation was carried out with appropriate sensors, filters, amplifiers and microcontroller with wireless network module. Experimental results indicate that the product capable of alerting the user when blood oxygen saturation drops below the acceptable level. A Bluetooth module was used for transferring calculated SPO2 values to a host computer for remote monitoring purposes.

Keywords : *Pulse oximetry, Blood oxygen saturation, wireless oximetry monitoring solutions*

Category : Science, Engineering and Technology

1193 HARNESING INSTITUTIONALLY-BASED REPOSITORIES USING OPEN-SOURCE LIBRARY SOLUTIONS#

Yushiana Mansor, *Library and Information Sciences, Kulliyah of Information & Communication Technology*
Normi Sham Awang Abu Bakar, *Computer Science, Kulliyah of Information & Communication Technology*
Nurul Izzatul Asiah Mohamad, *Library and Information Sciences, Kulliyah of Information & Communication Technology*

Exhibitor : Normi Sham Awang Abu Bakar, *Computer Science, Kulliyah of Information & Communication Technology*

This research showcases the progress of two projects using open source library solutions in enhancing access to the collections at the Hamzah Fansuri Resource Centre (HFRC), Kulliyah of ICT, IIUM. The first project involved using the Koha library management system, and the second, using Dspace for digital library development. Several issues related to open-source project management were experienced, particularly in the context of a small-sized library with minimal staff support. The experience at the HFRC suggests that while it is highly desirable for small-sized libraries to adopt open source solutions, a key success factor is having the staff with the right knowledge, skills and competency. Systems' interoperability aspect must be taken into consideration as it will enhance the potential of resource discoveries across disparate repositories. The research also observed the need for greater multidisciplinary collaboration between researchers from the Library and Information Science, Computer Science, and Information Systems domains in realizing the idea of interoperable, networked, digital repositories environment.

Keywords : *Institutionally-Based Repositories, Open-Source, Library Solutions*

Category : Science, Engineering and Technology

1198 IMPROVED TWO-WAY SIX-STATE PROTOCOL FOR QUANTUM KEY DISTRIBUTION#

Jesni Shamsul Shaari, *Physics, Kulliyah of Science*
Asma' Ahmad Bahari, ,

Exhibitor : Jesni Shamsul Shaari, Physics, Kulliyah of Science

A qubit based two-way quantum key distribution scheme capitalizing on non-orthogonal quantum states derived from three mutually unbiased bases was first proposed in the paper [Phys. Lett. A 358 (2006) 85]. It boasts of a higher level of security, the protocol's major drawback was its design which poses a definite challenge in terms of practical implementation. We propose modifications to the protocol which result not only in improved security but also in a more efficient and practical setup.

Keywords : QKD

Category : Science, Engineering and Technology

1199 FABRICATION OF GELATIN COATED POLYCAPROLACTONE (PCL) MICROSPHERES FOR CELL CULTURE APPLICATION#

Maizirwan Mel, *Biotechnology Engineering, Kulliyah of Engineering*
Mohd Azmir Arifin, *Biotechnology Engineering, Kulliyah of Engineering*
Nurhusna Samsudin, *Biotechnology Engineering, Kulliyah of Engineering*
Hamzah Mohd Salleh, *Biotechnology Engineering, Kulliyah of Engineering*
Yumi Zuhanis Has-Yun Hashim, *Biotechnology Engineering, Kulliyah of Engineering*
Iis Sopyan, *Manufacturing and Material Engineering, Kulliyah of Engineering*

Exhibitor : Maizirwan Mel, Biotechnology Engineering, Kulliyah of Engineering

In this study, polycaprolactone (PCL) microspheres were fabricated by using oil in water (o/w) emulsification coupled with solvent evaporation technique. In order to render the microspheres suitable for cell attachment and gelatin immobilization on their surfaces, PCL microspheres were loaded with active oxygen species such as carbonyl (CO), hydroxyl (OH) and carboxyl (COOH) functional groups by using an ultraviolet/ozone system. To mimic the extracellular matrix, PCL microspheres were further modified in which gelatin were immobilized on their surfaces by using a zero length cross-linker reagent, EDAC/NHS. The morphology, composition and the mechanical properties of the gelatin coated PCL microspheres were characterized by using scanning electron microscopy, Fourier transform infrared spectrum, X-ray diffraction, differential scanning calorimeter and UV-vis spectrum while their cellular bioactivity were assessed by culturing continuous cell lines, Vero and CHO cells in vitro.

Keywords : *polycaprolactone, ultraviolet/ozone, gelatin immobilization, cell culture*

Category : Science, Engineering and Technology

1200

CARBON NANOTUBE FET FOR GREEN TECHNOLOGY#

Soheli Farhana, *Electrical and Computer Engineering, Kulliyah of Engineering*
A.H.M. Zahirul Alam, *Electrical and Computer Engineering, Kulliyah of Engineering*
SMA Motakabber, *Electrical and Computer Engineering, Kulliyah of Engineering*
Sheroz Khan, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : A.H.M. Zahirul Alam, Electrical and Computer Engineering, Kulliyah of Engineering

The purpose of this research is to study novel carbon nanotube-embedded Field effect transistor (CNTFET) that can be applicable for environmentally friendly electronics devices. Carbon nanotubes (CNTs) are rolled sheets of carbon with atoms arranged in a hexagonal pattern. CNTs measure about a millionth of a millimetre in diameter and show great promise for applications in nanotechnology. Use of CNTs in nano-electronics can lead to nano-scale FET. To investigate the electrical properties of FET, CNT-embedded FET structures are analyzed using numerical modelling.

Keywords : Graphene, CNTFET, Energy.

Category : Science, Engineering and Technology

1201 VARIATIONAL ANALYSIS OF SOLITON SCATTERING BY EXTERNAL POTENTIALS#

Bakhran Umarov, *Physics, Kulliyah of Science*
Azeddine Messikh, *Computer Science, Kulliyah of Information & Communication Technology*
Nassima Regaa, *CTS, Kulliyah of Science*

Exhibitor : Bakhran Umarov, Physics, Kulliyah of Science

Dynamics of the width and center-of-mass position of a matter wave soliton subject to interaction with arbitrary external potential is analyzed using the collective coordinates approach. It is shown that approximation of the trial function and external potential only in the interaction region of the spatial domain is sufficient for adequate description of the soliton scattering process. The validity of the developed approach is illustrated for the Gaussian and Poschl-Teller potentials.

Keywords : *soliton, variational method, nonlinear systems, matter wave*

Category : Science, Engineering and Technology

1202 RAIN FADE SLOPE MODEL IN EARTH-TO-SATELLITE PATH BASED ON DATA MEASURED AT KU-BAND IN MALAYSIA#

Md. Rafiqul Islam, *Electrical and Computer Engineering, Kulliyah of Engineering*
Khalid Al-Khateeb, *Electrical and Computer Engineering, Kulliyah of Engineering*
Hassan Dao, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : Md. Rafiqul Islam, Electrical and Computer Engineering, Kulliyah of Engineering

Rain fade slope is one of fade dynamics behaviour used by system engineers to design fade mitigation techniques (FMT) for space-earth microwave links. Adaptive power control (APC) and Uplink power control (ULPC) are ones of rain countermeasure techniques relies on rain fade dynamics parameters by increasing transmitted power to compensate rain fading on propagation path. Fade slope is one behaviour of fade dynamics characteristics that assesses tracking speed contributing factor to fade mitigation techniques (FMT). Recent measurements found that fade slope prediction model proposed by ITU-R is unable to predict fade slope distribution accurately in tropical regions. Rain fade measurement was conducted in Kuala Lumpur (3.3° N, 101.7° E) where located in heavy rain zone by receiving signal at 10.982 GHz (Ku-band) from MEASAT3 (91.5° E) on 77.4° elevation angle. The measurement has been carried out for one year period. New fade slope prediction model is proposed based on measured data.

Keywords :

Category : Science, Engineering and Technology

1213 DEVELOPMENT OF POLYSTYRENE MICROCARRIER BY AN EMULSION SOLVENT EVAPORATION PROCESS#

Nurhusna Samsudin, *Biotechnology Engineering, Kulliyah of Engineering*
Yumi Zuhani Has-Yun Hashim, *Biotechnolgy Engineering, Kulliyah of Engineering*
Hamzah Mohd Salleh, *Biotechnology Engineering, Kulliyah of Engineering*
Maizirwan Mel, *Biotechnology Engineering, Kulliyah of Engineering*
Iis Sopyan, *Manufacturing and Material Engineering, Kulliyah of Engineering*
Azmir Mohd Arifin, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Maizirwan Mel, Biotechnology Engineering, Kulliyah of Engineering

Unloaded microspheres were prepared from polystyrene (PS) using an oil-in water emulsion solvent evaporation method. The study was conducted to evaluate how the polymer and some process parameter affect the properties of the final microspheres particle size. Several conditions has been tested such as stirring speed, amount of PS, ratio of solute to solvent, stirring temperature, concentration of surfactant on the bead size. Polystyrene (PS) microspheres was prepared by solvent evaporation but with several modifications. Firstly, polystyrene were dissolved in the solvent phase which is chloroform and then will be mixed with the first aqueous phase which consists of deionized distilled water with designed concentration of 88% hydrolyzed polyvinyl alcohol (PVA). Spherical shaped beads from non-homogenous polystyrene powder have been successfully produced by using this method with desire beads size. The result found that the parameters do affect microspheres size the most was the surfactant concentration in emulsion water phase and solvent composition

Keywords : *microcarrier, polystyrene, emulsion, evaporation, bead*

Category : Science, Engineering and Technology

1214 DESIGN AND DEVELOPEMENT OF RADIOFREQUENCY (RF) CANNULA FOR CHRONIC PAIN MANAGEMENT#

Shafie Kamaruddin, *Manufacturing and Material Department, Kulliyah of Engineering*
Wan Ahmad Yusmawiza Wan Yusoff, *Manufacturing and Material Department, Kulliyah of Engineering*
Abdul Hadi Mohamed, *Anaesthesiology & Intensive Care, Kulliyah of Medicine*

Exhibitor : Wan Ahmad Yusmawiza Wan Yusoff, Manufacturing & Materials Engineering, Kulliyah of Engineering

Radiofrequency (RF) cannula is one of important component in treatment of chronic pain known as Radiofrequency (RF) procedure. This procedure has become a common and alternative procedure for chronic pain management since it gives pain relief without causing damage to the nerve tissue. Over the past few years, treatment cost for radiofrequency (RF) procedure is increase as the demand for single use radiofrequency (RF) cannula increase. Due to the increase numbers of demand for RF cannula, there is a need to explore on development of existing radiofrequency (RF) cannula leading to reduce fabrication cost and improve its effectiveness. Thus, through conceptual design development, new design of cannula may improve placement of cannula to target nerve and reduce fabrication cost. In conceptual design and development, product design specification is established from user requirement and existing cannula. Six design concept sketching are generated according to product design specification which to be evaluate by user of RF cannula. In evaluating these design concepts, several criteria are defined to satisfied user most through details questionnaire. Final concept design is selected through concept screening and concept scoring phase. A design of prototype cannula is created using Catia V5 software with improvised features. This study proposes the fabrication prototype cannula using Fused Deposition Modeling (FDM) machine. The prototype cannula is tested on chicken tissue to verify it ability to functioning as existing cannula. The result shows that, lesion size generated by prototype cannula larger than lesion size generated by existing cannula because of electrical resistivity properties of tip needle material to emit thermal lesion. Elemental compositional analysis of both tip needle material shows that, the composition material for both tip needle corresponding to type austenite stainless steel. An austenite stainless steel with low electrical resistivity such as AISI 201, AISI 303, AISI 304, 320 is suggested as the material for the tip needle. Essentially, this study may benefit a lot in terms of cost reduction while promising a better performance of radiofrequency (RF) cannula.

Keywords : Radiofrequency (RF) procedure, Fused Deposition Modeling (FDM)

Category : Science, Engineering and Technology

1222

PROCEDURAL MODEL OF HORSE SIMULATION#

Asadullah Shah, *Computer Science, Kulliyah of Information & Communication Technology*

Zeeshan Bhatti, *IT, Kulliyah of Information & Communication Technology*

Farruh Shahidi, *CS, Kulliyah of Information & Communication Technology*

Exhibitor : Asadullah Shah, Computer Science, Kulliyah of Information & Communication Technology

In this paper, a procedural model has been developed for synthesizing cyclic horse motion through trigonometric functions. The system has been developed and implemented using mathematical model derived from trigonometric cyclic equations, along with forward and inverse kinematics, motion dynamics and gait error optimization to produce absolute gait control over the locomotion of horse character. The dynamic motion is calculated independently for each body part with GUI based user interaction and control over the speed, frequency and oscillation during runtime, for high divergence control over the simulation. The user can manipulate the simulation parameters for motion speed, body oscillation, leg impact phases and duration at runtime and our system will automatically adjust the motion of horse and gait transition according to the user input. At preprocessing level a template based horse skeletal rig is generated automatically with inverse kinematics (IK) controllers for the spine, neck and all four legs. The head, tail, and feet's are controlled with forward kinematics (FK), along with scapula and sternum joints of the legs. Motion cycle is generated using the stance time and leg cycle time. Our procedural model for horse simulation can currently generate various gaits of motion with variable speed and body oscillation with controllable behavior and transaction of gaits at runtime.

Keywords : *simulation, procedural model, animation*

Category : Science, Engineering and Technology

1224

QUANTUM ROTATION GATES WITH STIRAP#

Azeddine Messikh, *CS, Kulliyah of Information & Communication Technology*

Ridza Wahiddin, *cs, Kulliyah of Information & Communication Technology*

Bakhram Umarov, *CTS, Kulliyah of Science*

Gharib Mahmoud Subhi, *Science in Engineering, Kulliyah of Engineering*

Exhibitor : Azeddine Messikh, Computer Science, Kulliyah of Information & Communication Technology

We compute numerically the phases acquired by the adiabatic atomic states and show that in the presence of dephasing the quantum rotation gates are imperfects due to the fact that these phases can not be recompensated .

Keywords : Quantum rotation gates, STIRAP, three-level lambda systems

Category : Science, Engineering and Technology

1228 NONPARAMETRIC TESTS OF NO COVARIATE-TREATMENT INTERACTION AND NO MAIN COVARIATE EFFECTS#

Siti Marponga Tolos, *CTS, Kulliyah of Science*

Exhibitor : Siti Marponga Tolos, Computational and Theoretical Sciences, Kulliyah of Science

This paper discusses theory and numerical studies for testing the nonparametric effects of no covariate-treatment interaction and no main covariate effects based on the decomposition of the conditional mean of regression function that is potentially nonlinear. The response variable could be either discrete or continuous. These tests uses the same technique in constructing the test statistics as in a distribution free test to detect general dependency introduced in Wang (2010). The method first involves augmenting each pair of the data for all treatments with a fixed number of nearest neighbors as pseudo-replicates. A test statistic is then constructed by taking the difference of two quadratic forms. Using such differences eliminate the need to estimate any nonlinear regression function, thus reducing the computation. The parametric standardizing rate is obtained for the asymptotic distribution of the test statistics.

Keywords : *main covariate , covariate-treatment interaction, nonparametric tests*

Category : Science, Engineering and Technology

1229 CONTRIBUTING FACTORS OF URBAN HEAT ISLAND- AN INVESTIGATION ON SURFACE TEMPERATURE OF GROUND SURFACE MATERIALS IN THREE PLAZAS WITH DIFFERENT TYPES OF LANDSCAPE SETTINGS: A CASE STUDY OF PLAZAS IN PUTRAJAYA#

Aniza Abu Bakar, Landscape Architecture, Kulliyah of Architecture & Environmental Design

Noor Aziah Mohd. Ariffin, Architecture, Kulliyah of Architecture & Environmental Design

Arinah Rozhan, Landscape Architecture (student), Kulliyah of Architecture & Environmental Design

Mohd Faiz Mahamad Suhaimi, Landscape Architecture (student), Kulliyah of Architecture & Environmental Design

Amira Nadhirah Mohamad, Landscape Architecture (student), Kulliyah of Architecture & Environmental Design

Exhibitor : Aniza Abu Bakar, Landscape Architecture, Kulliyah of Architecture & Environmental Design

Urban heat island (UHI) is a phenomenon where an urban area is significantly warmer than its surrounding rural area. During night time, more heat is being released causing a greater temperature difference between the city and countryside. The increment of the air temperature is from the modification of land surface due to urban development such as change of land use, paved surfaces; more building being built that uses materials that significantly retain heat. Canyon geometry, evaporative cooling source and wind pattern are other factors that contribute to the formation of urban heat island. This phenomenon negatively affects the social outdoor activities, health and economy. Therefore, this paper aims to study the impact of surface material in urban plazas on their micro-climate. Three different plazas: shaded, partially shaded and exposed plazas were studied to compare and contrast on their landscape settings and surface temperature of various materials. Other variables considered in this research are wind speed, solar radiation and cloud cover. By this research, it is hoped that appropriate surface material with appropriate criteria can be identified to mitigate the UHI effect.

Keywords : *Urban heat island, surface material, landscape setting, urban plaza*

Category : Science, Engineering and Technology

**1239 PERFORMANCE INDEX OF SATISFACTION FOR ADAPTABILITY - CASE STUDY AT
TEACHER'S QUARTERS IN MALAYSIA#**

Asiah Abdul Rahim, *Architecture, Kulliyah of Architecture & Environmental Design*
Zulkefle Ismail, *Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Asiah Abdul Rahim, Architecture, Kulliyah of Architecture & Environmental Design

The objective of this paper is to identify the Performance Index of Satisfaction (PIS) on adaptability of housing using Industrialized Building System (IBS) in Malaysia. Preliminary research identified that the attitude of the individual towards design standard and user's need depends on many varying factors such as physical area and psychological feeling of the internal spaces. The previous studies show that the implementation of IBS has limiting the environmental impact and allows the building to be developed faster. Thus, the study focuses on the housing using IBS by identifies the level of user's satisfaction and the conditions for adaptability to be applied into the house. Adaptability in architecture is defined as proving occupants with forms and means that facilitate a fit between their space needs and the constraints of their homes either before or after occupancy. The ability of modifications to suit new conditions or the design will allows for any additions to make building more flexible. This will ease for renovation and extension that currently limited in housing using IBS. A case study was carried out at eleven Teacher's Quarters using IBS in Malaysia. The Performance Index of Satisfaction (PIS) is utilized in the analysis as a systematic manipulation of the factors and the variables of design. The findings confirmed the requirements and potential for physical adaptabilities in Teacher's Quarters. The conceptual model was revised based on user's satisfaction of internal spaces in the house. Expanding the adaptability towards residential open building is recommended for the success of IBS by link the manufacturers to a multitude of contextual dimensions. Transforming the architectural dictums from form follows function to form accommodates change by estimating the sociological impact of professional and practice attitudes and mindsets should be encouraged towards successful implementation of adaptable housing using IBS in Malaysia.

Keywords : *Performance Index of Satisfaction (PIS); Industrialized Building System (IBS); Adaptability; Internal Spaces; Teacher's Quarters*

Category : Science, Engineering and Technology

1249 DEVELOPMENT OF KENAF HYBRID COMPOSITE FOR STRUCTURAL APPLICATIONS#

M. A. Maleque, *Manufacturing & Materials Engineering, Kulliyah of Engineering*
Atiqah A., *Manufacturing & Materials Engineering, Kulliyah of Engineering*
Iqbal M, *Polymer Pilot Plant, Reseach Institute*

Exhibitor : M. A. Maleque, Manufacturing & Materials Engineering, Kulliyah of Engineering

The main aim of this study is to develop light weight, eco-friendly and cheaper kenaf-glass (KG) fibers reinforced unsaturated polyester hybrid composite on a source of green composite using sheet molding compound process. Unsaturated polyester resin (UPE) and KG fibers in mat form were used at a ratio of 70:30 (by volume) with treated and untreated kenaf fiber. The hybrid composites were tested for flexural, tensile and Izod impact strength using ASTM D790-03, ASTM D618 and ASTM D256-04 standards respectively. The highest flexural, tensile and impact strength were obtained from treated kenaf with 15/15 v/v KG fibers reinforced UPE hybrid composite in this investigation. Scanning electron microscopy fractography showed fiber cracking, debonding, fiber pulled-out and fiber tearing as the main fracture mode of composites and kenaf treated 15/15 v/v KG reinforced hybrid composite exhibited better interfacial bonding between the matrix and reinforcement compared to other combinations. Therefore, it can be claimed that the developed hybrid composite is light in weight, cheaper (as kenaf has been used to substitute high cost synthetic glass fibre) and eco-friendly which can be used for structural applications such as automotive, protective helmet, household and construction industry.

Keywords : *Eco-friendly hybrid composite, kenaf-glass fibres, mechanical proerties, light weight structural*

Category : Science, Engineering and Technology

1251 APPLICATION OF COCKLE AND CLAM SHELLS FOR REMOVAL OF CADMIUM AND LEAD IN WATER#

Jamaluddin Mohd Daud, *Chemistry, Kulliyah of Science*
Nor Shuhadah Warzukni, *Biotechnology, Kulliyah of Science*

Exhibitor : Jamaluddin Mohd Daud, Chemistry, Kulliyah of Science

This study was initiated to promote the use of natural low-cost biosorbent to remove heavy metal in water because of the danger of heavy metal to human health. Hence, feasibility on the use of cockle and clam shells to adsorb cadmium (II) and lead (II) ions from water was investigated. Parameters that influence the adsorption process such as fragment size of the seashells, contact time, pH and metal ion concentration were studied in batch experiments at ambient temperature. The residual cadmium and lead concentration was analyzed using Atomic Absorption Spectrometry (AAS). Fragment size of cockle and clam shells in the range of 0.5-1.00 mm, 1 hour contact time, pH 7 were the optimum conditions for cadmium adsorption up to 12 mg cadmium (II) ions per gram cockle and clam shells. Whereas the optimum conditions for lead adsorption of lead were 0.5-1.0 mm fragment size of the seashells, 1 hour contact time, pH 6 and adsorption up to 15 mg lead (II) ions per gram cockle and clam. Statistical analysis showed that there were no significant differences between cockle and clam shells for the adsorption cadmium with the $p=0.763$ ($p>0.05$) and for the adsorption of lead with the $p=0.497$ ($p>0.05$). Therefore, it can be concluded that both cockle and clam shells have the same potential for application as low cost adsorbent to cleanup cadmium and lead in water.

Keywords : Heavy metals, cadmium (II), lead (II), adsorption, cockle and clam shells

Category : Science, Engineering and Technology

1257

INTEGRATED RF MEMS RESONATOR#

Ahmad Anwar Zainuddin, *Electrical and Computer Engineering Department, Kulliyah of Engineering*

Anis Nordin, *Electrical and Computer Engineering Department, Kulliyah of Engineering*

Mohanraj Pandian, *Technology,*

Exhibitor : Anis Nordin, Electrical and Computer Engineering, Kulliyah of Engineering

The design of clamped-clamped and Clamped-free beam resonators which can be miniaturized for better performance and integrated with oscillators without losing its Q-factor. Generally, oscillators benefit substantially from high Q, as their phase noise at important offsets is often inversely proportional to the square of Q. Unfortunately, the crystal and SAW devices that provide beneficial high Q's are off-chip components and must be interfaced with transistor electronics at the board level, posing a significant bottleneck against the ultimate miniaturization of wireless communicators.

Keywords : MEMS, clamped-clamped beam, resonator, oscillator

Category : Science, Engineering and Technology

1260

HAPTIC BELT: A DEVICE FOR VISUALLY IMPAIRED PEOPLE#

Md. Raisuddin Khan, *Mechatronics Engineering, Kulliyah of Engineering*
Md. Masum Billah, *Mechatronics Engineering, Kulliyah of Engineering*
Syed Masrur Ahmmad, *Mechatronics Engineering, Kulliyah of Engineering*
Nayeem Md. Lutful Huq, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : Md. Raisuddin Khan, Mechatronics Engineering, Kulliyah of Engineering

A haptic belt device is designed and developed for the visually impaired people in order to help them to move around without any assistance. With the help of this device a user can move independently and able to walk freely. This wearable device is equipped with four ultrasonic sensors and one sharp infrared sensor. A mathematical model has been developed based on the specifications of the ultrasonic sensors to identify optimum orientation of the sensors for detecting stairs and holes. Based on the analyses of the acquired data, an algorithm is developed for classifying various types of obstacles. The achievements of this device are the selection of proper hardware, development of mathematical model, design and fabrication of prototype, development of algorithm for detecting obstacles and development of GUI for data acquisition.

Keywords : *Blind, Belt.*

Category : Science, Engineering and Technology

1261

HOTBOT EASY MOP#

Md. Raisuddin Khan, *Mechatronics Engineering, Kulliyah of Engineering*
Nayeem Md. Lutful Huq, *Mechatronics Engineering, Kulliyah of Engineering*
Md. Masum Billah, *Mechatronics Engineering, Kulliyah of Engineering*
Syed Masrur Ahmmad, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : Md. Raisuddin Khan, Mechatronics Engineering, Kulliyah of Engineering

Some people may like doing household errands, even they are irritated with mopping, late alone those who hate household chores. There are few tasks at home as terrifying as mopping. Dealing with filthy water around while pushing and rubbing a cloth on the end of a stick ... then what do you think technology is for!? Yes it is to make life easy and to get escaped all those stuff that we are scared of. That's it, we have the 'HotBot' that can handle this task, giving you clean floors without all the effort. Hotbot is a mopping robot that can clean your floor with nice efficiency leaving no sticky dirt. You can use hot water for heavy stains or can use normal water for economy. You need neither to monitor during mopping nor to sweep after it. HotBot has sensors to detect obstacles and a control mechanism to avoid it. Moreover, it cleans sequentially and equipped with several accident protection systems. Thus, HotBot is a totally robust mopping servant of yours.

Keywords : Mopping, Robot.

Category : Science, Engineering and Technology

1263 EXAMINING THE INFORMATION DISCLOSURE BEHAVIOR ON SOCIAL NETWORK SITES USING PROTECTION MOTIVATION THEORY, TRUST AND RISK#

Norsaremah Salleh, *Computer Science, Kulliyah of Information & Communication Technology*

Ramlah Hussein, *College of Business Administration, Prince Sultan University Riyadh,*

Norshidah Mohamed, *Universiti Teknologi Malaysia,*

Nor Shahriza Abdul Karim, *Universiti Teknologi Malaysia,*

Abdul Rahman Ahlan, *Information System, Kulliyah of Information & Communication Technology*

Umar Aditiawarman, *Information System, Kulliyah of Information & Communication Technology*

Exhibitor : Norsaremah Salleh, Computer Science, Kulliyah of Information & Communication Technology

This study reports on an empirical study that investigates the information disclosure behavior on Social Network Sites (SNS) focusing on undergraduate University students as our population. Although much have been reported on the issue of information privacy or privacy leakage on SNS, very few have employed the Protection Motivation Theory (PMT) as a framework to understand SNS user's behavior related to information disclosure. In this study, the PMT incorporated with trust and risk factor, has revealed that trust on SNS, perceived benefits, and perceived risk influenced information disclosure behaviour. Our findings showed that all PMT constructs are significantly related to privacy concern. However, privacy concern was found not related to information disclosure behaviour. Using self-administered questionnaire, 487 undergraduate students from five different universities in Malaysia were involved in this study.

Keywords : *Protection Motivation Theory, privacy concern, perceived risk, trust.*

Category : Science, Engineering and Technology

1269 LOW-COST MEMS BIOSENSOR CULTUREWARE FOR ANALYSIS OF COLORECTAL CANCER CELLS#

Anis Nurashikin Nordin, *ECE, Kulliyah of Engineering*
Maizirwan Mel, *Biotechnology, Kulliyah of Engineering*
Ioana Voiculescu, *Mechanical Engineering,*

Exhibitor : Anis Nurashikin Nordin, Electrical and Computer Engineering, Kulliyah of Engineering

In this work we report on the fabrication and testing of an impedance biosensor which is fabricated on a printed circuit board. The sensor's interdigitated electrodes were designed using COMSOL Multiphysics™. To yield inexpensive, easily manufactured sensors, the devices were fabricated on a glass-reinforced epoxy laminate (FR4) printed circuit board (PCB). An eight-well chamber slide was glued on the PCB sensor to form the cultureware. To facilitate cell attachment to the electrodes, cell substrate was coated on the electrodes. Two different cell substrates gelatin and polyaniline were coated on different devices to evaluate the effectiveness of the cell substrate. The fabricated PCB sensor was tested using human colorectal carcinoma cells (HCT116). The impedance measurements were recorded with cell culture medium (without cells) and with colorectal cancer cells in the culture medium over a frequency range from 100 Hz to 10 MHz. The impedance measurements were compared to the equivalent circuit model.

Keywords : MEMS, Biosensor, ECIS, HCT116

Category : Science, Engineering and Technology

1280 A STUDY ON THE EFFECTS OF PAVEMENT TOWARDS THE SURROUNDING THERMAL ENVIRONMENT: A CASE STUDY OF DATARAN RAKYAT AND DATARAN WAWASAN, PUTRAJAYA.#

Aniza Abu Bakar, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*

Noor Aziah Mohd. Ariffin, *Architecture, Kulliyah of Architecture & Environmental Design*

Ahmad Kamal Azim, *Landscape Architecture (student), Kulliyah of Architecture & Environmental Design*

Zafirah Ahmad, *Landscape Architecture (student), Kulliyah of Architecture & Environmental Design*

Exhibitor : Aniza Abu Bakar, Landscape Architecture, Kulliyah of Architecture & Environmental Design

Rapid urbanization has turned most of the soil ground into paved surfaces whether it is building or outdoor landscape elements that make up majority of urban fabrics composition. Paved surfaces are one of the crucial elements that significantly influence the occurrence of urban heat island (UHI) phenomenon. All these surface paving elements vary in term of their ability to influence the arising of the surrounding temperature. It depends on the color, albedo, material, texture and so forth that demonstrated their capacity for storing, radiating, or emitting the heat from solar radiation. This research attempts in investigating the surface temperature of the diverse paving materials at two urban plazas which are Dataran Wawasan (exposed plaza) and Dataran Rakyat (partially shaded plaza) with some constant values such as same orientation, common resemblance of physical site context and dimension. As a result, this study shows the influences and significance of certain types of pavement surfaces that vary in term of its material, color, and texture towards the surrounding thermal environment of the studied sites and subsequently provide few recommendations through design initiatives that are feasible to mitigate the UHI effects in that particular areas.

Keywords : *Urbanization, urban heat island, pavement, thermal environment, glare*

Category : Science, Engineering and Technology

1281

AUTOMATIC TRAFFIC SUMMON SYSTEM#

Momoh Salami, *Mechatronics, Kulliyah of Engineering*

Musa Aibinu, , *Kulliyah of Engineering*

Adoum Albechir Saleh,, , *Kulliyah of Engineering*

Abdisalam Sheikh Mohamoud Abdulahi, ,

Exhibitor : Momoh Salami, Mechatronics Engineering, Kulliyah of Engineering

Traffic laws are universal means of enforcing safety on roadways especially among motorists and motorcyclist. Breaking these laws are universally frowned at and sometimes involve payment of penalty or fine. Penalties are typically assessed based on circumstantial details, and can run the gamut from a nominal fine to a court summons and criminal charges. Some jurisdictions will issue tickets for all offences, the function of which is to assign blame and set a contestable penalty. Others will instead issue traffic summons for offences, which compel recipients to appear in court to have guilt or innocence determined. Still others use both tickets and summons, depending on the offence committed and country. In Malaysia, the process of issuing this summons to motorist and motorcyclist involve manual process, monotonous and cumbersome. In this work, a novel automatic summon system has been developed. It involve the use of digital signal and image processing technique in automatic capturing, analyzing and recognizing car plate number and offender identity card (IC); use of GPS system in locating the point of incidence and downloading the road map; SMS platform in sending summon ticket to the offender mobile phone; email system for sending soft copy of the summon and a micro printer for printing the traffic summon ticket on the spot. The low cost and effectiveness of the developed product has made the commercialization potentials of this novel work a reality. Areas of intended commercialization include : Law enforcement agency such as Police; JPJ; Shopping mall; security entrance; access control; Car parking system etc

Keywords : *Traffic, Digital Image Processing,*

Category : Science, Engineering and Technology

1282

DEVELOPMENT OF A NOVEL HOME AUTOMATION SYSTEM#

Momoh Salami, *Mechatronics, Kulliyah of Engineering*

Musa Aibinu, ,

Arthaur Rahman Najeeb, ,

Exhibitor : Momoh Salami, Mechatronics Engineering, Kulliyah of Engineering

The deployment of biometric technologies in access and system control is becoming a standard as these two constitutes the critical elements in contemporary global security issues. In the recent, contactless biometric systems have emerged not only for protecting the users of the systems against transmittable infectious diseases but also permit remote access. However, the existing spectra of biometric devices are contact based hence are susceptible to several problems. Whistling feature were acquired from individuals and processed. The processed signal were later characterized to generate the feature vectors using artificial neural network and other techniques. The feature vectors were then integrated at the score level to for the development of the proposed system for home automation system. Innovation and novelty from this work include: new method of control home appliances, new feature vector technique and low power usage of the device. Commercialization potential and areas of applications of this work include: access control; Banking System; Security control; data encryption; Transportation and haulage system; Data Management etc.

Keywords : *Biometric, Automation, Sound*

Category : Science, Engineering and Technology

1283

**PRODUCTION OF LACTIC ACID FROM FERMENTATION OF
PRETREATED CASSAVA LEAVES AND STARCH USING RHIZOPUS SP.#**

Azlin Suhaida Azmi, *Biotechnology Engineering, Kulliyah of Engineering*

Nurlisa Yusuf @ Idris, , *Kulliyah of Engineering*

Dzun Noraini Jimat, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Azlin Suhaida Azmi, Biotechnology Engineering, Kulliyah of Engineering

Hydrolysis of inedible cassava starch and its leaves was optimized by varying four factors namely acid concentration, starch concentration, temperature and reaction time at three levels each. Maximum glucose yield of 0.96 g/g was obtained when 2.5% (w/v) of cassava leaves with 2.5% (w/v) of starch was hydrolyzed using 0.20 M of nitric acid at 160°C of temperature for 10 min. The hydrolyzed cassava starch and leaves prepared at optimized parameter obtained was then investigated for lactic acid production using fungal *Rhizopus* sp. The fermentation process was conducted in shake flasks by varying four factors at three levels each. Maximum lactic acid and ethanol yield of 0.95 g/g and 0.52 g/g were respectively attained at different optimum conditions. Lactic acid production was found to be coupled with decreased of ethanol production. Design Expert v6.0.8 was used to aid the design of experiment using Taguchi's methodology.

Keywords : *Cassava leaves; cassava starch; lactic acid; Rhizopus sp.; Taguchi's methodology*

Category : Science, Engineering and Technology

1284

NEW BIOFUEL SOURCE IN MALAYSIA: CHAETOCEROS AFFINIS#

Mohamad Fuad Mohamad Anuar, *Biotechnology, Kulliyah of Science*

Normawaty Mohammad-Noor, *Biotechnology, Kulliyah of Science*

Ahmed Jalal Khan Chowdury, *Biotechnology, Kulliyah of Science*

Kamaruzzaman Yunus, *Biotechnology, Kulliyah of Science*

Exhibitor : Normawaty Mohammad-Noor, Biotechnology, Kulliyah of Science

Algae as alternative source of biofuel have been suggested elsewhere. However, to find for the right species that can produce high amount of biofuel and easily cultivated is still a big question. Marine diatoms have been reported to have high lipid content. Therefore, this study is carried out to determine whether *Chaetoceros affinis*, a common marine algae, has the potential as biofuel source. Study has been performed at different growth phases i.e. exponential phase, stationary phase and death-growth phase. Results showed that more than 50% of total lipid had been detected in all phases. Myristic acid is the major compound found in every phases studied with the highest percentage of 24 % at death-growth phases followed by Palmitic acid with the percentage of 21% and Palmitoleic acid covers about 16%. Highest fatty acid recorded at the death-growth phase with the percentage of 75%. This indicates that *Chaetoceros affinis* can be listed as potential sources for biofuel industry in Malaysia.

Keywords : *Marine diatoms, Chaetoceros affinis; fatty acid synthesis; growth phase; biofuel*

Category : Science, Engineering and Technology

1285

OPTIMIZED LIVE FEED CULTURE FOR FISH LARVAE#

Akbar John, *Biotechnology, Kulliyah of Science*

Zaleha Kassim, *Fisheries, Reseach Institute*

Nor Hydaya, *Fisheries, Reseach Institute*

Kamaruzzaman Yunus, *Biotechnology, Kulliyah of Science*

Exhibitor : Kamaruzzaman Yunus, Biotechnology, Kulliyah of Science

Effect of various environmental stresses on the fatty acid (FA) profile and survival of benthic harpacticoid copepod (*Pararobertsonia* sp.) was checked In vitro. Samples were exposed to different pH (5, 7 and 9) and salinity (15, 20, 25, 30 and 35 psu) at constant temperature 25oC for 30 days. After the treatment, different fatty acid levels were determined using Gas Chromatography and Mass Spectrometry (GC-MS). Results clearly indicated the positive influence of the combined effect of environmental parameters on the fatty acid content in experimental samples. The detected FAs were ranging from C5-24. Palmetic and oleic acids were in higher percentage in all the experiments. Results clearly indicated that pH7:25psu, pH7:35psu and pH9:25psu at 250C ambient water temperature would help to producing copepods (*Pararobertsonia* sp.) that expresses rich fatty acid profile, high EPA/DHA ratio and considerable survival rate.

Keywords : *Fish feed, Live feed, copepod, fatty acid profile*

Category : Science, Engineering and Technology

1287 SMART ROBOT-ASSISTED REHAB PLATFORM WITH REAL-TIME AFFECT RECOGNIZER#

Shahrul Naim Sidek, *Mechatronics Engineering, Kulliyah of Engineering*
Aimi Shazwani Ghazali, *Mechatronics Engineering, Kulliyah of Engineering*
Elliana Ismail, *Mechatronics Engineering, Kulliyah of Engineering*
Abu Ubaidah Shamsudin, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : *Shahrul Naim Sidek, Mechatronics Engineering, Kulliyah of Engineering*

It is estimated that more than 40,000 people in Malaysia suffer from stroke attack every year that most likely will reduce the person's ability to function physically or emotionally due to the death of the respective part of the brain cells. 70% of stroke patients who recovered, stopped participating in social activities in which 30% loss their ability to be independent and need assistance to cope with daily life activities such as the ability to feed oneself, to clean, to dress, and to simply get in and out of a chair. Generally, the recovery from stroke can be greatly enhanced by rehabilitation therapy. The whole idea of the system is formed based on two underlying basic premises that are: Premise 1: Robot can be used to adapt the rehabilitation regime of stroke patient by continuously accessing the muscle condition of the patient and responding to the condition accordingly Premise 2: By identifying the affective state (engagement level) of stroke patient undergoing rehabilitation therapy, the rehabilitation regime can be adapted more interactively and this could improve the speed of recovery of the patient

Keywords : *robot-assisted rehab, affect recognizer, Chedoke-McMaster Stroke Assessment, endogenous blink, supervisory controller*

Category : Science, Engineering and Technology

1289 GAHARU (AGARWOOD) DISTILLATE-INCORPORATED ROSELLE HEALTH DRINK#

YUMI ZUHANIS HAS-YUN HASHIM, *BIOTECHNOLOGY ENGINEERING, Kulliyah of Engineering*

Irwandi Jaswir, *Biotechnology Engineering, Kulliyah of Engineering*

Abeir Hussein Gameil, *Biotechnology Engineering, Kulliyah of Engineering*

Iswadi Idris, *Biotechnology Engineering, Kulliyah of Engineering*

Mohammed Fitri Mohammed Ab Halim, ,

Hamzah Mohd. Salleh, ,

Parveen Jamal, ,

Azura Amid, ,

Phirdaous Abbas, ,

Exhibitor : YUMI ZUHANIS HAS-YUN HASHIM, Biotechnology Engineering, Kulliyah of Engineering

In this work, a nutraceutical product based on Gaharu distillate was developed. Gaharu (Agarwood) is a scented resin produced by trees of the *Aquilaria* species upon infection by fungus. While various components and parts of Gaharu tree have traditionally been reported to have medicinal values, it is the resin that is most sought after. Meanwhile, less have been focused on the distillates, a waste by-product of Gaharu oil distillation process. In this study, Gaharu distillate was found to have acidic pH of 3.60 and safe for consumption as it is devoid of steroids, has total suspended solid of less than 25 mg/L and an LC50 of 398000 ppm based on Brine Shrimp Lethality Assay. Gaharu distillate was also found to have antioxidant and antimicrobial properties as well as being selective towards killing cancer cells. To increase market acceptability, formulation of Gaharu distillate incorporated Roselle health drink was developed and optimized. By discovering, developing and commercializing new use of Gaharu distillates (coupled with scientific evidences on safety and potential health benefits), we can ensure the sustainability of Gaharu industry as well as provide new means of income-generating activities.

Keywords : *Gaharu, distillate, roselle, health drink*

Category : Science, Engineering and Technology

1290 GAHARU (AGARWOOD, AQUILARIA SUBINTEGRA): A POTENTIAL SOURCE OF ANTICANCER AND ANTIINFLAMMATORY COMPOUNDS#

YUMI ZUHANIS HAS-YUN HASHIM, *BIOTECHNOLOGY ENGINEERING, Kulliyah of Engineering*

Azura Amid, *Biotechnology Engineering, Kulliyah of Engineering*

Phirdaous Abbas, ,

Muhammad Hafiz Ali, ,

Munirah Md Zain, ,

Hamzah Mohd. Salleh, ,

Parveen Jamal, ,

Irwandi Jaswir, ,

Exhibitor : YUMI ZUHANIS HAS-YUN HASHIM, Biotechnology Engineering, Kulliyah of Engineering

Gaharu or agarwood, is a priceless non- timber forest product form Aquilaria species. As a result of a defence mechanism to fend off pathogens, Aquilaria species develop agarwood which is a resinous material used as incense, main ingredient for perfume, and traditional medicines. The trees were levelled off for the expensive resin, while other parts such as leaves and branches are considered as waste. These so called waste may contain diverse classes of chemical substances that may be lavish in terms of medicinal values. Thus, this study investigated the potential anticancer and antiinflammatory properties in Aquilaria subintegra. Fresh leaves and branches were grounded and subjected to solvent extraction based on D-Optimal design (MODDE9, SIMCAP+v12) using four different solvents and different levels of solid to liquid ratio, time of extraction, temperature and agitation. Anticancer screening was conducted through Sulforhodamine B (SRB assay) and for antiinflammatory screening, Griess assay was employed. The Gaharu branches were observed to possess both anticancer and antiinflammatory properties. This discovery would promote use of less exploited components of Gaharu as well as ensure sustainability of local Gaharu industry.

Keywords : Gaharu, Agarwood, anticancer, antiinflammatory, branches

Category : Science, Engineering and Technology

1293 MODELLING AND SIMULATION OF EVANESCENT FIELD DISTRIBUTION OF POLYMER WAVEGUIDE STRUCTURE FOR OPTICAL BIOSENSOR#

Mohd Haziq M. Salleh, *Information System, Kulliyah of Information & Communication Technology*
Mohd Hazimin Mohd Salleh, *Physics, Kulliyah of Science*

Exhibitor : Mohd Hazimin Mohd Salleh, Physics, Kulliyah of Science

The use of polymeric materials for micro and nano structures recently has gained gain major interest of multi disciplinary research since it allows rapid and straightforward fabrication process. In this paper, we show the potential use of fabricated SU8 polymer micro resonator structures for optical biosensing applications. The detection principle is based on the phenomenon that, when the refractive index surrounding the micro resonator changes, there is a shift of resonance wavelength that can be monitored by an optical spectrum analyser. In experiments described here, we launch a white light source into the waveguide and characterize the resonances via collection from an output waveguide. Different radius (30, 40 and 50 μm) have been successfully fabricated. The resonance patterns from the output waveguide extend within the visible wavelength region (400 - 800 nm) and it was suitable to be utilized in both labeled and label-free optical biosensor detection scheme. Modelling calculation and evanescence mapping results of the spectral response are presented. The reasons for discrepancies from the simple model calculations are discussed, particularly on why the depth of resonance is not as deep as predicted by theory. However, the resonances peak characteristics from polymer microring are sufficiently well defined to be used in sensing applications.

Keywords : *Optical waveguide, ring resonator, FDTD simulation*

Category : Science, Engineering and Technology

1296 SCIENTIFIC ANALYSIS IN TRADITIONAL PREVENTIVE MEASURE USING GARLIC AND VINEGAR AS A WOOD FUNGICIDE IN MALAYSIA#

Mandana Barkeshli, *Applied Arts and Design, Kulliyah of Architecture & Environmental Design*
Nurul Adida Bt Abdul Halim, *Applied Arts and Design, Kulliyah of Architecture & Environmental Design*

Exhibitor : Mandana Barkeshli, Applied Art and Design, Kulliyah of Architecture & Environmental Design

Woodwork masters has reported garlic (*Alliums Sativum*) and vinegar as a two material that traditionally applied on timber building as fungicide for wood staining and mould fungi in Malaysia. This method also used to be applied in medical aspect. This technique will minimize the usage of synthetic fungicides such as Boric acid, Arsenic compound, Zinc chloride and Tributyltin oxide, which has been reported can cause harm to human health, artefact and environment. A research was conducted to screen anti fungal activity of vinegar and garlic extraction. The materials extraction was used against a culture of *Aspergillus Niger* which inoculated on agar media and was kept at a temperature of 35°C -37°C in a laboratory. The results indicated that this material could completely inhibit the tested fungi after a certain period with no sign of fungal growth on the medium that contain garlic extraction and vinegar.

Keywords : *Aspergillus Niger Fungicide, Garlic, vinegar, Wooden artifacts*

Category : Science, Engineering and Technology

1297

EVALUATION OF ARTIFICIAL REEF IN PULAU TIOMAN#

Shahbudin Saad, *Institute of Oceanography and Maritime Studies, Kulliyah of Science*
Muhammad Faiz Mohd Hanapiah, *Institute of Oceanography and Maritime Studies, Kulliyah of Science*

Exhibitor : Shahbudin Saad, Institute of Oceanography and Maritime Studies, Kulliyah of Science

Artificial reef is defined as a man-made, underwater structure, typically built for the purpose of promoting marine life in areas of generally featureless bottom. It has long become alternative in order to alleviate human impact in coastal ecosystem and enhancing fisheries. This study evaluated artificial reefs in Pulau Tioman in terms of coral assemblages and colonization of other invertebrates and fish. Eleven sites of artificial reefs were surveyed in June 2012 and the locations of artificial reefs were determined by using side scan sonar. The survey consists of underwater photography and videography. Concrete Table reef exhibited the highest number of coral species with 60% coral colonization while Enviro Reef recorded the lowest with only 5% colonization. Most of the surface areas of artificial reef are being colonized by algae assemblages. Low number of species recorded for all artificial reefs indicated that the artificial reef structure were not preferable for invertebrates' colonization. The number of fish species available related with the number of coral available on artificial reef. Concrete Table reef which has the highest number of coral species recorded high number of fish species. The availability of coral in the artificial reef might provide better nursery and feeding ground for fish to colonize this area.

Keywords : *Artificial Reef, Coral Assemblages, Pulau Tioman*

Category : Science, Engineering and Technology

1303 TOWARDS OPEN BUILDING SYSTEM IN HOUSING: COMPILATION OF INDUSTRIALIZED BUILDING SYSTEM (IBS) PRECAST PANEL#

Asiah Abdul Rahim, *Architecture, Kulliyah of Architecture & Environmental Design*
Zulkefle Ismail, *Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Asiah Abdul Rahim, Architecture, Kulliyah of Architecture & Environmental Design

Abstract The preliminary idea to this research comes from the Construction Industry Master Plan that is to transform and industrialized the Malaysian construction industry towards more systematic and mechanized system. The previous studies show that the elimination of onsite construction has limiting the environmental impact to the site, affords greater accuracy in construction, and allows the building to be developed faster. The research identifies the potential solutions to deliver quality housing for the Malaysian as well as to solve and ever harmonizing the architectural design with the innovation of precast panel system in construction. The ultimate goal is to examine the idea of Open Building System in Europe and Japan to be applied for the new architectural design of housing in Malaysia. The Open Building System is the design which allows for any additions in a building to be flexible. It may result the precast components that could be easily dismantles and reassembles elsewhere such as the Malay Traditional House. Fast deployment will increase the value added of the house. This will ease for renovation and extension that currently limited in housing using Industrialized Building System (IBS). In addition, this concept will promote in reducing wastage during construction and renovation. Nowadays in Malaysia, IBS has made available many different building systems, which providing a large variety of services. A semi-structured case study of housing using IBS was carried to identify the level of satisfaction of users. The finding identified five (5) steps towards the successful implementation of Open Building System for housing in Malaysia. The standard joints of IBS as a solution for value chain should be competitive to the conventional one. All this may be used for a considerable improvement of the architectural design of housing in Malaysia. As a result, it will foster a strong sense of identity between user and architecture towards sustainability and in harmonize with the Malaysia Standard.

Keywords : *Industrialized Building System (IBS), Precast Panel, Adaptability, Sustainability*

Category : Science, Engineering and Technology

1304 OPTIMIZATION OF CUTTING TEMPERATURE AND SURFACE ROUGHNESS IN CNC END MILLING USING MULTI OBJECTIVE GENETIC ALGORITHM#

Muataz Hazza F. Alhazza, *MANUFACTURING AND MATERIALS, Kulliyah of Engineering*

Erry Y.T. Adesta, *MANUFACTURING AND MATERIALS, Kulliyah of Engineering*

Muhammad Riza, *MANUFACTURING AND MATERIALS, Kulliyah of Engineering*

SUPERIANTO M. YOHAN, *MANUFACTURING AND MATERIALS, Kulliyah of Engineering*

Exhibitor : Muataz Hazza F. Alhazza, Manufacturing & Materials Engineering, Kulliyah of Engineering

Machining of hard materials at high cutting speeds produces high temperatures in the cutting zone, which affects the surface quality. Thus, developing models for estimating the cutting parameters and optimizing these models to minimize the cutting temperatures and surface roughness becomes utmost importance to avoid any damage to the quality surface. This paper presents the development of new models and optimizing these models of machining parameters. The mathematical models for the cutting temperature and surface roughness parameters have been developed in terms of cutting speed, feed rate, and axial depth of cut by using Response Methodology Method (RSM). Two objectives have been considered in optimization, minimum cutting temperature and minimum arithmetic mean roughness (Ra). Due to complexity of this machining optimization problem, a multi objective genetic algorithm (MOGA) has been applied to resolve the problem, and the results have been analyzed. The results show that the cutting speed in the range of 263 m/min, feed rate of 0.07 mm/tooth and depth of cut of 0.1mm gave the minimum cutting temperature and minimum arithmetic mean roughness (Ra) in the boundary design of the experiment

Keywords : *genetic algorithm, end milling, temperature, roughness*

Category : Science, Engineering and Technology

1307 DEVELOPMENT OF GAIT ASSISTANCE FOR INDIVIDUALS WITH LOWER LIMB IMPAIRMENTS#

Amir Akramin Shafie, *Mechatronic Engineering, Kulliyah of Engineering*

Mohd Syazwan Abdul Halim, *Mechatronic Engineering, Kulliyah of Engineering*

Muhammad Faris Sayed Mohamed, *Mechatronic Engineering, Kulliyah of Engineering*

MD Akhtaruzzaman, *Mechatronics, Kulliyah of Engineering*

Exhibitor : Amir Akramin Shafie, Mechatronic Engineering, Kulliyah of Engineering

Disability rehabilitation of the lower limbs is a big burden to the health service sector due to lack of experienced personnel. Not only that such experienced people without enough physical strength and patience cannot help the recovery process well. The lower limbs rehabilitation robot is a typical man-machine cooperation robot, which can drive the affected limbs to carry out various motor function recovery trainings within the same workspace of the patients. To ensure the safety and comfort of the affected limbs during the training process, the system controller is designed based on the impedance control principle, thus the controller can make the robot with a certain degree of flexibility by adjusting the relationship of the end actuator position and force. The impedance parameters of the controller can be adjusted at different stages of recovery training, so that the rehabilitation training process not only can meet clinical recovery needs of disabled patients on the lower limbs but also has submissive nature. Impedance values of the human limbs, in this case, legs of a person are the key factors in the designing of the required assistive robot. The trajectories of rotational motion at the ankles, knees and hip joints are the other important kinematic parameters that need to be controlled for jerk free motion of the limbs and the assistive robot in collaboration. Thus in this research, impedances of human legs as well as motion trajectories of the joints will be determined through experimentation under different disability state. A mathematical model will then be developed based on the experimental data for developing control algorithms for jerk free rehabilitation assistive robot. The outcome of this research will consist of impedance data set, joint trajectories under different disability state and a mathematical model for designing jerk free lower limb motion during rehabilitation.

Keywords : *Rehabilitation, Robotic System, Mechatronic*

Category : Science, Engineering and Technology

1312 DEVELOPING A NEW FLANK WEAR MODEL FOR CNC END MILLING BY USING BACK PROPAGATION NEURAL NETWORK MODELING#

Muataz Hazza F. Alhazza, *MANUFACTURING AND MATERIALS, Kulliyah of Engineering*
Erry Y. T. Adesta, *MANUFACTURING AND MATERIALS, Kulliyah of Engineering*
Muhammad Riza, *MANUFACTURING AND MATERIALS, Kulliyah of Engineering*
Yohan Superianto, *MANUFACTURING AND MATERIALS, Kulliyah of Engineering*

Exhibitor : Muataz Hazza F. Alhazza, Manufacturing & Materials Engineering, Kulliyah of Engineering

Estimating and predicting the flank wear length in early stages reduces the risk of unaccepted surface roughness and tooling cost. This research presents a neural network model for predicting the flank wear in the CNC end milling process in higher cutting speed. A set of sparse experimental data for finish end milling on AISI H13 at hardness of 48 HRC have been conducted to measure the flank wear length after each path. Then the measured data have been used to train the developed neural network cells (NN) was applied to predict the flank wear length. The neural network contains twenty hidden layer with feed forward back propagation hierarchical. The neural network has been designed with Matlab2009b Neural Network Toolbox. The results show a high correlation between the predicted and the observed flank wear which indicates the validity of the models. Finally a simulation done to see the effect of the feed rate and depth of cut in high cutting speed 250 m/min. The result show that depth of cut has the more effect

Keywords : *flank wear, end milling, simlation, neural network,*

Category : Science, Engineering and Technology

1315

ATR-IRS EXPLORATIONS AT BIO-INTERFACES#

Anil A. Jalaludin, *Dept. of Biotechnology, Kulliyah of Science*

Exhibitor : Anil A. Jalaludin, Biotechnology, Kulliyah of Science

Adsorption of enzymes and adhesion of bacteria have been extensively reported. However, limited information on the actual mechanisms involved. Even more limited are reports of the activity of an adsorbed enzyme against bacterial cells. Important questions include physical factors which influence enzyme adsorption, the activity of adsorbed enzymes and means to monitor enzymatic activity in situ. This study explores a solid-liquid interfacial phenomenon involving lysozyme (LYS) and the bacteria also made infamous by Alexancer Fleming, *Micrococcus luteus* (ML) using attenuated total reflection infrared spectroscopy (ATR-IRS). The positively charged LYS molecules were found to secondarily adsorb onto the negatively charged pre-adhered ML cells. A flow of a LYS solution across ML cells already adhered to ZnSe caused alterations in the carbohydrate-, phospholipids and carboxylic acids components (1200-800 cm⁻¹) more pronouncedly than that of the carboxylate-related groups (1400 cm⁻¹). The study concludes that ATR-IR spectroscopy has proved to be a useful method to study surface adsorption behaviour of antibacterial agents such as LYS. The consequences of the biologically important interfacial interactions between bacteria cells and enzymes were evident. Such information will be useful in the development of robust strategies to control bacteria-fouled surfaces.

Keywords : *Spectroscopy, Adsorption, Adhesion, Interfaces*

Category : Science, Engineering and Technology

1318 THE DEVELOPMENT OF A ARDUINO-CONTROLLED AUTONOMOUS ANDROID GROUND VEHICLE#

Fadly Jashi Darsivan Ridhuan, *Mechanical Engineering, Kulliyah of Engineering*
Ikrimah Husni Mustafa Kamil, *Mechanical Engineering, Kulliyah of Engineering*

Exhibitor : Fadly Jashi Darsivan Ridhuan, Mechanical Engineering, Kulliyah of Engineering

This project involves the hardware integration between a normal remote control car and Arduino microcontroller. The purpose of the project was to establish a more complex remote communication between a motor powered ground vehicle and a smartphone. By having this complex and sophisticated communication the capability of the ground vehicle such as integration with Google Maps for autonomous driving would seem to be very much possible. By replacing the standard remote control chip with the Arduino the motor driven ground vehicle can now be controlled using a smartphone. Through the smartphone the destination and the motion of the vehicle can be predetermined and the signals can be sent directly to the Arduino through the on board bluetooth chip thus enabling the vehicle to move without the interference of the human controller. Since smartphones have embedded accelerometers or g-sensors it is also possible to control the motion or direction of the vehicle just by tilting the smartphones in the intended direction. The capability of the vehicle can be further explored by adding proximity and visual sensors to enable it into a fully autonomous motor driven ground vehicle. With a similar working concept of an electrical vehicle (EV) it is hoped that the same system can also be implemented into a real working ground vehicle.

Keywords : Arduino, Android, Autonomous, Smartphone

Category : Science, Engineering and Technology

1320

WEIGHTED DNA COMPUTING#

Sherzod Turaev, *Department of Computer Science, Kulliyah of Information & Communication Technology*
Norsaremah Salleh, *Department of Computer Science, Kulliyah of Information & Communication Technology*

Exhibitor : Sherzod Turaev, Computer Science, Kulliyah of Information & Communication Technology

DNA computing is one of the most exciting new developments of computer science from both theoretical and practical points of view. DNA computing models use Watson-Crick complementary of DNA molecules, which are double stranded structures composed of four nucleotides A (adenine), C (cytosine), G (guanine), and T (thymine). According to Watson-Crick complementary, adenine always bonds with thymine, and guanine with cytosine. This feature of DNA molecules makes possible only to check the information encoded on a single strand and makes far-reaching conclusions since the information on the other strand can be decoded according to the complementary. Another feature of DNA molecules is the massive parallelism of DNA strands, which allows constructing many copies of DNA strands and carrying out operations on the encoded information simultaneously. The use of these two fundamental features of DNA molecules has already illustrated that DNA based computers can solve many computationally intractable problems: Hamiltonian path problem, the satisfiability problem for arbitrary contact networks, the satisfiability problem for Boolean circuits, etc. One of the early theoretical proposals for DNA based computation was made by Head who used the splicing operation – a formal model of the cutting and recombination of DNA molecules under the influence of restriction enzymes. This process works as follows: two DNA molecules are cut at specific subsequences and the first part of one molecule is connected to the second part of the other molecule, and vice versa. This process can be formalized as an operation on strings, described by a so-called splicing rule, which are the basis of a computational model called a splicing system (or H system). A system starts from a given set of strings (axioms) and produces a language by iterated splicing according to a given set of splicing rules. Since splicing systems with finite sets of axioms and rules generate only regular languages, several restrictions in the use of rules have been considered, which increase the computational power up to the recursively enumerable languages. This is important from the point of view of DNA computing: splicing systems with restrictions can be considered as theoretical models of universal programmable DNA based computers. Our research is devoted to introduce and study weighted molecular (DNA) computing: such as weighted, probabilistic and fuzzy splicing systems. On the one hand, the study of weighted splicing systems shows that weights can increase the generative power of usual splicing, and on the other hand, they help to construct more accurate models for stochastic phenomena and processes appearing in many applications of formal language theory. For instance, the use of weights makes possible to develop more efficient parsing and tagging algorithms for the natural and programming language processing. The future interesting main topics for the study in weighted DNA computing are (a) to investigate weighted sticker systems and Watson-Crick automata with different thresholds and modes; (b) to study splicing and sticker systems extended with fuzzy characteristic functions.

Keywords : *Computation, DNA Computing, Splicing Systems, Weighted Splicing Systems*

Category : Science, Engineering and Technology

1325

EXPLORING METHODOLOGY FOR HERITAGE DISTRICT#

Nurul Syala Abdul Latip, *Architecture, Kulliyah of Architecture & Environmental Design*
Lukman Hakim Mahamod, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*
Nurul Hamiruddin Salleh, *Architecture, Kulliyah of Architecture & Environmental Design*
Zumahiran Kamarudin, *Applied Arts and Design, Kulliyah of Architecture & Environmental Design*
Mazlina Mansor, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Muhammad Ikhwan Jamaludin, -, *Kulliyah of Architecture & Environmental Design*
Khairuddin Abdul Rashid, *Quantity Surveying, Kulliyah of Architecture & Environmental Design*

Exhibitor : Nurul Syala Abdul Latip, Architecture, Kulliyah of Architecture & Environmental Design

Past studies on conservation focus on Kuala Kangsar, Perak identified numerous built and natural features that have heritage significance in terms of: history, architecture, archaeology, scenic, and other sociocultural values. This study involves five key areas, namely public architecture, residential architecture, urban and regional planning, landscape architecture and applied arts and design which intend to explore sustainable methodology to access Kuala Kangsar as a Heritage District in Malaysia.

Keywords : *conservation, heritage, district, urban planning, architecture, landscape, art and culture, kuala kangsar, perak,*

Category : Science, Engineering and Technology

1326 GREEN RECYCLED POLYPROPYLENE COMPOSITES FOR HIGH STRENGTH APPLICATION#

Noorasikin Samat, *Manufacturing & Materials, Kulliyah of Engineering*
Nur Izzati Zulkifli, *Manufacturing & Materials, Kulliyah of Engineering*
Fatimah A'thiyah Sabaruddin, *Manufacturing & Materials, Kulliyah of Engineering*

Exhibitor : Noorasikin Samat, Manufacturing & Materials Engineering, Kulliyah of Engineering

Polypropylene (PP) is one of the most popular thermoplastic polymers due to it offers many advantages such as low cost, recyclability and easy to be processed. Recycling of PP waste is the most acceptable way of disposal where it can be beneficial not only to the environment but it is also cost-effective; the recycling PP waste can be converted to value-added products and reduce the use of virgin PP. Unfortunately, the recycled plastics commonly show degradation in thermal and mechanical properties as compared to virgin material. Polymer composites reinforced with cellulosic fibre has promised lower environmental impact than traditional composite based synthetic fiber. However, the main disadvantage of cellulose reinforced polymer composites is the poor of interfacial adhesion between cellulose and polymer matrix which results in the unsatisfactory properties of the final composites. Maleic anhydride grafted polypropylene (MAPP) has been shown to be very efficient in improving the interfacial adhesion between the fibers and polypropylene matrix. The main objective of this research is to fabricate recycled polypropylene composites reinforced with microcrystalline cellulose (rPP/MCC) and MAPP is used as coupling agent. The result revealed that the addition of MAPP at different loadings improves the mechanical properties of composites and the interfacial adhesion between rPP matrix and MCC fiber. Dynamic mechanical analysis also shows that the presence of MAPP increased stiffness and melting temperature of the composites. Therefore, it can be said that the rPP/MCC composites with MAPP as coupling agent can offer good mechanical properties better than virgin PP and it has potential as eco-friendly materials for various applications.

Keywords : *recycled PP, green composites, tensile, impact, dma,*

Category : Science, Engineering and Technology

1327 POTENTIAL OF FLAME RETARDANT PP/ATH NANOCOMPOSITES FOR AUTOMOTIVE APPLICATIONS#

Noorasikin Samat, *Manufacturing & Materials, Kulliyah of Engineering*
Fatimah A`thiyah Sabaruddin, *Manufacturing & Materials, Kulliyah of Engineering*
Farah Nadiya Sobri, *Manufacturing & Materials, Kulliyah of Engineering*
Nur Izzati Zulkifli, *Manufacturing & Materials, Kulliyah of Engineering*

Exhibitor : Noorasikin Samat, Manufacturing & Materials Engineering, Kulliyah of Engineering

Polypropylene (PP) has been widely used in many applications including in automotive. The new development in nanocomposites has opened further the use of PP thermoplastic. Nanocomposites commonly offer better mechanical strength and stiffness compared to traditional composites which use micron-sized filler which allow this material to become a material of choice in automotive industries. Aluminum Hydroxide (ATH) is one of the flame retardant fillers. Apparently, the incorporation of nano-sized ATH filler into PP matrix has high a potential to improve the mechanical and thermal properties of PP. It is well known that agglomeration of nanofiller causes deterioration in mechanical properties of the nanocomposites. As a result in this work, coupling agent; maleic anhydride grafted polypropylene (MAPP) at composition of 2, 3 and 5wt% were added to modify the surface interaction between PP matrix and ATH nanofiller. The amount of ATH was kept constant at 4wt% to evaluate the influence of this coupling agent on the mechanical properties of the fabricated nanocomposites. The fractures surface was characterized using Field Emission Scanning Electron Microscopy (FESEM). Overall, MAPP coupling agent at a 2wt% shows an optimum result in mechanical properties of these nanocomposites.

Keywords : *PP, nanocomposites, tensile, impact, dma, flame retardant, ath*

Category : Science, Engineering and Technology

1330

DEVELOPMENT OF AUTOMATIC ADJUSTMENT REAR VIEW MIRROR#

Mohd Redzuan Baharan, *Mechatronics Engineering, Kulliyah of Engineering*
Mohd Khairul Faiezi Aziz, *Mechatronics Engineering, Kulliyah of Engineering*
Salmiah Ahmad, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : Salmiah Ahmad, Mechatronics Engineering, Kulliyah of Engineering

Automatic adjustment rear view mirror system is designed to constitute for the weak points of the manual adjustment rear view mirror. This system determines the optimal position angle of rear view mirror based on height of the driver, categorized as short, medium and tall. To achieve this target, the interest face coordinate will be measure by means of image processing technique which call as background estimation. Those coordinates are made as an input to mirror actuation system where it will rotate the mirror to the target position. This system is very easy, convenient and safe to use, and it is possible to adjust mirrors safely while driving since all processes are performed automatically.

Keywords : *Rear View Mirror, Position Control, Face detection*

Category : Science, Engineering and Technology

1331 **A COMPARATIVE STUDY BETWEEN STEEL AND TIMBER AS MATERIALS FOR CONSTRUCTION IN FOREST ENVIRONMENT CASE STUDY: TANARIMBA VISITORS CENTRE (TIMBER) : SEKEPING SERENDAH HOUSE (STEEL#**

Zeenat Begam Binti Yusof, IIUM, Kulliyah of Architecture & Environmental Design

Zeenat Begam Binti Yusof, IIUM, Kulliyah of Architecture & Environmental Design

Zeenat Begam Binti Yusof, IIUM, Kulliyah of Architecture & Environmental Design

Exhibitor : Zeenat Begam Binti Yusof, Architecture, Kulliyah of Architecture & Environmental Design

Presently demand for land is increasing and development has become a necessity. As development proceed and expands it starts to encroach into the forest environment. As a direct result of these encroachments environmental problems arises. To overcome this problems, causing factors should be identified. There are few factors was identified such as construction technique, developers awarness, construction material selection and land availability. Among all these factors, construction materials is further discussed in this research. There are three types of materials mainly used for construction namely timber, steel and concrete. Timber is widely acknowledge as a materials harmonizes with the nature and concrete is vice versa. Other than timber, steel also classified as green steel and no longer a threat to the environment. As a result, a comparative research is conducted in order to find out which material is most suitable between steel and timber as construction material in the forest environment. Method which was opted for this research was qualitative method using observation, semi structure interview,document analysis and case study. As for this research two case studies has been chosen. The first one is located in Serendah forest which is a weekend house belong to Mr Seksan. The house was constructed using steel. The second case study is located at Janda Baik. It is Tanarimba visitor centre which is eco-friendly development owned by Sitrac corporation. This centre is constructed using timber (pine wood). The main aim of this research is to identify which materials are more suitable as construction material in the forest area. From the comparative study, information and data collected it was identified that both materials is suitable to be use in the forest environment. The similarities of the both materials are such as lightweight, flexible, easy installation technique and prefabrication construction. These characteristics contribute to the biggest point of conserving the forest environment during the construction period. Other than the similarities both materials have own characteristics and properties which makes them more superior than each other. The conclusion is steel is identified as more suitable in the forest area compared to the timber based on its characteristics. The good characteristics of the steel are it is not vulnerable towards termite and biological attack, not required harmful preservatives treatment, steel does not shrink, swell, wrap, it can be used in any type of soil and 100% recycleable material. The characteristic of timber such as vulnerable to termite, fungus attack, coastly,required preservaties, limited source and longer time for maturity making timber less important compared to steel. However, inorder to achieve sustainability in the forest environment both materials can be combine and used in building construction, where timber weakness can be replaced with the steel advantages and vice versa.

Keywords : timber,steel and comparative studies

Category : Science, Engineering and Technology

1333 SUITABILITY OF THE NAUPLII AND ADULTS OF TWO COPEPODS, ACARTIA ERYTHRAEA AND OITHONA BREVICORNIS COMPARE TO ARTEMIA NAUPLII AS A LIVE FEED FOR DIFFERENT SIZES OF ASIAN SEABASS (LATES CALCARIFER BLOCH) LARVAE#

Mohammad Mustafizur Rahman, *Biotechnology, Kulliyah of Science*

Exhibitor : Mohammad Mustafizur Rahman, Biotechnology, Kulliyah of Science

Asian seabass (*Lates calcarifer* Bloch) is one of the most commercially important fish for brackish water farming. Artificial propagation of Asian seabass through induced breeding techniques is already standardized. However, larval rearing techniques, including suitable nursery feeds is not yet standardized, which is crucial for better survival and growth of Asian seabass larvae. Live-feed is the essential for almost all fishes at least during the initial stages of their life cycle. It is already known that Asian seabass larvae prefer rotifer in age between 1 and 5 days, rotifer and *Artemia* nauplii in age between 6 to 10 days and only *Artemia* nauplii in age between 11 to 14 days. However, there is no reliable information on suitable live feed for the growth of Asian seabass larvae when age after 14 days. Based on this issue, the present experiment was conducted to know the effects of feeding *Artemia* nauplii, and adult and nauplii of two copepods (*Acartia erythraea* and *Oithona brevicornis*) on growth and survival of 14, 20 and 25 days old Asian seabass larvae. In this study, *A. erythraea* and *O. brevicornis*, were chosen as they are nutritionally rich, easy to culture, high rate of reproduction, salinity tolerance and available in tropical waters. A 21-day experiment was conducted in 45 fibreglass tanks. The size of each tank was 70 cm × 50 cm × 30 cm holding approximately 100 L of seawater. A factorial design was used, the factors being fish larval age (3 levels: 14, 20 and 25 days old Asian seabass larvae) and live feed (5 levels: nauplii of *A. erythraea*, adult of *A. erythraea*, nauplii of *O. brevicornis*, adult of *O. brevicornis* and nauplii of *Artemia*). The combinations of the two factors resulted in a total of 15 treatments, all of which were performed in triplicate. A total of 1000 fish larvae (10 larvae/L) were stocked in each tanks. All fish larvae were collected from a seabass hatchery while both copepods were cultured in the laboratory. All larvae were fed three times a day, at approximately 06:30 h, 13:00 h and 19:30 h. The results indicated that seabass larvae grew better (higher specific growth rate, final length and final weight) in tanks supplied with copepods than *Artemia* nauplii. The effects were more pronounced in the case of 25 days old larvae than in the case of 20 days old larvae, followed by 14 days old larvae. Fatty acid analysis analysis of *L. calcarifer* larvae showed that total n-3 fatty acids were higher in larvae fed with copepods diet than those of feeding with *Artemia* nauplii diet. Therefore, besides higher growth rates, the quality of seabass seeds can be improved if *A. erythraea* or/and *O. brevicornis* is/are used as live feed. This experiment suggests that the copepods can be used as a suitable live feed for larval rearing of highly valued *L. calcarifer* larvae.

Keywords : *Asian seabass; larvae; Artemia nauplii; Acartia erythraea; Oithona brevicornis*

Category : Science, Engineering and Technology

1334 DEVELOPMENT OF IMPROVED AND COST EFFECTIVE AUTOINDUCTION CULTURE MEDIA FOR rBROMELAIN PRODUCTION IN E. COLI BL21-AI#

Mohd Jamil Aizat Jamaluddin, *Biotechnology Engineering, Kulliyah of Engineering*

Azura Amid, *Biotechnology Engineering, Kulliyah of Engineering*

Azlin Suhaida Azmi, *Biotechnology Engineering, Kulliyah of Engineering*

Muhd. Ezza Faiez Othman, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Azura Amid, *Biotechnology Engineering, Kulliyah of Engineering*

In this study, bromelain, a naturally available therapeutic protease enzyme from pineapple stem, was expressed in *Escherichia coli* strain BL21-AI using auto-induction-based fermentation media. Recently, many recombinant proteins efficiently expressed in soluble form in *E. coli* using this auto-induction approach. Indeed, our preliminary experiment showed that this media was proven to be able in producing a high-density batch culture as claimed. Still, since overall soluble expression level is thought to be both protein and host's strain specific depending on the type of media used, further optimization step for legitimate optimal production of recombinant bromelain is therefore required. Moreover, to our knowledge, as of now optimization study on performance of the production of recombinant bromelain in *E. coli* using the auto-induction media has yet been initiated elsewhere in the literature. Our statistical analysis results show that tryptone, ammonium chloride and cobalt were most significant in increasing the rBromelain productivity among the 22 media components studied. The optimized values of these three factors were obtained by RSM based on the result of a face-centered central composite design. Using this improved autoinduction medium formulation, the rBromelain productivity was maximally produced at 13.435 U/mg

Keywords : *Autoinduction, bromelain, industrial Enzyme, media formulation*

Category : Science, Engineering and Technology

1336 EVALUATION OF ANTICANCER PROPERTIES IN MANGO FRUIT & ITS PUREE#

Muhd Ezra Faiez Othman, *Biotechnology Engineering, Kulliyah of Engineering*

Azura Amid, *Biotechnology Engineering, Kulliyah of Engineering*

Irwandi Jaswir, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Azura Amid, Biotechnology Engineering, Kulliyah of Engineering

Mango (*Mangifera indica* L.) is one the popular tropical fruits found in Malaysia. It is known for its vibrant flesh colour, juicy texture, sweet flavour, vitamins and minerals. Besides that, mango also contains anticancer and antiproliferation properties. The focus of this study is to evaluate the variety available mango (Siamese, Honey, Kuinin and Chokonan) for screening anticancer property towards human breast cancer cell (MCF-7). Based on the result obtained, Kuinin has the lowest IC50 but for commercialization reason Siamese mango was chosen for puree optimization with optimized thermal treatment below 90°C with lower holding time. The treatment shows no contamination on both *S.aureus* and *E.coli/Coliform*

Keywords : *Breast cancer, mango, puree*

Category : Science, Engineering and Technology

1338 BANANA PEELS: A NOVEL RENEWABLE SOURCE FOR FEED SUPPLEMENT#

Parveen Jamal, *Biotechnology Engineering, Kulliyah of Engineering*
Olorunnisola Kola Saheed, *Biotechnology Engineering, Kulliyah of Engineering*
Md. Zahangir Alam, *Biotechnology Engineering, Kulliyah of Engineering*
Zaiki Zainuddin, *Biotechnology Engineering, Kulliyah of Engineering*
Suleyman Aremu Muyibi, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Parveen Jamal, *Biotechnology Engineering, Kulliyah of Engineering*

Animal feed ingredients remain one of the main imported materials in Malaysia costing the government several millions. This cost can be reduced by efficient utilization of huge tones of agro-wastes generated within the agricultural sector of the economy by adopting simple biotechnological approaches for converting waste to wealth. Utilization of banana peels (BP) as a lignocellulosic substrate for production of amino acid rich feed supplement, is a novel biotechnological approach, which will be a sustainable alternative for imported feed materials. This will improve agricultural waste management as well. In this research solid state bioconversion (SSB) involving fungal yeast system was performed. Media screening was followed by single factor optimization that showed optimum bio-protein synthesis at 5% sucrose, 0.4% MgSO₄.7H₂O and 0.6% NH₄H₂PO₄. Media optimization by Face centered central composite design (FCCCD) gave a significant model which suggested 4.79% for sucrose, 0.44% MgSO₄.7H₂O and 0.61% NH₄H₂PO₄ as optimum level. The protein content was improved from 88.93mg/gm to 116.13 mg/g banana peel. Product synthesis kinetic showed that zero and first order models described the trend of bio-protein production.

Keywords : Banana peel; *Candida utilis*; *Phanerochaete chrysosporium*; Lignocelluloses; Bioprotein.

Category : Science, Engineering and Technology

1339 HONEYDEW FRUIT SKIN: A NEW SOURCE OF PECTIN AND HALAL JAM#

Parveen Jamal, *Biotechnology Engineering, Kulliyah of Engineering*
Nurlina Binti Yusof, *Biotechnology Engineering, Kulliyah of Engineering*
Irwandi Jaswir, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Parveen Jamal, Biotechnology Engineering, Kulliyah of Engineering

Honeydew melon (*Cucumis Melo* L.) has unique and sweet taste and originated from France. This is a favourite fruit for Malaysians, which is rich in potassium, sodium, vitamin and cholesterol free. The fruit pulp of honeydew melon is served as fresh fruits while the skin and the fruit seeds are dumped as waste. Almost 30 percent part from honeydew fruits are thrown away as waste, which leads to additional environmental problem. Utilization of fruit or food waste into valuable nutritional products is becoming the main concern of research by the food scientists. Pectin is a polymer which contains at least 65% of galacturonic acid. It can be found only in plants and function as the gelling agent. There is no report for the extraction of pectin from the honeydew. This research sought to detect pectin content from different parts of honeydew. Three parts of honeydew, which comprises of the outer skin, inner skin and fruit pulp, were used in this research. From this study, inner skin of honeydew was found to possess a higher amount of pectin. Different parts of honeydew fruits were later used in jam making. Four different types of honeydew jams were prepared; two jams from the inner skin (with and without added pectin) and the other two jams from the fruit pulp (with and without added pectin). Twenty samples were evaluated by 20 students of IIUM in terms of appearance, aroma, taste/sweetness, texture and overall acceptability. The optimum formulation for jam spread of honeydew skin was 70% of sugar, 1.13% of pectin and 0.81% of citric acid. In addition, moisture content and ash content were determined. High amount of sugar decreased the moisture content of the jam and increased the shelf life of the jam. Percentage of ash in the jam spread of honeydew skin was 1.07%, which represents the mineral content in the food. High ash means more mineral content, thus the jam is highly nutritious. Out of the 20 respondents participated in sensory evaluation, 78% liked the jam from the inner skin (the part that is usually considered as waste) without the added pectin.

Keywords : *Cucumis melo* L., galacturonic acid, moisture content, Pectin, Jam , Sensory evaluation

Category : Science, Engineering and Technology

1340 A QUANTUM OPTICAL APPROACH TO EXPLAIN HOW A LATECOMER MAKES IT IN A WORLD OF THE RICH GET RICHER#

Mohamed Ridza Wahiddin, *Computer Science, Kulliyah of Information & Communication Technology*

Exhibitor : Mohamed Ridza Wahiddin, Computer Science, Kulliyah of Information & Communication Technology

Scale free networks obey power law distribution instead of Poisson distribution, and hence a departure from randomness. There exist phase transitions between disorder and order, and consequently leading to self-organisation. The availability of vast amounts of data today is driving the importance of scale free networks to map the inner workings of many complex systems from social media to cell biology. One of the challenges faced by scale free networks is to explain how a late comer makes it in a world of the rich get richer. The first mover always has the advantage. The winner's lead however is never significant. It is always closely followed by a slightly smaller node that has almost as many links as the leader. Google has violated the basic prediction of the scale free network. Launched in 1997 and was a latecomer to the web, but in three years it became the largest hub and the most popular search engine. In order to remain relevant in a competitive environment each node has a certain FITNESS. A node's preferential attachment is driven by its fitness and the number of links it has. Recently it has been shown that Bose-Einstein condensates and Fermi quantum gases are able to address the issue. I propose a quantum optical approach that is like a sliding ruler that may move from Fermi statistics (fermionic networks) through a mix Fermi-Bose statistics, and finally to Bose statistics (bosonic networks). This does not need to treat the different statistics separately as done by previous studies.

Keywords : *Scale free networks, quantum optics*

Category : Science, Engineering and Technology

**1342 ARTIFICIAL NEURAL NETWORK BASED HYSTERESIS COMPENSATION FOR
PIEZOELECTRIC TUBE SCANNER IN ATOMIC FORCE MICROSCOPY#**

Yahya. Sherif Othman, *Department of Mechatronics Engineering, Kulliyah of Engineering*
Iskandar Al-Thani Mahmood, *Department of Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : Iskandar Al-Thani Mahmood, Department of Mechatronics Engineering, Kulliyah of Engineering

Piezoelectric tube scanner is a major component that used in nanoscale imaging tools such as atomic force microscopy (AFM). This is because it can provide precise nanoscale positioning. However the precision is limited by vibration and some nonlinear drawbacks represented by creep and hysteresis. Hysteresis problem appears when positioning is needed at wide range. In this paper, a feed forward multi-layer neural network (MLNN) is trained to shape a proper control signal based on reference input and actual output signals. The experimental results show that the developed neural network scheme improves the performance of the system by significantly minimizing the effect of hysteresis.

Keywords : *Piezoelectric tube actuators, atomic force microscopy, hysteresis, artificial neural network, control system*

Category : Science, Engineering and Technology

1344 THE ETHICAL IMPLICATIONS OF THE MODERN PROGRESS IN SCIENCE#

Ibrahim Shogar, *Department of Computational and Theoretical Science, Kulliyah of Science*

Exhibitor : Ibrahim Shogar, Computational and Theoretical Sciences, Kulliyah of Science

The main objective of this research is to inoculate the ethical culture in scientific enterprise and expose scientists to their ethical and social responsibilities. Science is a method of description, explanation and understanding of the natural phenomena; while technology means application of scientific knowledge to solve human problems. The scientific research is possible due to the fact that the entire universe has been made in a perfect order and with precise measures. Objects are formed from different components, nucleus, atoms, and molecules, with great potentials and capabilities of interaction and rearrangement. Things around us act as they do because of the way their molecules behave. Gold and earth are distinguishable only by their very components. Arranged in one way atoms make up soil and water; arranged in another way they make up trees and ripe fruits. Mankind uses the malleability of nature to make the scientific progress and change the world. Human ability to rearrange the objects, therefore, lies at very foundation of creating new technologies and devices that help to develop new knowledge. It is no doubt that the progress in modern science and technology has made remarkable insights on the structure of the natural phenomena, but they also has been used for the detriment of humanity and environment. Based on empirical method, the modern science is attempting to rearrange the entire world. Scientists, aided by devices at exact to the atomic precision, are shifting from examining the passive substances such as electronics, to more complex patterns such as human genomes. This new approach of scientific progress has brought future of entire species on earth into a critical turn.

Keywords : *Scientific progress, ethical implication, epistemology, descriptive knowledge, Islamic philosophy of science.*

Category : Science, Engineering and Technology

1346 ANALYSING THE DYNAMICS BEHAVIOUR OF FAST FLUX DOMAIN NAME SYSTEM THROUGH VISUALISATION#

Normaziah Abdul Aziz, *Computer Science, Kulliyah of Information & Communication Technology*
Andi Fitriah Abdul Kadir, *Computer Science, Kulliyah of Information & Communication Technology*

Exhibitor : Normaziah Abdul Aziz, Computer Science, Kulliyah of Information & Communication Technology

Fast-Flux Service Networks (FFSN) was first used as a Domain Name Server (DNS) switching mechanism that combine distributed command and control, web-based load-balancing, and proxy redirection. However, cybercriminals are making use of this technology to cover their tracks and avoid detection. As such, their criminal infrastructures stay up longer to get more victims. These issues are tackled by investigating the dynamics of FFSN by using data mining classification method and data visualization technique. This combination can assist network administrators and security analyst to recognize the threats more easily and efficiently. In this study, over 500 domains are collected and monitored. By applying kNN classifier to the trained data, the presence of Single-Flux (SF), NS-Flux (NSF), and Double-Flux (DF) are observed. Subsequently, by scrutinizing and visualizing these fluxing domain names, the new types of fluxing designated as NS-Name-Flux(NF) and Nested-NS-Flux (NNF) are discovered. The analysis results of both NF and NNF exposed that FFSN have become extensively sophisticated and dynamic. This exemplifies that visualization is an alternative and effective data exploration method for understanding the complex behaviors of FFSN.

Keywords : *fast flux, domain name server, cyber-criminals, network forensics*

Category : Science, Engineering and Technology

1347 SOCIO-ECONOMIC TRANSFORMATION THROUGH BIODEGRADABLE SANITARY PRODUCT#

Zuraida Ahmad, Manufacturing and Materials Engineering, Kulliyah of Engineering

Nurizan Omar, Manufacturing and Materials Engineering, Kulliyah of Engineering

Nur Humairah Abdul Razak, Manufacturing and Materials Engineering, Kulliyah of Engineering

Mohamad Naquiddin Yacob, Manufacturing and Materials Engineering, Kulliyah of Engineering

Faiz Naim Rahamaddulla, Manufacturing and Materials Engineering, Kulliyah of Engineering

Aznira Ashaari, Manufacturing and Materials Engineering, Kulliyah of Engineering

Exhibitor : Zuraida Ahmad, Manufacturing & Materials Engineering, Kulliyah of Engineering

In eliminating various problems associated with environment and socio-economics, biodegradable disposable sanitary products consisting natural based materials were produced. This innovation consists of two parts; a hydrophilic absorbent gel in the core to absorb and retain the liquid with hydrophobic outer layer that acts as water barrier sheet. Malaysian native sago was used as the main raw materials in both of the biodegradable fabric and absorbent gel. The outer layer fabric was prepared from sago starch (SS) - citric acid crosslinked and plasticized with glycerol by simple film casting technique. On the other hand, superabsorbent gel composite was synthesized through graft co-polymerization of acrylic acid (AA) onto SS in aqueous solution with the incorporation of bentonite nanoclay. The AA grafted polymer composite was obtained via redox initiator system of ammonium persulphate (APS) and in the presence of N,N'-methylenebisacrylamide (N-MBA) crosslinking agent. This new approach showed a promising production of biodegradable sanitary products produced from local low cost available resource; sago, that contribute to greener environment and socioeconomic transformation.

Keywords : *biodegradable, sago starch, absorbent gel, film casting, polymerization*

Category : Science, Engineering and Technology

1349 DETECTING COMPUTER GENERATED IMAGES FOR IMAGE SPAM DETECTION#

Normaziah Abdul Aziz, *Computer Science, Kulliyah of Information & Communication Technology*
Zubaida Muataz, *Computer Science, Kulliyah of Information & Communication Technology*

Exhibitor : Normaziah Abdul Aziz, Computer Science, Kulliyah of Information & Communication Technology

Image spam continues to be one of the security problem today. Spammers used image spam as a technique to bypass conventional email filters. Anti-Spammers used image classification as a method to detect images spam by extracting different features of the image. One of the important feature used is color features. Several works used different color analysis to differentiate image spam, most of these works used supervised methods trying to differentiate computer generated images which is mostly like to be a spam and natural images. Supervised methods have its weaknesses, such as high cost in computation, requires training data, and rapid changes in spammers behaviors. This paper develops an unsupervised method using HSL geometric model (Hue, Saturation, and Luminance) to distinguish CG (computer generated) and natural images. Rules and Heuristics are defined by using HSL variables. The proposed method mainly depends on Saturation and Lightness values and their histograms. Experiment results shows that the combination of these variables can give high classification accuracy results.

Keywords : *Computer Generated Image, Image Spam Filter, Saturation, Lightness*

Category : Science, Engineering and Technology

1354 MIRROR REFLECTION FROM SUPER DARK CARBON NANOTUBE FOREST#

Tanveer Saleh, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : Tanveer Saleh, Mechatronics Engineering, Kulliyah of Engineering

Carbon-nanotube (CNT) forests are known to be among the darkest materials on earth. They can absorb the entire visible range of electromagnetic wave more efficiently than any other known black material. We have attempted controlled mechanical processing of the CNTs and, surprisingly, observed mirror-like reflection from the processed area with 10-15% reflectivity, a level higher than typical reflectivity of pure forests by over two orders of magnitude, for a wide range of the spectrum (570-1100 nm). Patterning of micro mirrors in the forest is demonstrated to show its potential application for producing monolithically integrated reflector-absorber arrays in the material.

Keywords : *CNT forest, Dark Absorber, Mirror reflection*

Category : Science, Engineering and Technology

1355

SMART HANDHELD HALAL AND BUDGET TRACKER#

Siti Fauziah Toha, *Mechatronics, Kulliyah of Engineering*
Abdullah Ariff Tajuddin, *Mechatronics, Kulliyah of Engineering*
Khairul Zaim Abdul Rahim, *Mechatronics, Kulliyah of Engineering*

Exhibitor : Siti Fauziah Toha, Mechatronics Engineering, Kulliyah of Engineering

Engineering is a discipline that not only covers numerous aspects of our everyday lives, but is in actually an essential part of our everyday life. To sum things up, engineers make things work. Over and above that, engineers give practical solutions to everyday problems. This poster presents the design of microcontroller based halal and budget tracking device. It involves three major phases which are hardware construction, software programming and communication setup. Hardware construction requires wiring up the microcontroller as the ‘brains’ of the device to external input/output devices such as liquid crystal display (LCD) keypad and a barcode scanner. Software programming constitutes programming the microcontroller to interact with the aforementioned connected devices to give the user choices for inputs as well as display it through an LCD screen. Communication setup requires interaction between the microcontrollers based handheld budget tracking device with an external device such as personal computer. The objective of this work is to design and implement a smart, handheld and portable budget tracker based on microcontroller system. The expected outcome is a marketable product to be used by consumers in order to help them from spending over limit and impulse buying scenario. The significance of designing a smart handheld budget tracker are its portability, and can be used for both cash and credit card payment methods. The device is also comes with Bluetooth technology where shoppers can easily track the barcode for every items spent. Finally, the cost of the device must be made as low as possible to be marketable and becoming a ‘need’ in every shopper’s pocket/bag.

Keywords : *microcontroller, liquid crystal display, barcode reader, handheld*

Category : Science, Engineering and Technology

1356

AMPHIBIOUS VEHICLE FOR DISASTER MANAGEMENT#

Siti Fauziah Toha, *Mechatronics, Kulliyah of Engineering*

Abdul Muizz Ayub, *Mechatronics, Kulliyah of Engineering*

Zakaria Zainol, *Mechatronics, Kulliyah of Engineering*

Exhibitor : Siti Fauziah Toha, Mechatronics Engineering, Kulliyah of Engineering

A natural disaster such as earthquake, tsunami and volcanic eruption, constantly leads to financial, environment and human losses. These natural events have occurred since the earth began forming and continue to cause serious damage and loss of life all over the globe. Developing countries are highly affected because they may lack resources, infrastructures and disaster-preparedness systems. Following natural disaster attacks, there is often concern that the bodies of victim can cause epidemic amongst surviving populations. Therefore, strategic planning and emergency management are vital to find proper solutions in dealing with both pre and post natural disaster attacks. An amphibious vehicle, named SOPHIBIAN is presented in this poster with the capability to manoeuvre on both land and floats in water. This vehicle has special sonar detector features to locate any objects in water or buried in soil. The portable and small size of the vehicle is an added advantage since it can move easily on the disastrous or hazardous area. Global positioning system (GPS) will be used for communication purposes between the vehicle and plant controller with ease of camera vision system. The controller part of the system is made intelligent where it can update in real-time environment using bee colony optimisation algorithm. This low cost and intelligent sonar detection amphibious vehicle for disaster relief (SOPHIBIAN) involves three major phases which are software programming, hardware construction, and communication setup. Software programming constitutes modeling the system in search for good model of the system as well as control motion of the vehicle in both land terrain and floating on water. Hardware construction will involve suitable design prototype and integration between all mechanical and electrical devices such as sonar acoustic (transmitter and receiver) and vision sensor. The vehicle is design to be able to manoeuvre and suited on both land and water environments. Communication setup requires interaction between the amphibious vehicle with an external device such as global positioning device (GPS), personal computer (PC) or mobile hand phone.

Keywords : *amphibious vehicle, global positioning device, disaster relief,*

Category : Science, Engineering and Technology

1357 SPECTRAL EXPANSIONS ASSOCIATED WITH THE SCHRODINGER'S OPERATOR IN CLOSED DOMAIN#

Abdumalik Rakhimov, *Science in Engineering, Kulliyah of Engineering*

Exhibitor : *Abdumalik Rakhimov, Science in Engineering, Kulliyah of Engineering*

Application of the modern methods of mathematical physics in the spaces of distributions, leads to the problems of localizations spectral expansions. Especially simple and important example of spectral expansions is Fourier series of the Dirac delta function, which is not uniformly approximation of the delta function. However, arithmetic means of the partial sums of Fourier series of the Dirac delta function uniformly approximate the delta function in any closed interval that not contains zero. In multidimensional case more regularization is required.

Keywords : *Dirac delta function, regularization, closed domain, near boundary.*

Category : Science, Engineering and Technology

1359 DEGRADATION OF BIPOALR JUNCTION TRANSISTOR CURRENT GAIN AFTER NEUTRON RADIATION#

Nurul Fadzlin Hasbullah, *ECE, Kulliyah of Engineering*
Nahrul Khair Alang Md Rashid, *MCT, Kulliyah of Engineering*
Julia Bt. Abdul Karim, *Agency Nuclear malaysia,*
Myo Min Oo, *ECE, Kulliyah of Engineering*

Exhibitor : Nurul Fadzlin Hasbullah, Electrical and Computer Engineering, Kulliyah of Engineering

In this work, the bipolar junction transistors (BJTs) were chosen to be irradiated with neutron radiation because they continue to play an important role in the integrated circuit technology, especially in the area of the analog or mixed signal and bipolar complementary metal oxide semiconductor. This work deals with the analysis of the neutron radiation effects on the silicon bipolar junction transistors in NPN polarity. The different types of bipolar junction transistors (BJTs) are utilized to be irradiated with neutron with the pneumatic transfer system (PTS) or also known as the rabbit system comprises of tubes connecting the Pneumatic Room to the reactor core. In this work, the degradation of electrical characterizations is emphasized. The experimental data presented in this work reveal the electrical response of the BJTs (2N2222, 2N2219A, NTE 123) such as current gain and Gummel plot (I_c and I_b versus V_c). The key parameters were measured in Keithley software and the change in current gain of these NPN transistors is obtained at a fixed value of the collector voltage (V_c). Based on the simultaneous and exposure results, the current degradation of the NPN transistors is sensitive to both of the collector. According to these experimental results, the base current and collector current is slightly changed while the base current is changed significantly in Gummel Plot for every transistor.

Keywords : Bipolar Junction Transistor (BJTs), neutron radiation, current gain degradation

Category : Science, Engineering and Technology

1361 **NOVEL CAROTENOIDS FROM LOCAL PUMPKIN (CUCURBITA MOSCHATA):
EFFECT OF STORAGE AND TEMPERATURE IN POST HARVEST HANDLING#**

Irwandi Jaswir, *Biotechnology Engineering, Kulliyah of Engineering*
Norshazila S., *Biotechnology Engineering, Kulliyah of Engineering*
Rashidi Othman, *KAED, Kulliyah of Architecture & Environmental Design*
Yumi Hashim, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : *Irwandi Jaswir, Biotechnology Engineering, Kulliyah of Engineering*

Carotenoids are antioxidants with pharmaceutical potential. The major carotenoids important to humans are alpha-carotene, beta-carotene, lycopene, lutein, zeaxanthin and beta-cryptoxanthin. Some of the biological functions and actions of these individual carotenoids are quite similar whereas some are specific. Besides genotype and location, other environmental effects such as temperature, light, mineral uptake and pH were found to have an impact in carotenoid development in plant species and organs. Therefore this research investigates the effect of storage and temperature treatments in post-harvest handling towards carotenoid content in pumpkin. Results showed that long term storage resulted in the accumulation of lutein and beta-carotene with a slightly decreased in zeaxanthin. Whereas pumpkin treated with different level of temperature resulted in decreased of total carotenoid and major individual carotenoids. Of all the post harvest storage conditions treatment tested, we found that 2 month storage time and temperature below than 40oC is the best conditions to enrich the nutritional values of pumpkin as well as the commercial values. By identifying the key factors of post harvest handling conditions that controlling specific carotenoid accumulation a greater understanding of how nutritional values in pumpkin and other crops can be enhanced will emerge. Post harvest storage conditions markedly can enhance and influence the levels of total carotenoid, zeaxanthin, lutein and beta-carotene in pumpkin. In our case the magnitude of these effects depends on time of storage and level of temperature.

Keywords : *pumpkin, carotenoid, post harvest, storage, temperature*

Category : Science, Engineering and Technology

1363 ENZYMATIC DEGRADATION OF TURBARIA TURBINATA FOR RELEASE OF ANTI-INFLAMMATORY POLYPHENOL#

Hammed A.M., *Biotechnology Engineering, Kulliyah of Engineering*
Irwandi Jaswir, *Biotechnology Engineering, Kulliyah of Engineering*
Azura Amid, *Biotechnology Engineering, Kulliyah of Engineering*
Zahangir Alam, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Irwandi Jaswir, Biotechnology Engineering, Kulliyah of Engineering

Inflammation occurs frequently in both animal and human tissues in order to ameliorate in coming microbes or physical attacks. Current anti-inflammatory drugs in use are referred to as Non-Steroid Anti-inflammatory Drugs (NSAID's) such as Aspirin, Indomethacin and Ibuprofen etc. However, several reports have implicated NSAID's of causing numerous side effects such as ulcer perforation, upper gastrointestinal bleeding and even death. About 16,500 death and more than 100,000 are hospitalized each year in United States alone due to use of NSAID's (Singh, 1998). Organisms, from marine environment have been identified to possess biochemicals with therapeutic potentials. These organisms include algae which are often subjected to various marine/environmental stresses, such as fluctuation in light, temperature change and tidal waves, in their habitat. In this study we have successfully extracted novel anti-inflammatory compounds from local brown seaweed using enzymatic degradation.

Keywords : brown seaweed; anti-inflammatory; enzymatic degradation;

Category : Science, Engineering and Technology

1364

CONCURRENT COMPUTING WITH PETRI NETS#

Sherzod Turaev, *Department of Computer Science, Kulliyah of Information & Communication Technology*
Norsaremah Salleh, *Department of Computer Science, Kulliyah of Information & Communication Technology*

Exhibitor : Sherzod Turaev, Computer Science, Kulliyah of Information & Communication Technology

Petri nets, introduced by Carl Adam Petri in 1962, provide a powerful mathematical formalism for describing and analyzing the flow of information and control in concurrent systems, which have widely been used in the study of formal languages. In our recent research we have introduced different variants of a Petri net controlled grammar, which is a context-free grammar equipped with a Petri net, whose transitions are labeled with rules of the grammar or the empty string, and the associated language consists of all terminal strings which can be derived in the grammar and the sequence of rules in every terminal derivation corresponds to some occurrence sequence of transitions of the Petri net which is enabled at the initial marking and finished at a final marking of the net, as mathematical models for the study of concurrent systems appearing in systems biology and automated manufacturing systems. The distinguished feature of all of these variants is that the transitions of a Petri net fire sequentially. In this study we introduce concurrent grammars – grammars controlled by Petri nets under parallel firing strategies, i.e., the transitions of a Petri net fire simultaneously in different modes. On the one hand, these variants of control increase the computational power of generative devices, and on the other hand, they can be used as theoretical models for parallel computing devices. We also study the mathematical properties of concurrent grammars.

Keywords : *Concurrent Computing, Petri Nets, Automata, Formal Languages, Petri Net Controlled Grammars,*

Category : Science, Engineering and Technology

1366 **ANTIOBESITY EFFECTS OF α -MANGOSTIN THROUGH GLUT4 AND LEPTIN EXPRESSION TOGETHER WITH PPAR γ ACTIVATION IN ADIPOCYTES#**

Muhammad Taher Bakhtiar, *Pharmaceutical Technology, Kulliyah of Pharmacy*
Mohamed Zaffar Ali Mohamed Amiroudine, *Pharmaceutical Technology, Kulliyah of Pharmacy*
Deny Susanti Darnis, *Chemistry, Kulliyah of Science*
Solachuddin Jauhari Arief Ichwan, *Dentistry, Kulliyah of Dentistry*
Mohd Arifin Kaderi, *Biomedical Science, Kulliyah of Allied Health Sciences*

Exhibitor : Muhammad Taher Bakhtiar, Pharmaceutical Technology, Kulliyah of Pharmacy

The increasing incidence of obesity has opened the gap to search for the adipogenic differentiation-inhibitory compounds from natural products. This has raised our concern to evaluate the effects of *Garcinia* species which is well-known for its phytochemical contents such as flavonoids, phenolic acids and xanthenes. Despite its highest medical properties, there was no reported data for obesity prevention. In this study, we used α -mangostin, the major xanthone compounds in *Garcinia malaccensis* Hk.f (locally known as “manggis burung”). Firstly, we elucidated the inhibitory effect of the compounds on lipid accumulation of 3T3-L1 preadipocytes by using Oil red O staining. α -mangostin dose-dependently reduced the triglyceride accumulation on 3T3-L1 cells. All compounds showed high lipid inhibition activity at 50 μ g/mL concentration ($P < 0.05$) compared to MDI treated cells. Besides, insulin-induced 2-deoxy-D-[3H] glucose uptake activities were significantly improved with increasing the concentration of the test compounds. Moreover, the data was significant ($P > 0.05$) with MDI and metformin which were used as the positive control for the assay. In addition, analysis by using the adipolysis kit shows that α -mangostin increases the amount of free fatty acid (FFA) release from the cells into the medium. Further evaluation with the quantitative real time polymerase chain reaction (qRT-PCR) shows that α -mangostin reduced the expression of ppar γ genes during adipocyte differentiation. At the same time, induction of glucose uptake and free fatty acid release by α -mangostin was accompanied by the increased mRNA expression of glut4 and leptin genes. As a result, we demonstrated that α -mangostin reduce lipid accumulation with decreased ppar γ expression as well as stimulate the glucose uptake and free fatty acid release from the cells via glut4 and leptin expression. In conclusion, these results indicated that α -mangostin derived from *Garcinia malaccensis* may be a candidate for preventing metabolic disorders such as obesity.

Keywords : *Antiobesity, α -mangostin, adipogenesis, glucose uptake, gene expression*

Category : Science, Engineering and Technology

1368 INSULIN MIMICKING ACTIVITIES OF CYCLOARTANE TRITERPENOID IN 3T3-L1 CELLS#

Muhammad Taher Bakhtiar, *Pharmaceutical Technology, Kulliyah of Pharmacy*
Mohamed Zaffar Ali Mohamed Amiroudine, *Pharmaceutical Technology, Kulliyah of Pharmacy*
Deny Susanti Darnis, *Chemistry, Kulliyah of Science*
Solachuddin Jauhari Arief Ichwan, *Dentistry, Kulliyah of Dentistry*
Mohd Ariffin Kaderi, *Biomedical Science, Kulliyah of Allied Health Sciences*

Exhibitor : *Muhammad Taher Bakhtiar, Pharmaceutical Technology, Kulliyah of Pharmacy*

Type 2 diabetes is a metabolic disorder characterized by insulin resistance, insulin action and caused by multifactorial etiology, including environmental factors, particularly diet and genetic components. Recently, most research on diabetes has focus on adipocyte which is used as a model for testing of insulin sensitivity and novel antidiabetic drugs. In this study, we investigated the effects of cycloartane triterpenoid on the adipocyte differentiation and glucose uptake in 3T3-L1 cells together with its underlying gene expression. The cells were treated for triglyceride accumulation with different concentration of the compound using Oil Red O staining assay. After 8-days, morphological changes and increase lipid accumulation were observed in these cells ($p < 0.05$). Indeed, the intracellular lipid accumulation increased by 1.9 fold relative to MDI-treated control cells at concentration of 50 μM . Analysis of insulin-induced 2-deoxy-D-[3H] glucose uptake activities shows that cycloartane triterpenoids significantly ($p < 0.01$) improved the glucose uptake with increasing the concentration of the compounds as compared to the basal. Further evaluation with the quantitative real time polymerase chain reaction (qRT-PCR) shows that mature 3T3-L1 cells treated with cycloart-24-en-3 β -ol enhance ppar γ and glut4 gene expression. As a result, it demonstrated that cycloartane triterpenoids enhance ppar γ and glut4 gene expression. Taken together, these results suggest that cycloart-24-en-3 β -ol derived from *Garcinia malaccensis* could improve insulin sensitivity through the activation of ppar γ as a ligand and glut4.

Keywords : *Cycloartane triterpenoids, adipogenesis, glucose uptake, gene expression*

Category : Science, Engineering and Technology

1372 GENE EXPRESSION OF NTANN12 IN NICOTIANA TABACUM TO Pb TREATMENT#

Nurul Izzah Abdul Halim, *Biotechnology, Kulliyah of Science*
Ing Chia Phang, *Biotechnology, Kulliyah of Science*

Exhibitor : Ing Chia Phang, Biotechnology, Kulliyah of Science

Plants are sessile organisms that are unable to move away from adverse environmental conditions. In order to survive or adapt their growth to environmental stresses, plants undergo physiological, biochemical and molecular changes. Lead (Pb) is a widespread heavy metal pollutant that is commonly found in the environment. It is highly persistent and causes toxicity to plants, animals, and human. To advance our understanding in Pb tolerance in plants and subsequently develop phytoremediation technology, there is a need to identify genes associated with Pb stress. *Nicotiana tabacum* has the characteristics of a plant ideal for phytoremediation. It has deep and highly branched root system, is tolerant to Pb pollutant, and repulsive to herbivores. Recent studies have shown that annexins participate in abiotic stress responses. Ntann12 is an annexin in *Nicotiana tabacum*. It was found to be upregulated upon *Rhodococcus fascians* infection, salt and abscisic acid treatments. It is likely that Ntann12 could be involved in the response of plants to Pb stress and play a role in defending plants against Pb-induced oxidative damage.

Keywords : Lead (Pb), annexin, Ntann12, *Nicotiana tabacum*, phytoremediation

Category : Science, Engineering and Technology

1381

DUCTING ROBOT FOR HVAC SYSTEM#

Nahrul Khair Alang Md Rashid, *Mechatronics Engineering, Kulliyah of Engineering*

Yasir Mohd Mustafah, *Mechatronics Engineering, Kulliyah of Engineering*

Mohd Zoofadli Salleh, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : Nahrul Khair Alang Md Rashid, Mechatronics Engineering, Kulliyah of Engineering

HVAC systems and ducting have been shown to act as a source of a variety of contaminants that are potentially hazardous to health (e.g. mold, fungi, bacteria, and very small particles of dust). The removal of such contaminants from HVAC system and ducting should be considered a primary component in an overall plan to improve indoor air quality. Hence, a duct cleaning robot with tele-operation ability is proposed to maintain the ducts' sanitation. The robot comprises 3 main systems; i) monitoring and control system (system is built inside a briefcase) ii) robotic system (a robotic body comprises of mechanical, electronic and circuitry, and iii) power supply system. The monitoring and control system consists of 3 interdependent subsystems; user interface, low-level data processing and long-range transmission systems. For robotic system, the subdivisions are; vision, long-range transmission and high-level data processing systems. These two primaries are then tied to a portable power system to ease transportability.

Keywords : HVAC, ducting robot, ventilation system

Category : Science, Engineering and Technology

1382

LEVEL CROSSING SYSTEM USING SOUND RECOGNITION#

Nahrul Khair Alang Md Rashid, *Mechatronics Engineering, Kulliyah of Engineering*

Md. Mozasser Rahman, *Mechatronics Engineering, Kulliyah of Engineering*

Alim Sabur Ajibola, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : Nahrul Khair Alang Md Rashid, Mechatronics Engineering, Kulliyah of Engineering

The level crossing is a very dangerous place in that all accidents that occur there are usually very costly in terms of human and material loss. The human loss is usually in form of injuries or death, while the material loss is in millions of dollars per accident. This research proposes the use of sound recognition for the control of the level crossing protection devices. Sound recognition has been previously used for the control of devices, but its use in the control of level crossing protection devices is novel. The simulation results showed that sound recognition technique can be effectively used in the protection of level crossings.

Keywords : *level crossing, sound recognition, railroad*

Category : Science, Engineering and Technology

1384 NEUTRON RADIATION EFFECTS ON THE ELECTRICAL PROPERTIES OF GAN COMMERCIAL DIODES#

Nurul Fadzlin Hasbullah, *Electrical and Computer Engineering, Kulliyah of Engineering*

Nahrul Khair Alang Md Rashid, *Mechatronics, Kulliyah of Engineering*

Julia Abdul Karim, *Nuclear Physics, Reseach Institute*

Nuurul Iffah Che Omar, *Electrical and Computer Engineering, Kulliyah of Engineering*

Dhiyauddin Ahmad Fauzi, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : Nurul Fadzlin Hasbullah, Electrical and Computer Engineering, Kulliyah of Engineering

The electrical properties of two commercially available GaN based Light Emitting Diodes (LED) (TLHB5800 and TLHB5100) as a result of neutron radiation were studied. Diodes were irradiated using rotary rack facility in TRIGA reactor, Malaysia Nuclear Agency under fluences up to 10^{12} neutron/cm².s of neutron under exposure time of 1,2,3 and 5 hours. The effects of neutron radiation on GaN LEDs were investigated through current-voltage (I-V) and capacitance-voltage (C-V) electrical characterization methods. It is observed that the FB and RB leakage current increases for both diodes. However, the changes are minimal. The increment suggested that the neutron induced displacement defect generates generation-recombination (GR) current as a result of the formation of traps or recombination centers. Significant changes in the doping profile were also observed in the GaN diodes as the doping concentration experienced an increment. The high ideality factor of greater than 2 obtained from the FB I-V fitting, denotes that the current is not attributed by the space-charge GR process but it is due to deep-level-assisted tunneling. The properties of GaN based diodes demonstrated less change as compared to GaAs based diodes under the same experimental conditions. Therefore, GaN material may be regard as a radiation hard material towards radiation induced defects.

Keywords : GaN LED, Neutron Radiation, I-V and C-V Charaterisation

Category : Science, Engineering and Technology

1390 A STUDY ON THE CAUSAL ELEMENTS OF THERMAL ENVIRONMENT AND THEIR EFFECTS TO THE MALAYSIA ENVIRONMENT#

Muhammad Abu Eusuf Eusuf, *Department of Architecture, Kulliyah of Architecture & Environmental Design*
Adebayo-Aminu Sarat Sarat, *Department of Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Muhammad Abu Eusuf Eusuf, Architecture, Kulliyah of Architecture & Environmental Design

Urban climate is modified resulting in its temperature warmer and drier than surrounding sub urban and rural area. One of the major causes of the modification is the process of urbanization where vegetated surfaces are converted to asphalt and concrete surfaces. Temperature distribution in urban canopy layer is highly affected by the urban radiation balance. Solar radiation incident on the urban surfaces is absorbed and then transformed to sensible heat. Most of the solar radiation impinges on roofs, and the vertical walls of the buildings, and the ground level. Kuala Lumpur, like other cities in a tropical environment faces serious environmental degradation of urban heat island, atmospheric pollution, traffic congestion and high energy consumption due to its rapid development and urbanization. Outdoor experiments were conducted in IIUM Gombak Campus to investigate the heating effect of different pavement materials in urban thermal environment. Microclimate parameters such as air temperature, relative humidity and wind velocity were recorded, also determine temperature differences among Asphalt, concrete, interlocking bricks and grass surfaces. Estimation of reflected solar radiation using Artificial Neural Network. The net balance between the solar gains and the heat loss by emitted long wave radiation determines the thermal balance of urban areas. Because the radiant heat loss is slower in urban areas the net balance is more positive than in the surrounding rural areas and thus higher temperatures are presented.

Keywords : *Thermal Environment; Causal elements; Albedo; Thermal pollution and Microclimate*

Category : Science, Engineering and Technology

1393 A THERMAL PERFORMANCE ANALYSIS OF A PROPOSED WASTE MATERIAL INTEGRATED WITH GROUND FLOOR SLAB OF A BUILDING#

Muhammad Abu Eusuf Eusuf, *Department of Architecture, Kulliyah of Architecture & Environmental Design*
Abdullah Al- Hasan Hasan, *Department of Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Muhammad Abu Eusuf Eusuf, Architecture, Kulliyah of Architecture & Environmental Design

A hazardous waste, ELT or massive scraped tyre waste created environmental load to the local environment. Today, when researchers think of the environmental impacts of tyres, they mostly focus on the management of tyres at the end of their useful lives. From Global perspective it is found that one billion tyres reach the end of their useful lives annually, out of which about four billion ELTs are currently in landfills and as stockpiles worldwide. Study revealed that most of the developing countries, particularly Malaysia, currently are not experienced with the disposal method of ELT. Besides, developed countries from Europe, USA, Japan and Singapore have framed specific law or regulation to the disposal of ELT. Recently it is obvious that should find out alternative ways as to reduce the load of massive ELT waste. This study has been focused on the recycling of massive ELT waste material in Malaysia and their thermal impact to the building which then adapt the indoor thermal environment. It is observed that the role of construction materials modify the building interior and regulates the indoor thermal environment. Having in mind the aim to seek for contextual alternative building material from waste to obtain continuing improvement in building thermal performance, this study has been designed to do experiments on locally existing massive ELT waste for its thermal impact on indoor thermal environment. Due to fact that this research followed by an effective experimental set up to observe the real phenomena of ELT for passive cooling in hot humid tropical climate and make comparison with conventional construction materials and systems.

Keywords : *Massive ELT waste, ELT management scenario in Malaysia, Tropical climate, Tropical building, Thermal Comfort, Heat Sink, Building envelope, Terrace house in Malaysia, Experimental Setup and Thermal & environmental monitoring system.*

Category : Science, Engineering and Technology

1394 THE DISTRIBUTION OF THREE HARMFUL ALGAL BLOOM (HAB) SPECIES IN COASTAL WATERS OF KOTA KINABALU#

Normawaty Mohammad Mohammad-Noor, *Biotechnology, Kulliyah of Science*

Aimimuliani Adam, , *Kulliyah of Science*

Ann Anton, , *Reseach Institute*

Ejria Saleh, , *Reseach Institute*

Shabudin Saad, *Biotechnology, Kulliyah of Science*

Sitti Raehanah Muhd Shaleh, , *Reseach Institute*

Exhibitor : Normawaty Mohammad Mohammad-Noor, Biotechnology, Kulliyah of Science

Harmful algal blooms (HABs) have been reported in coastal water of Sabah since a decade ago. However knowledge on the distribution and occurrence of the species are still limited especially in the east coast of Sabah. This is because of HAB occurred more frequently in this area. Since HABs have caused many negative effects to other organisms including human death, the understanding on the occurrence is critically needed. Therefore, this study was conducted to understand its distribution in the west and east coast of Sabah. Physico-chemical factors contributing towards the occurrence were also studied. Result indicated that the common HAB species found in the west coast of Sabah viz. *Pyrodinium bahamense*, *Cochlodinium polykrikoides* and *Gymnodinium catenatum* were not found in the east coast of Sabah. This was mainly due to the nutrient concentration which differed greatly at both locations. In the west coast of Sabah, the occurrence of these species showed some trends. The information gained from this study will help the local authorities in managing HAB problems in Sabah coastal area

Keywords : *Harmful algal bloom (HAB), monsoon, Pyrodinium bahamense, Cochlodinium polykrikoides, Gymnodinium catenatum*

Category : Science, Engineering and Technology

1397 RARE EARTH ELEMENTS (REES) IN SELECTED ROCKY SHORE ORGANISMS FROM PAHANG COASTAL WATERS#

Mohd Fuad Miskon, *Institute of Oceanography and Maritime Studies (INOCEM), Kulliyah of Science*

Kamaruzzaman Yunus, , *Kulliyah of Science*

Md. Mokhlesur Rahman, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*

Fikriah Faudzi, *Institute of Oceanography and Maritime Studies (INOCEM), Kulliyah of Science*

Anies Aznida Sa'ari, *Institute of Oceanography and Maritime Studies (INOCEM), Kulliyah of Science*

Exhibitor : Kamaruzzaman Yunus, , Kulliyah of Science

Interspecies and interspatial variations of rare earth elements (REEs) in soft tissue of *Saccostrea cucullata*, *Thais clavigera* and *Nerita chameleon* at selected sampling sites from Pahang coastal waters were determined. Filter feeder *S. cucullata* is highly potential as bioindicator for REEs due to its feeding behaviour that is much related to particulates as REEs sources. The REEs fractionation patterns normalized to chondrite or shale were remarkably similar indicating a common source of the REEs for the Pahang coastal waters. Typical deviations from this pattern were found for Ce and Eu and could be explained by their redox chemistry. The ratio of light to heavy REEs, La/Yb in the *S. cucullata* of 27.3 and *T. clavigera* of 29.47 are remarkably similar to Terengganu River basin soil of 33.00 and of Terengganu River sediment of 27.60 while *N. chameleon* shows slightly lower ratios (22.29). Along with its wide distribution on rocky shore areas, the present results of REEs recorded in soft tissue of *S. cucullata*, *T. clavigera* and *N. chameleon* collected at particular sites from Pahang coastal waters may serve as baseline data for future reference.

Keywords : rocky shore organisms, Pahang coastal waters, rare earth elements

Category : Science, Engineering and Technology

1399 **LOW VOLTAGE STEP-UP CONVERTER FOR ENERGY HARVESTING CIRCUIT#**

Nurul Arfah Che Mustapha, *ECE, Kulliyah of Engineering*

A.H.M Zahirul Alam, *ECE, Kulliyah of Engineering*

Sheroz Khan, *ECE, Kulliyah of Engineering*

Amelia Wong Azman, *ECE, Kulliyah of Engineering*

Exhibitor : A.H.M Zahirul Alam, Electrical and Computer Engineering, Kulliyah of Engineering

In this work, 35 mV of thermal energy obtained from the body heat is used to start up the circuit and operates at 36 GHz frequency. The design converter generates output voltage, 210 mV which is sixth times greater than its initial input voltage. The effect of switching transistors, inductor current, rise and fall time is also discussed in this work. The circuit operates using 2 μ H inductor and 0.01 fF load capacitor and is tested using PSpice Simulation tool. This voltage converter is suitable for energy harvesting application.

Keywords : *DC-DC, step-up converter, boost converter, low voltage, energy harvesting*

Category : Science, Engineering and Technology

1403 PROVIDING INSULATION AS A PASSIVE DESIGN STRATEGY FOR THE GREENING OF EXISTING HOMES IN MALAYSIA#

Noor Aziah Mohd Ariffin, *Architecture, Kulliyah of Architecture & Environmental Design*
Aniza Abu Bakar, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Noor Aziah Mohd Ariffin, Architecture, Kulliyah of Architecture & Environmental Design

Malaysia's rapid economic development in the past four decades has resulted in substantial population growth and rapid urbanization, which in turn, increased demand for housing. Through both public and private sector developments, driven by successive Malaysia Plans, the country to date has produced more than four million units of housing. The majority of houses are the medium density terraced mostly built in urban areas and within a short time span. It would seem that no attention was given to designing the houses to increase human comfort and minimize energy consumption taking cognizance of the hot humid climatic conditions that prevail throughout the year. As a consequence residential energy consumption has increased due to what seemingly are inconsiderate design decisions with regard to energy issues, compounded by an increase in the use of air-conditioning to maintain thermal comfort. This study addresses the possibilities of using passive design strategies to existing terraced houses to improve living conditions and conserve energy as well especially in the capital city of Kuala Lumpur. Given the nature of the climate, which is mostly invariant and outside the comfort range throughout the year, it considers utilising insulation in roofs (common but not obligatory) to try to find alternate design strategies that will reduce residential energy consumption while maintaining thermal comfort. The findings reported through the statistical analyses conducted on the post-evaluation and experimental studies contended that with the use of insulation in the roofs temperatures can be mitigated and minimum thermal comfort is attainable passively.

Keywords : *passive design, terraced housing, thermal comfort and insulation*

Category : Science, Engineering and Technology

1404

AUTONOMOUS AERIAL SURVEILLANCE USING QUADROTOR UAV#

Yasir Mohd Mustafah, *Mechatronics, Kulliyah of Engineering*

Rasyid Yazid, *Mechatronics, Kulliyah of Engineering*

Eqwan Roslan, *Mechatronics, Kulliyah of Engineering*

Exhibitor : Yasir Mohd Mustafah, Mechatronics Engineering, Kulliyah of Engineering

Advances in the electronics technology has made the aerial surveillance using UAV a possibilities. Aerial surveillance has becoming more important nowadays as its could provide useful bird-eye view of the area. Unmanned aerial surveillance can be performed using various type of aerial vehicles including the quadrotor type copter. The main advantages of using quadrotor for aerial surveillance is that it can carry higher load and can be kept at a particular positioned with ease in the air. In this work autonomous aerial surveillance is system was developed by incorporating intelligent image processing algorithms onto the quadrotor. The algorithms is responsible to make decision to control the behavior of the quadrotor.

Keywords : *Aerila Surveillance, UAV, Autonomous Agent*

Category : Science, Engineering and Technology

1405

AUTONOMOUS IONIZING RADIATION MAPPING#

Yasir Mohd Mustafah, *Mechatronics, Kulliyah of Engineering*
Nahrul Khair Alang Md Rashid, *Mechatronics, Kulliyah of Engineering*
Amelia Wong Azman, *Electrical and Computer Science, Kulliyah of Engineering*

Exhibitor : Yasir Mohd Mustafah, Mechatronics Engineering, Kulliyah of Engineering

Recent Fukushima-Daiichi accident which occurred on 11 March 2011 has attracted the attention of the world on the safety issue of nuclear and radiation technology. The main problem with the Fukushima Plant incident response was the direct involvement of human in radiation environment. The ability to autonomously perform radiation surveillance without the need of human operator would greatly enhanced the emergency response. This research proposed to design mobile robot based autonomous ionizing radiation mapping system. A mobile robot carrying ionizing radiation sensor will autonomously navigate through the irradiated field and radiation map can be constructed by fusing the reading of radiation sensor and positioning sensor of the robot.

Keywords : *Autonomous Agent, Radiation Mapping*

Category : Science, Engineering and Technology

1406

USE OF PALM OIL WASTE FOR ENERGY SOURCE IN IRONMAKING#

Hadi Purwanto, *MME, Kulliyah of Engineering*
Rusila Zamani Jusoh @ Abd Rashid, *MME, Kulliyah of Engineering*
Nurul Azhani Yunus, *MME, Kulliyah of Engineering*
Hamzah Mohd Salleh, *BTE, Kulliyah of Engineering*
Mohd Hanafi Ani, *MME, Kulliyah of Engineering*

Exhibitor : Hadi Purwanto, *MME, Kulliyah of Engineering*

Effective use of local iron ore and biomass waste as energy and material resources in iron making is an interesting economic prospect, since Malaysia imports iron ore to supply its domestic steel consumption while there is an abundance of biomass waste from the palm oil industry. In this work, a composite pellet made of Chini iron ore with palm oil wastes (palm kernel shell and empty fruit bunch char) was fabricated with average spherical diameters of 10 to 12 mm before subjected to reduction tests using an electric tube furnace. The effect of PKS and EFB char content on reduction rate was investigated at 600°C and 900°C. XRD analysis revealed that the original iron ore mainly contains iron oxide hydrate was converted into simple hematite after heating and then become magnetite after reduction. The iron oxide was successfully reduced to predominantly magnetite with small amount of wustite when 40 mass% of PKS and 30 mass% of EFB char were present in the composite pellet. The results showed that the rate of reduction increased with increasing PKS and EFB char content up to 40 mass %. Besides, 20 mass% of PKS and EFB char in reduction process was sufficient to reduce almost 14 -39 mass% of CO₂ emissions as well as decrease almost 13.89-39.5 mass% from total coke consumption in blast furnace method. Thus, the utilization of biomass as an energy source for iron making is an attractive method for reducing CO₂ emission and promoting green technology.

Keywords : Iron ore, Iron making, Palm kernel shell waste, Reduction, Energy, CO₂ emission

Category : Science, Engineering and Technology

1408

TOUCHIN: AN NFC SUPPORTED SMART ATTENDANCE SYSTEM#

Media Ayu, *Information Systems, Kulliyah of Information & Communication Technology*
Barroon Ahmad, *Information Systems, Kulliyah of Information & Communication Technology*
Aqqiela Zuhra, *Computer Science, Kulliyah of Information & Communication Technology*
Nour Tabet, *Information Systems, Kulliyah of Information & Communication Technology*

Exhibitor : Media Ayu, Information Systems, Kulliyah of Information & Communication Technology

NFC (Near Field Communication) technology has been used in people's life activities with the aim of increasing conveniences. Its main purpose lies on providing easiness and convenience to the users in interacting with other users and/or applications by reducing the number of steps the users need to perform. Nowadays, this NFC technology has been integrated in many smartphones. This integration has lead to the development of mobile based application that utilising the NFC to deliver better services to the users that support the 'natural way' interaction under a ubiquitous environment. In relation to that, here we propose a smart attendance system called TouchIn which is supported by the NFC technology. It is an innovative system that is expected to give better accuracy in recording students attendance and offer more efficient and effective way to record, monitor, as well as giving report of student's attendance

Keywords : *Smart attendance system, NFC technology, Intuitive computing*

Category : Science, Engineering and Technology

1409 ACTIWARE: AN ACTIVITY-AWARE APPLICATION FOR MOBILE PHONES#

Media Ayu, *Information Systems, Kulliyah of Information & Communication Technology*
Ahmad Faridi Matin, *Computer Science, Kulliyah of Information & Communication Technology*
Siti Aisyah Ismail, *Computer Science, Kulliyah of Information & Communication Technology*

Exhibitor : Media Ayu, Information Systems, Kulliyah of Information & Communication Technology

Context awareness is an important element in the pervasive and ubiquitous computing. It involves the ability of the computing system to be aware of the context in which a particular target user is experiencing. This involves the location in which the target is, the activity that the target is doing, the identity of that target and the time in which the activity occur. The focus of the project is to determine the activity aspect of context awareness. Here accelerometer data (extracted from modern smart phones) is used for that purpose. From our previous work, it is suggested that basic user activities can be recognized by manipulating the accelerometer data extracted from accelerometer sensor embedded inside mobile phones. This is done with the help of a suitable and efficient recognition algorithm for training and classifying the accelerometer data. In this work, we present our effort in classifying basic activities using smart phone without the need of server in order to train and classify the accelerometer data to support for an activity aware application that give intelligent responses to the users.

Keywords : *activity recognition, mobile application, machine learning*

Category : Science, Engineering and Technology

1410 IMPROVED METHOD OF DEVELOPING COMPATIBLE MIXED CULTURE OF MICROORGANISMS FOR BIOTECHNOLOGY APPLICATIONS#

Abass O. Alade, *Department of Biotechnology Engineering, Kulliyah of Engineering*
Ahmad Tariq Jameel, *Department of Biotechnology Engineering, Kulliyah of Engineering*
Suleyman A. Muyibi, *Department of Biotechnology Engineering, Kulliyah of Engineering*
Mohammed I. Abdul Karim, *Department of Biotechnology Engineering, Kulliyah of Engineering*
Mohd Zahangir Alam, *Department of Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Ahmad Tariq Jameel, Department of Biotechnology Engineering, Kulliyah of Engineering

Mixed cultures of microorganisms are conventionally grown on media plates and their compatibility in their mycelia interactions are used to determine the extent of their mutual compatibility or incompatibility. However, the concern for the development of effective mixed culture for biotechnology processes aroused the interest of the present study. Thus the mixed cultures developed in this study were further characterized quantitatively based on the selected enzymatic activities such as lipase and amylase in order to determine the extent at which these will influence the bioactivities of the mixed culture. Mixed culture involving *Pithomyces sacchari*-*Pithomyces sacchari*; *Pithomyces sacchari*-*Pestalotiopsis maculans*; *Pestalotiopsis maculans*-*Trichoderma virige*; *Trichoderma virige*-*Penicillium*; *Pithomyces sacchari*-*Aspergillus niger*; *Pithomyces sacchari*-*Phanerochaete chysosporium*; *Phanerochaete chysosporium*-*Penicillium*; *Pithomyces sacchari*-*Trichoderma virige*; *Trichoderma virige*-*Phanerochaete chysosporium*, and *Trichoderma virige*-*Aspergillus niger*, are prepared for the qualitative evaluation. The mixed cultures of *Trichoderma virige*/*Penicillium* gave the highest lipase (0.130 U/mL) and amylase (15.06 U/L) activities, while *Pithomyces sacchari*/*Trichoderma virige* gave the lowest lipase (0.072 U/mL) and amylase (2.135 U/L) activities. Since the mixed culture of *Trichoderma virige*/*Penicillium* demonstrated 'mutual mingling', with neither secretion nor inhibition, in their physical interaction, it therefore appeared as the most suitable mixed culture. This study thus provides a platform for the selection of viable mixed culture of microorganisms for biotechnology processes beyond the usual procedures of qualitative evaluations of mixed culture.

Keywords : *mixed culture, microorganism, enzymatic activity, bioactivity, compatibility*

Category : Science, Engineering and Technology

1411

ENGLISH-ARABIC RULE-BASED MACHINE TRANSLATION#

Tengku Mohd Tengku Sembok, *Computer Science, Kulliyah of Information & Communication Technology*
Amjad Al-Houseini, *Computer Science, Kulliyah of Information & Communication Technology*

Exhibitor : Tengku Mohd Tengku Sembok, Computer Science, Kulliyah of Information & Communication Technology

Machine translation is the attempt to automate all, or part of the process of translating from one human language to another. Up to date there is no general purpose MT system that satisfies all the wishes of the customers, while the specific purpose MT systems satisfied a high levels of accuracy, more than 98%, but these systems are restricted in their. MT systems have many obstacles, some of these obstacles are the problems in agreement and ordering of words in one language to another. Agreement between nouns and verbs in terms of number, gender, and case ending. As well as agreement between adjectives nouns, and pronouns which pose problems to be solved by MT algorithm. We present a MT system which translates English to Arabic using a rule-based and template-based approach in translating a well-structured English sentence into a well-structured Arabic sentence focusing on words agreement and ordering. The approach adopted is flexible to cater for any language, and scalable to handle the domain size. The lexicon and grammar database have been designed to be flexible where most of the rules are defined in the database tables in order to generalize the coding of the system.

Keywords : Machine Translation

Category : Science, Engineering and Technology

1412 LIVING WITH LOSS: THE NEW SHARED EXPERIENCES IN GRIEF SUPPORT GROUP#

Haniza Rais, *Educational Psychology and Counseling, Institute of Education*

Exhibitor : *Haniza Rais, Dept of Educational Psychology & Counseling, Institute of Education*

Living with Loss: The New Shared Experiences in Grief Support Group A formal structured bereavement group is relatively new in a Malay society. While support group has started to creep in to the society, it is crucial to assess participants' reactions to group experience. A qualitative study was conducted with the aim to describe the Malays participants' experience of being in a bereavement group. Additionally, the study also explored the participants' reactions to the group activities and how they were affected by the group experience. Eight college students were recruited to participate in a six series of group counseling based on a semi structured group proposal. The group counselor assisted participants to process their experience being in the group at the last group meeting. Data were also collected from the in-depth post-group interviews with individual participants. The group proposal was revised and a module for Grief Support Group is proposed.

Keywords : *Grief and Loss, Death and Bereavement, Group Counseling, Support Group Coping Reactions, Families*

Category : Science, Engineering and Technology

1413 STATISTICAL OPTIMIZATION OF PROTEIN BUFFER TO PURIFY HYDROLASES FROM THE SKIM LATEX OF HEVEA BRASILIENSIS#

Nazhirah Mohamed, *Biotechnology- Biochemical Engineering, Kulliyah of Engineering*
Faridah Yusof, *Biotechnology- Biochemical Engineering, Kulliyah of Engineering*

Exhibitor : Nazhirah Mohamed, Biotechnology Engineeirng, Kulliyah of Engineering

Hydrolase, also known as hydrolytic enzyme, has a bright future in vast areas such as detergent, food, flavour industry, pharmaceuticals, fine chemicals and green technology. Protein makes about 2% of the total latex has been reported to contain useful enzymes; some of them like hydrolases. This study purposes to develop a purification strategy for hydrolases from the byproduct of latex processing that is skim latex. A column chromatography technique will be conducted to purify the target protein namely an ion exchange chromatography on DEAE Sepharose™. A statistical study using a central composite design of experiment by Design Expert® 6.0.8 software will be introduced to the ion exchange chromatography in order to investigate the relationship between the pH and concentration of protein buffer towards the recovery of total protein content, total enzyme activity, and protein purity thus, came up to an optimized condition of protein buffer. The success of this column chromatography purification technique will be assayed by sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) to evaluate the protein purity, Bradford's protein assay to quantify the protein yield and enzymatic assay to measure total activity of active protein. The study is significant as an initial attempt to establish an alternative way of utilizing the natural rubber waste and to turn into value added product.

Keywords : *hydrolases, industrial enzymes, latex serum, purification, ion exchange chromatography*

Category : Science, Engineering and Technology

1415 SUSTAINABLE STRATEGIES AND OPERATIONAL SAVINGS OF A GATED COMMUNITY OF MEDIUM DENSITY HOMES – COMPARING INTERNATIONAL AND MALAYSIAN CASE STUDIES#

PuteriShireen Jahn kassim, *Dept. of Architecture, Kulliyah of Architecture & Environmental Design*
Noor Aziah Mohd Ariffin, *Dept. of Architecture, Kulliyah of Architecture & Environmental Design*
Rawia Abdul Aziz, *Dept. of building services engineering, Kulliyah of Architecture & Environmental Design*

Exhibitor : PuteriShireen Jahn kassim, Architecture, Kulliyah of Architecture & Environmental Design

The aim is to design, develop and monitor an innovative sustainable gated housing development in Segambut Tengah, Kuala Lumpur which incorporate a range of sustainable features and green technologies in medium density housing including heat reclaim system, rainwater harvesting, solar panels, roof insulation and double wall system. Due to the importance of capital costs and long-term savings in marketing the homes, the IIUM team then compile the post-occupancy data and compared with various other sustainable housing developments including semi-detached housing in Malaysia and those found in the international context. It was found that some features such as rainwater harvesting and solar panels must be features ‘shared and common’ rather than features of the individual units as occupants will be unlikely to maintain these green features. The cost of building and maintaining such features must be folded into the price of each home while at the same time, proclaiming the green credentials and long term savings of the houses. After a period of monitoring the energy performance, the researches then compiles and tabulates the energy and water consumption data of the green features, their green cost premium and their expected and proven lifecycle savings during operational phase. The results indicate that sustainability is commercially viable in the high-end medium housing market however their operational savings are much affected by, and contingent upon the awareness of occupants and owners on the advantages of green features and this is necessary to realise the savings in the longterm. Such sustainable features should be marketed as part and parcel of the sustainable lifestyle of the home owners.

Keywords : *sustainable housing energy, lifecycle operational savings, post occupancy performance*

Category : Science, Engineering and Technology

1416 MANGROVE SEDIMENT OF TANJUNG LUMPUR: POTENTIAL OF NEW ACTINOMYCETE RESOURCES#

Zaima Azira Zainal Abidin, *Biotechnology, Kulliyah of Science*
Ahmed Jalal Khan Chowdhury, *Biotechnology, Kulliyah of Science*
Nurhanisah Mohamad, *Biotechnology, Kulliyah of Science*

Exhibitor : Zaima Azira Zainal Abidin, Biotechnology, Kulliyah of Science

Mangrove Sediment of Tanjung Lumpur: Potential of New Actinomycete Resources ABSTRACT Actinomycetes are common soil inhabitants and are renowned for the production of structurally diverse and biologically active secondary metabolites. However, extensive screening and isolation of actinomycetes from soil has led to exhaustive cultivars and re-discovery of known compound. Therefore, there is a dire need to find a new resource of actinomycetes that may lead to finding new species and probably new taxa that will ultimately led to the discovery of novel bioactive molecules. Underexplored habitats such as the oceans, dunes, deserts and mangroves are slowly gaining the recognition as potentially new resources of actinomycetes as indicated by recent discoveries of new taxa and novel metabolites. Thus, this study was aimed to isolate actinomycetes in mangrove sediment samples of Tanjung Lumpur, Kuantan using several pretreatments and various selective media. The application of various pretreatment methods and selective media were expected to reduce the number of dominant genera i.e. Micromonospora, Rhodococcus and Streptomyces and bring about the rare actinomycetes from mangrove sediments. A total of 110 potential actinomycete isolates were obtained from five different sampling sites by using these procedures. Location 3 and Location 5 produced the highest numbers of isolate which was 42 CFU of potential actinomycetes. Pretreatment method using sterilized sea water and heated at 55oC for 15 minutes was the most effective method for the isolation of actinomycetes as indicated by high number of isolates per gram sediment which was 71 CFU, whereas dry heat treatment yielded only 39 CFU. Pretreatment with phenol produced no actinomycetes instead high recovery of fungi was obtained. Four different selective media were applied to assess the optimal conditions for the isolation of rare actinomycetes from sediment. Gause modified medium was the most suitable medium as it showed the highest percentage for the recovery of actinomycetes (35%). Actinomycetes found in this study showed distinct and unusual morphologies and characteristics, an indication of the actinomycetes diversity present in the mangrove sediment. Interestingly, mangroves of Tanjung Lumpur were located near to urban area which polluted with industrial and domestic waste. Hence, all isolates were probably have adapted to the extreme environment and might lead to the discovery of new bioactive compounds. Therefore, mangrove sediment of Tanjung Lumpur is valuable for the isolation of novel actinomycetes with the potential to yield useful new product.

Keywords : *Actinomycetes, Tanjung Lumpur, mangrove, pretreatments, selective media*

Category : Science, Engineering and Technology

1418 SOLE SHOES : ELECTRON BEAM IRRADIATED OF HDPE-EPR BLEND#

Hazleen Anuar, *Manufacturing & Materials Engineering, Kulliyah of Engineering*
Husniyah Aliyah Lutpi, *Manufacturing & Materials Engineering, Kulliyah of Engineering*

Exhibitor : Hazleen Anuar, Manufacturing & Materials Engineering, Kulliyah of Engineering

This study focuses on the mechanical effect of different composition of polymer blend. Polymer blend of high density polyethylene (HDPE) and ethylene propylene rubber (EPR) were selected and varied by three different compositions which are 70:30, 50:50 and 30:70. HDPE-EPR blend is believed to be the best material for sole shoe. In which, HDPE has good flexibility while, EPR can maintain optimum performance at high and low temperature as well as provide better gripping characteristic that suits for insole and outsole sport shoe. On the other hand, the time efficiency of electron beam irradiation on these polymer blends helps in improving the crosslinking of HDPE-EPR blend. The aim of this paper was to find the optimum composition of electron beam irradiated polymer blends for sole shoes especially in sport application. These irradiated polymer blends were produced by melt blending, underwent compression moulding and then were irradiated by electron beam at 100 kGy/s. Mechanical test of tensile and hardness test were investigated and the morphology of the failure fracture was analysed by field emission scanning electron microscopy (FESEM). The polymer blend with 70% of HDPE and 30% of EPR showed the optimum result of tensile strength, tensile modulus, hardness low density as well as ductile failure image.

Keywords : *Polymer blends, High Density Polyethylene (HDPE), Ethylene Propylene Rubber (EPR), Mechanical properties, Morphology, Electron beam, Sole shoe.*

Category : Science, Engineering and Technology

1421 NONINVASIVE POWER TRANSFER INDUCTIVE COUPLING SYSTEM FOR IMPLANTABLE DEVICES#

AIZURA BINTI ABDULLAH ABDULLAH, *ECE, Kulliyah of Engineering*
AHMAD ANWAR BIN ZAINUDDIN ZAINUDDIN, *ECE, Kulliyah of Engineering*
FOUGHALIA AISSA FOUGHALIA, *ECE, Kulliyah of Engineering*
HAIDER SYED SAMNAN HAIDER, *ECE, Kulliyah of Engineering*
MOHAMMED M.M. SHOBAKI SHOBAKI, *ECE, Kulliyah of Engineering*
MD. NOMAN HABIB KHAN KHAN, *ECE, Kulliyah of Engineering*
UMAIR AHMED KHAN KHAN, *ECE, Kulliyah of Engineering*
ZURAIDAH BINTI ZAINUDIN ZAINUDDIN, *ECE, Kulliyah of Engineering*
Sheroz Khan, *ECE, Kulliyah of Engineering*

Exhibitor : Sheroz Khan, Electrical and Computer Engineering, Kulliyah of Engineering

Recent developments have shown that the noninvasive means of powering the low power implants has become popular. Such devices are normally powered up by the technique of inductive coupling. Inductive coupling is used to power up electronic devices for gathering sensed data in return for power sent. This poster addresses the performance of an inductive coupling system for two coils and four coils circuit setup. Analytical as well as simulations have been conducted to plot all the design parameters. Simulation results have been compared with the analytical plots, proving the utility of the derivations made. Power transfer efficiency for the inductive coupling system has been studied in detail and it has been found that it depends mainly on the mutual coupling between the coils. Under consideration Comparative results for the different values of mutual coupling have been plotted and results show that increasing the mutual coupling improves the power transfer efficiency correspondingly.

Keywords : *inductive coupling, telemetry, biomedical, implants, non-contact*

Category : Science, Engineering and Technology

1426

1×2 OPTICAL SWITCH FOR INDOOR LAN#

Moinul Bhuiyan, *Mechatronics, Kulliyah of Engineering*

Yochi Haga, *New Industry Creation Hatchery Center, Tohoku University, Reseach Institute*

Munira Bhuiyan, *School of Medicine and Health Science, Monash University Sunway Campus, Reseach Institute*

Masayoshi Esashi, *New Industry Creation Hatchery Center, Tohoku University, Reseach Institute*

Exhibitor : Moinul Bhuiyan, Mechatronics Engineering, Kulliyah of Engineering

Plastic optical fiber (POF) is suitable for indoor local area network (LAN), for example, in-home or office networks, because of its flexibility and its ease of connection due to its relatively large core diameter. A 1x2 optical switch for indoor LAN using POF and a shape memory alloy (SMA) coil actuator with magnetic latches was successfully fabricated and tested. In this paper, the design concept and the characteristics of this switch are described. To achieve switching by the movement of a POF, large displacement is necessary because the core diameter is large (e.g., 0.486 mm). A SMA coil actuator is used for large displacement and a magnetic latching system is employed for fixing the position of the shifted POF. For this design, the insertion loss is 0.40 to 0.50dB and crosstalk is more than -50dB without index-matching oil. Switching speed is less than 0.5 s at a driving current of 80 mA. A cycling test was performed 1.4 million times at room temperature. Another optical fiber switch was fabricated and successfully actuated using plastic clad fiber (PCF). PCF also has a large core diameter (e.g., 0.20 mm) and optical switches using PCF will be useful for short distance networks between buildings.

Keywords :

Category : Science, Engineering and Technology

1430 CARDIAC ARRHYTHMIAS CLASSIFICATION USING REGULARIZED LEAST SQUARES CLASSIFIER#

Hamza Baali, *Mechatronics Engineering, Kulliyah of Engineering*
Rini Akmeiliawati, *Mechatronics Engineering, Kulliyah of Engineering*
Momoh Salami, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : Rini Akmeiliawati, Mechatronics Engineering, Kulliyah of Engineering

An algorithm for arrhythmia classification that conforms to the standard of the Association for the Advancement of Medical Instrumentation (AAMI) is proposed in this work. Three inter-patient classification scenarios are considered namely, detection of ventricular ectopic beats (VEBs), detection of supraventricular ectopic beats (SVEBs) and the multiclass recommended taxonomy. A new set of features extracted from the application of orthogonal decomposition of the ECG signal has been developed. These features in conjunction with some commonly used features are fed into the Regularized Least Squares Classifier (RLSC) with linear kernel. The proposed classification scheme shows good separation capability between the classes of ECG arrhythmias as it achieved a Balanced Classification Rate (BCR) of 83.9 % for the multiclass scenario which is comparable to the state-of-the-art performance of automatic arrhythmia classifications.

Keywords : ECG, Arrhythmia classification, Regularized Least Squares Classifier

Category : Science, Engineering and Technology

1437 EXPLOITATION OF MANGROVE ECOSYSTEM INTRINSIC VALUES AS POTENTIAL SOFTSCAPE ELEMENTS TOOL FOR MALAY CULTURAL LANDSCAPE HERITAGE#

RASHIDI OTHMAN, *LANDSCAPE ARCHITECTURE, Kulliyah of Architecture & Environmental Design*
RAZANAH RAMYA, *LANDSCAPE ARCHITECTURE, Kulliyah of Architecture & Environmental Design*
NOR HAFIZANA MAT JUSOH, *LANDSCAPE ARCHITECTURE, Kulliyah of Architecture & Environmental Design*

Exhibitor : RASHIDI OTHMAN, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*

In recent years, there has been a growing concern over the survival of mangrove species and their habitats either worldwide or in Malaysia context. The damaging effect of human activity on mangrove ecosystems has become a growing public concern, particularly the rapid pace at which species have disappeared, a consequence of the accelerated spread of humans into more habitats and introduction of toxic chemicals into the environment. 32 mangrove species consist from the family such as Pteridaceae, Palmae Avicenniacea, Rhizoporaceae, Meliaceae, Acanthaceae, Combretaceae, Sonneratiaceae, Sterculiaceae, Fabaceae, Myrsinaceae and Rutaceae have been observed at 7 different locations of mangrove forest such as Sungai Merbok, Kedah; Tanjung Piai, Johor; Kuala Sepetang, Perak; Kuala Kemaman, Terengganu and Sungai Ular, Pahang. In term of ecological functional uses there were 14 species act as the aquatic nurseries, 21 species act as the shoreline stabilizer and act as protector of the mangrove ecosystem water quality. Whereas for ethno-botanical uses there were 15 species were used as food and medicine, 20 species were used as utility such as timber and pole, 3 species for cosmetic, 2 species for dye and others for ritual and poison. Each classification has specific purposes and functions which later determine the accumulation of plant materials selection which portray the habitat or type of environments in which these plant species origin will emerge as potential softscape elements tool and indicator in creating identity of Malay landscape for specific culture and locality. The facts are traditional knowledge of mangrove species usage especially among Malay community is disappearing and threatened by rapid changes in traditional lifestyles and cultural practices particularly by the spread of Islam, formal education and emphasis on reliance of modern medical care. Therefore this study aimed to introduce mangrove species as potential landscape plant materials either as aesthetic values or functional purposes in order to raise public concern about preservation and conservation of mangrove habitat.

Keywords : Malay landscape, mangroves ecosystem, landscape ecology, ethnobotany

Category : Science, Engineering and Technology

1440

**ASSESSING MALAYSIAN QUANTITY SURVEYORS' COMPETENCE
TOWARDS THE PROVISION OF PFI SERVICES#**

Khairuddin Abdul Rashid, *Quantity Surveying, Kulliyyah of Architecture & Environmental Design*
Samer Shahedza Khairuddin, *Quantity Surveying, UiTM,*
Ahmad Arzlee Hassan, *Quantity Surveying, UiTM,*

Exhibitor : Khairuddin Abdul Rashid, Quantity Surveying, Kulliyyah of Architecture & Environmental Design

Malaysia began adopting the Public Private Partnership (PPP) approach, as a compliment to the conventional procurement approach, in the provision of public infrastructure and services, initially in 1983 via Privatization, and subsequently in 2006 via the Private Finance Initiative or PFI. Among the key reasons why the government adopted the PPP approach include constraints in the public purse and to meet the demand for higher level quality in public infrastructure and services. Typically, Quantity Surveyors are engaged to provide professional services including procurement, costing and contractual advisory services. With the introduction of PFI, Quantity Surveyors are expected to provide similar professional services and beyond, given that services under PFI are not similar to conventional procurement. Past studies suggested that key Malaysian professionals including Quantity Surveyors may not possess the appropriate knowledge, skills and expertise to provide PFI procurement services. In an effort to understand better the type of competencies required in the provision of PFI services and to ascertain whether Malaysian Quantity Surveyors do possess the required competencies, a study was carried out. The results from the study, carried out via a questionnaire survey, involving 31 responding Quantity Surveyors (respond rate of 4.71%) suggested that; 1. Most Malaysian QSs are familiar with PFI. 2. The key competencies required in the provision of PPP/PFI services identified are: Technical, Financial, Legal, Hard and soft skills, Contractual, VfM and experience. 3. Competency gap exist i.e. there is a gap between competencies required and competencies possessed by the Malaysian QSs. The critical areas in terms of shortcoming in the core competencies identified are: experience, VfM and financial.

Keywords : *Competencies, Construction, Infrastructure, Public Private Partnership, Procurement., Private Finance Initiative*

Category : Science, Engineering and Technology

1441 A WEB CRAWLER TOOL TO MINE DATA FROM OPEN-SOURCE REPOSITORIES#

Normi Sham Awang Abu Bakar, *Computer Science, Kulliyah of Information & Communication Technology*
Iqram Mahmud, *Computer Science, Kulliyah of Information & Communication Technology*

Exhibitor : Normi Sham Awang Abu Bakar, Computer Science, Kulliyah of Information & Communication Technology

Empirical analysis is an important area in software engineering. The emergence of various open-source software repositories has contributed tremendously to the advancement in the empirical software engineering research. Researchers can easily obtain the system's source code from repositories that host the project, for instance, SourceForge , GoogleCode and GitHub , as well as from the websites of the open-source projects themselves, such as Apache, Mozilla and OpenBSD . Due to the vast number of systems hosted in the open-source repositories, it is very time-consuming to manually select the systems to be included in the research. Thus, there is a need to create a tool which can automatically search for the relevant systems and provides the important information to the researchers. This research aims to develop such tool, using a language called Python and utilizes special text strings for describing search patterns, called Regular Expressions or regex. This tool helps to search for the systems needed by the researchers within minutes and as a result, saves large amount of time for the researchers to do data collection.

Keywords : Web crawler tool. data mining, open-source repositories

Category : Science, Engineering and Technology

1442 MIXTURE STATES OF ROTATIONAL BANDS WITH $K_p < 2+$ IN $^{172,172,174}\text{Yb}$ ISOTOPES#

Abdurahim Okhunov, *Science in Engineering, Kulliyah of Engineering*

Phazlitdin Usmanov, *Physics,*

Anwer Ahmed Al-Sammarrae, *Physics, UM, Kulliyah of Science*

Hasan Abu Kassim, *Physics, UM, Kulliyah of Science*

Exhibitor : Abdurahim Okhunov, Science in Engineering, Kulliyah of Engineering

Accounting for Coriolis mixing of experimentally known rotational bands with $K_p \leq 2+$, non-adiabatic effects in energy and electromagnetic characteristics of excited states are investigated, within phenomenological model. The energy and wave function structure of excited states are calculated. The finding reveals that the bands mixing have been found to have considerable impact on the wave function of low-lying states $0+$ and $2+$ bands. In addition, the probabilities of E2- and M1- transitions have been calculated. The values from calculations of transitions and the multipole mixture coefficients $d(E2/M1)$ from $0+$ and $2+$ bands are compared with the experimental data. Finally, it is noteworthy that there is an obvious inverse relation between $g(R)$ factor and angular momentum I of the ground band states. This has been explained by a mixing ground and $K_p = 1+$ bands which have a strong B(M1) to ground state.

Keywords : Energy, low-lying, rotational, reduced probability, isotopes

Category : Science, Engineering and Technology

1444 IN-VITRO REGENERATION OF ORTHOSIPHON STAMINEUS (MISAI KUCING) USING AXILLARY BUD#

Zarina Zainuddin, *Biotechnology, Kulliyah of Science*
Asmaa' Mohd Kamil, ,

Exhibitor : Zarina Zainuddin, Biotechnology, Kulliyah of Science

Orthosiphon stamineus or known as misai kucing is a popular herbal tea plant that helps in treating the ailments of kidney and bladder, diabetes mellitus and gout. Due to high demand of this medicinal plant a large propagation of this plant is recommended. In this study, a protocol for regeneration of Orthosiphon stamineus using axillary bud as the explant was established. Murashige and Skoog (MS) medium supplemented with various concentrations of 6-benzylaminopurine (BAP) were evaluated for their effects on shoot induction. Results obtained revealed that the best shooting ability was observed when explants were cultured on MS medium supplemented with 0.2 ppm of BAP. Subsequently, shoot elongation of established shoot was obtained in medium containing gibberelic acid (GA3) with concentration of 0.5 ppm and 1.0 ppm. The best shoot elongation was achieved with medium supplemented with 0.5 ppm of GA3. Subsequently the elongated explants were transformed to root induction medium with the addition of either 0.2 ppm of 1-naphthaleneacetic acid (NAA) or 0.5 ppm NAA. The explants showed positive response in medium supplemented with 0.2 ppm of NAA. From this study it can be confirmed that suitable concentration of plant growth regulators can be used in the regeneration of Orthosiphon stamineus through tissue culture technique

Keywords : *Orthosiphon stamineus, regeneration, axillary bud, plant growth regulators.*

Category : Science, Engineering and Technology

1446

SG. PURU RIVER REHABILITATION#

Zaki Zainudin, *Biotechnology Engineering, Kulliyah of Engineering*
Muhammad Saedi Jami, *Biotechnology Engineering, Kulliyah of Engineering*
Ma'an Fahmi Al-Khatib, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Zaki Zainudin, Biotechnology Engineering, Kulliyah of Engineering

Sg. Pusu is a river that flows through the campus of the International Islamic University Malaysia (IIUM). The river is murky in appearance, particularly after a rainfall event, which reflects elevated suspended solids (SS) levels. This study aims to characterize the water quality conditions of the river under high flow conditions via a modeling approach and to determine the amount of load reduction needed to achieve a Class II denotation of the National Water Quality Standards (NWQS). The modeling revealed that at least 2,880 kg/hr of SS had to be reduced to achieve the Class II target. Sand-mining and developmental activities upstream were the primary source of SS. Besides this; BOD5 and NH3-N levels were also elevated, beyond the Class IV denotation. To achieve Class II, at least 122 kg/hr of BOD5 and 42 kg/hr of NH3-N have to be reduced.

Keywords : *Sg. Pusu, suspended solids, rehabilitation, QUAL2K*

Category : Science, Engineering and Technology

1447 IN VITRO CALLUS AND SHOOT CULTURES OF RUTA ANGUSTIFOLIA (L.) PERS AS NEW SOURCE FOR ANTIMICROBIAL AGENTS#

Norazian Mohd Hassan, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*
Sri Viowarti Noerdin, *Basic Medical Sciences, Kulliyah of Pharmacy*
Laina Zarisa Mohd Kamal, *Pharmaceutical Chemistry, Kulliyah of Pharmacy*
Deny Susanti Darnis, *Chemistry, Kulliyah of Science*

Exhibitor : Norazian Mohd Hassan, Pharmaceutical Chemistry, Kulliyah of Pharmacy

Ruta angustifolia (L.) Pers., which is known as Garuda in Malaysia is the only species in the genus Ruta of Rutaceae family that can be found in tropical climate. In Malaysia, it is usually grown as pot plant due the ill suited climate for its growth. It is used medicinally to treat skin diseases, boils and ear infection. In-vitro callus and shoot cultures have been established from its stem explants. Both tissues were multiplied, harvested and freeze dried for consecutive extraction with hexane, dichloromethane and methanol. The crude extracts from both tissues and intact plant were screened for their antimicrobial activity by disk diffusion assay against Staphylococcus aureus ATCC 25923, Escherichia coli ATCC 25922 and Candida albicans ATCC 90028. The antimicrobial active compounds were isolated following bioassay-guided isolation approach. Agar overlay bioautography assay was performed to screen for the antimicrobial active compounds. The targeted active compounds were isolated by column chromatography and chromatotron. The crude extracts of the in vitro cultures showed various degree of activity against the tested microbes and better activity as compared to that of intact plant. Three antimicrobial active alkaloids were detected and isolated from both in vitro tissues. The isolated compounds were identified as arborinine, graveoline and skimmianine.

Keywords : *Ruta angustifolia, antimicrobial, callus, shoot cultures, alkaloids*

Category : Science, Engineering and Technology

1449

SOLAR BASED VENTILATOR PROTOTYPE#

Abdul Razak Sopian, *Architecture, Kulliyah of Architecture & Environmental Design*

Wardah Fatimah Mohammad Yusoff, *Architecture,*

Agung Prabowo Sulistiawan, *Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Abdul Razak Sopian, Architecture, Kulliyah of Architecture & Environmental Design

This presentation present the investigation on effectiveness of solar based ventilator prototype for usage in industrial and residential buildings. The testing on the prototype itself and when it is applied to the building shows that it is able to enhance air flow rate, reduce air temperature and increase the air velocity at the indoor working area.

Keywords : *Solar, Ventilator, Prototype*

Category : Science, Engineering and Technology

1453

ENHANCED NEMO PROTOCOL TO ACHIEVE SEAMLESS HANDOFF#

Aisha-Hassan Abdalla, *Electrical and Computer Engineering, Kulliyah of Engineering*
Shayla Islam, *Electrical and Computer Engineering, Kulliyah of Engineering*
Mohammad Kamrul Hasan, *Electrical and Computer Engineering, Kulliyah of Engineering*
Mohammad Hadi Hababei, *Electrical and Computer Engineering, Kulliyah of Engineering*
SHIHAB A HAMEED, *Electrical and Computer Engineering, Kulliyah of Engineering*
Othman O Khalifa, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : Aisha-Hassan Abdalla, Electrical and Computer Engineering, Kulliyah of Engineering

Network Mobility (NEMO) is engaged to manage the movement of Mobile Router (MR) and its Mobile Network Nodes (MNNs) during handoff, which concerned to improve the performance of mobility management protocol in order to achieve seamless handoff with least delay and packet loss as well. For the real time scenarios, also it can be seen that a longer time is required to complete handoff process which may cause performance degradation of the applications (i.e. VoIP, video streaming) running on Mobile Network Nodes (MNNs). Therefore, these most significant shortcomings become technical challenges for current researchers. In Global Mobility Management (GMM), Fast Handover Scheme for Hierarchical Mobile IPv6 (FHMIPv6) works successfully as a host mobility solution whereas, Proxy Mobile IPv6 (PMIPv6) is the solution for Local Mobility Management (LMM). However, a Macro Mobility Scheme in NEMO (MM-NEMO) is proposed with the intention of establishing uninterrupted Internet connection during handoff. The performance of the proposed scheme is evaluated using both numerical and simulation approaches. The proposed scheme is benchmarked with the standard NEMO BSP. The numerical result proves that the location update cost for the proposed MM-NEMO scheme is 51% less than that of NEMO-BSP. The simulation result confirms that the MM-NEMO scheme outperforms the standard NEMO BSP in terms handoff latency (reduced to 42%) and packet loss (less than 6%).

Keywords : MM-NEMO ;NEMO-BSP; HANDOFF

Category : Science, Engineering and Technology

1454 PROBLEM BASED LEARNING IN TEACHING MATHEMATICS TO FOREIGN STUDENTS#

sheila chakrabarty, *Bridging, Center for Language and Pre University Acad. Development*

none none, *none, Center for Language and Pre University Acad. Development*

none none, *none, Center for Language and Pre University Acad. Development*

Exhibitor : sheila chakrabarty, Bridging, Center for Language and Pre University Acad. Development

Mathematics is a core subject for foundation students who will be taking up engineering, pharmacy, medicine and architecture. Therefore, it is crucial that a proper and effective method of teaching is adapted in order to build their understanding in mathematics. This paper discusses types of activities given based on problem based learning (PBL). 40 undergraduate foundation level foreign students participated in this study. These students come from diverse background especially in terms of culture and language. Communicating in English is a major problem amongst them. The researcher divided the students into small groups of 5 and presented 3 tasks in duration of 6 weeks. Topics covered were functions, matrix and trigonometry. They work in groups, discusses what to learn in order to solve the assign problem. They apply their new knowledge on the problem and reflect on what they learned and the effectiveness of the strategies employed. The teacher acts to facilitate the learning process rather than to provide knowledge. As the course progressed, they showed more confidence as they grew closer to each other and be able to grasp the content and apply their knowledge to solve the problems given to them. The findings show that there was an active participation on the students' part and from the interview conducted; it was found that most of them gained more confidence and were able to communicate with each other towards a common goal despite their differences. They become more motivated to learn as they begun to solve problems. As such, problem based learning is an approach that can help develop students' better understanding in mathematics as it enhances critical thinking , problem solving skills as well as communication skills. Hence, PBL can promote lifelong learning and is an effective approach in overcoming cultural barriers and encourages unity and collaborative learning within diverse student groups.

Keywords : *Foreign students, diverse culture, mathematics, problem based learning (PBL).*

Category : Science, Engineering and Technology

1456

IMPACT OF PARALLEL PROJECT MANAGEMENT#

Jamaludin Ibrahim, *Department of Information System, Kulliyah of Information & Communication Technology*

Sharyar Wani, *Department of Information System, Kulliyah of Information & Communication Technology*

Mutasim Elsadig, *Department of Information System, Kulliyah of Information & Communication Technology*

Husein Osman, *Department of Information System, Kulliyah of Information & Communication Technology*

Exhibitor : Jamaludin Ibrahim, Information Systems, Kulliyah of Information & Communication Technology

With number and complexity of projects increasing, enterprises face the challenge of orchestrating more projects simultaneously, and anticipating inter-dependencies of projects on the fly. There is increasing likelihood that even if project deliverables made sense at the time of project initiation, rapid enterprise change may have made them unsuited at delivery time. Yet there are few studies have investigated the implications of parallel project. Therefore, this paper aims to highlight the influence of handling more than one project simultaneously on schedule, budget and product's quality as well. To explore the implication of parallel projects, several interviews have been conducted among a number of project managers form International Islamic University Malaysia (IIUM) represented different sectors. There is a general consensus among project mangers that doing more than one project at the same time is a big challenge. The findings of this study showed that most of project mangers suffer from the problem of focus on one project at the expense of other. As a result, some projects do not end on time, do not meet the quality standard, and need extra budget.

Keywords : *Project Management, Parallel Projects, Multiple Projects*

Category : Science, Engineering and Technology

1457 **STUDY AND ANALYSIS ON THE PARAMETERS OF AN FES STIMULATOR CIRCUIT IN PRODUCING EFFECTIVE STIMULI FORCES#**

Jannatul Naeem, *Electrical and Computer Engineering, Kulliyah of Engineering*
Amelia Wong Azman, *Electrical and Computer Engineering, Kulliyah of Engineering*
Sheroz Khan, *Electrical and Computer Engineering, Kulliyah of Engineering*
Yasir Mohd Mustafah, *Mechatronic, Kulliyah of Engineering*

Exhibitor : Jannatul Naeem, Electrical and Computer Engineering, Kulliyah of Engineering

With the increasing awareness and advancement in medical rehabilitation program, there has been more demand in the usage of Functional Electrical Stimulation (FES) system around the world. In many published reports, it has been proven that FES system has managed to improve the lives of patients who are suffering from physical mobility. While there are many off-the-shelf FES systems available in the market, unfortunately due to its high cost, not many local hospitals are equipped with the system. This work presents a transformerless based FES stimulator circuit. Experiments have been conducted to study and analyze the effect of the stimuli parameters on the designed circuit in producing effective muscle response.

Keywords : *Functional electrical stimulation, upper limb, muscle response*

Category : Science, Engineering and Technology

**1459 IDENTIFICATION AND CHARACTERIZATION OF BURKHOLDERIA PSEUDOMALLEI
SERINE AND METALLOPEPTIDASES#**

NORASLINDA MUHAMAD BUNNORI, *BIOTECHNOLOGY, Kulliyah of Science*

Exhibitor : NORASLINDA MUHAMAD BUNNORI, Biotechnology, Kulliyah of Science

Burkholderia pseudomallei K96243, the causative agent of melioidosis, is reported to produce various extracellular products, including proteases. The role of these proteases in the melioidosis, however, remains obscure. Previous findings have hinted at the inherent pathogenicity of the protease during *B. pseudomallei* K96243 infection. We chose to study the two major families peptidases, i.e. serine peptidases and metallopeptidases present in *B. pseudomallei* K96243. The data mining revealed eighty ORFs (open reading frame) that potentially code for these peptidases and have prominent homology with *B. pseudomallei* K96243 based on prediction of function by bioinformatics approach. The annotations and classification lead forty eight and thirty two putative peptidases belong to serine peptidase and metallopeptidase, respectively. The distribution of 98% from the identified putative peptidase belongs to endopeptidases (EC 3.4.21. and EC 3.4.24.) and exopeptidases (EC 3.4.11., EC 3.4.13., EC 3.4.14., EC 3.4.16. and EC 3.4.17) and another 2% belongs to EC 3.5.

Keywords : *Burkholderia pseudomallei, serine peptidases, metallopeptidases*

Category : Science, Engineering and Technology

1467 IMPLEMENTATION AND OPTIMIZATION OF ANPR ON ANDROID MOBILE DEVICES#

Abdul Mutholib, *Electrical and Computer Engineering, Kulliyah of Engineering*
Teddy Surya Gunawan, *Electrical and Computer Engineering, Kulliyah of Engineering*
Mira Kartiwi, *Information Systems, Kulliyah of Information & Communication Technology*
Jalel Chebil, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : Teddy Surya Gunawan, Electrical and Computer Engineering, Kulliyah of Engineering

Android platform has gained popularity in recent years in terms of market share and number of available applications. The modeling, design and analysis of ANPR on mobile devices such as android devices is a poorly studied area. In this research, automatic number plate recognition (ANPR) was designed and implemented on Android platform. Furthermore, the system has been optimized for smart phone application which has limited camera resolution and processing power. Results showed about 96% recognition rate.

Keywords : *Automatic Number Plate Recognition, Android, Optical Character Recognition, Recognition Rate*

Category : Science, Engineering and Technology

1468

**DESIGN , SIMULATION AND PERFORMANCE MONITORING OF AN
INNOVATIVE CANOPY ROOF TO ACHIEVE COMFORT WITHOUT
AIRCONDITIONING IN A LARGE SHOPPING CENTER IN MALAYSIA#**

puteri Shireen Jahnkassim, *Department of Architecture, Kulliyah of Architecture & Environmental Design*

Maisarah Ali, *The Manufacturing and Materials Engineering, Kulliyah of Engineering*

Yousif abdalla Abkr, *Faculty of Engineering, University of Nottingham Malaysia Campus,*

Noorhanita Abd Majid, *Department of Architecture, Kulliyah of Architecture & Environmental Design*

Ihab Faisal Ibrahim, *Masters of Science in building services engineering, Kulliyah of Architecture & Environmental Design*

Exhibitor : puteri Shireen Jahnkassim, Architecture, Kulliyah of Architecture & Environmental Design

Large covered plazas shopping malls are problematic as they typically utilize a high level of air-conditioning for comfort of large numbers of visitors resulting in a high degree of energy wastage. By utilizing simulation tools to test, comfort, ventilation and daylight performance of a large plaza, IIUM researchers through a collaboration with the shopping mall developer, architects and designers, refined and then monitored the performance of the final built plaza and shopping center. By optimizing the openings in skylight and sectional details, the balance of daylight and heat gain was achieved while the height of the atrium and its openings was utilized to exhaust hot air which accumulated upwards. It was found that the atrium achieved the comfort level without airconditioning through a combination of limiting solar great gain, eliminating glare and exhausting hot air , placement of water features under an innovative roof in the tropics. In the original design, the skylight was placed horizontally, hence majority of its areas were allowing in direct solar radiation and direct penetration of both diffuse and direct radiation components. Direct incident solar radiation also absorbs by the thermal mass of the ground floor – causing heat to accumulate through both convection and radiation near the ground. In the innovative roof, the width and opening of the skylight is optimized in order to allow in adequate daylight and limiting heat gain. The configuration of the plaza is basically a space surrounded by multilevel blocks – intersperse only with small openings at plaza entrances at ground floor. Due to the ratio of covered roof – height of building and lack of openings towards the prevailing windows, there is a limitation of cooling effect through natural ventilation as hot air is gradually trapped. More openings at the top will allow hot air to be exhausted out through natural stack effect and to a limited extent, wind ventilation. This will assist the building to ‘breathe’ due to lack of large openings for significant airflow at the ground level. The choice of low E laminated glass with shading coefficient between 0.4-0.5 was selected as a glass roof material as part of the strategy to offset the excess solar radiation while admitting daylight for the users. The results shows a combination of roof design which creates like a jack roof in between strip of roof and the selection of low-e roof materials is predicted to create maximum internal thermal condition of 26- 30.2 °C, in comparison to the original design with laminated tinted glass which may give a thermal condition as high as 34 °C, 4 °C higher than that of the innovative roof design. The performance of the plaza was then monitored in terms of temperature and daylight levels during different period for two years to verify the comfort levels in terms of airflow, temperature and daylight level. It was found that the performance closely match that of the prediction with subjective view of the visitors which confirm the acceptability of the comfort conditions in the plaza.

Keywords : *ventilation, low E laminated glass , shading coefficient*

Category : Science, Engineering and Technology

1470 HEALTH BENEFITS OF GUM ARABIC AS NATURAL HALAL FOOD INGREDIENT AND EMULSIFYING AGENT#

Mohamed Elwathig Saeed Mirghani Mirghani, *International Institute for Halal Research and Training (INHART), Reseach Institute*

Nasereldin Ahmed Kabbashi Kabbashi, *Department of Biotechnology Engineering, Kulliyyah of Engineering*

Yumi Zuhamis Has-Yun Hashim Hashim, *International Institute for Halal Research and Training (INHART), Reseach Institute*

Ahmed Adam Hassan Mohamed Elnour Elnour, *Department of Biotechnology Engineering, Kulliyyah of Engineering*

Mohd Firdaus Yusoff Yusoff, *Biotechnology Engineering (BTE), Kulliyyah of Engineering*

Exhibitor : Mohamed Elwathig Saeed Mirghani Mirghani, International Institute for Halal Research and Training (INHART), Reseach Institute

HEALTH BENEFITS OF GUM ARABIC AS NATURAL HALAL FOOD INGREDIENT AND EMULSIFYING AGENT Mohamed Elwathig S. Mirghani^{1& 2}, Nasreldin Ahmed Kabbashi², Yumi Z. H. Y. Hashim^{1&2}, Ahmad Adam H. M. Elnour² and Mohd Firdaus Yusoff² ¹International Institute for Halal research and training (INHART), & ²Biotechnology Engineering (BTE), Kulliyyah of Engineering, IIUM Abstract: Gum Arabic (Acacia gum) is a water-soluble type of fibre. It is edible, dried, gummy exudates from the stems and branches of Acacia senegal and A. seyal that is rich in non-viscous soluble dietary fibre. Intervention studies investigating the effects of acacia gum on serum lipids in humans have been provided. Its effects on blood cholesterol have been studied. The study demonstrates that the mean value of the emulsifying stability of samples acacia gum were 1.21210. The water holding capacity (WHC) of all tested samples had been found to range between 63.0 and 63.9%. On the basis of the data available, MATLAB software was used to study the relationship the consumption of acacia gum and blood cholesterol concentrations. The studies address the scientific substantiation of health claims in relation to acacia gum and maintenance of normal blood cholesterol concentrations, which is beneficial to human health. Other studies prove that acacia gum helps to reduce blood cholesterol, contribute to maintain a good cardiovascular health and helps to control blood cholesterol level. In study in volunteers (men) a significant 10 % reduction in serum cholesterol and a significant 14 % reduction in LDL-cholesterol concentrations with the acacia gum mixture as compared to the no acacia gum control. The cholesterol-lowering effect of water-soluble fibre depends on increased viscosity that reduces the re-absorption of bile acids, increases the synthesis of bile acids from cholesterol, and reduces circulating (LDL) cholesterol concentrations. Gum Arabic now is no more food additive; it is been considered as food ingredient. Key words: Halal, gum Arabic, food ingredient, cholesterol.

Keywords : *Halal, gum Arabic, food ingredient, cholesterol.*

Category : Science, Engineering and Technology

1472 GREEN TECHNOLOGY FOR THE PRODUCTION OF SILVER NANOPARTICLES USING CANDIDA CYLINDRACEA SP.#

Ibrahim Ali Noorbatcha, *Department of Biotechnology Engineering, Kulliyah of Engineering*
Saifunnasr Zulkifli, *Department of Biotechnology Engineering, Kulliyah of Engineering*
Hamzah Mohd Salleh, *Department of Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Ibrahim Ali Noorbatcha, Department of Biotechnology Engineering, Kulliyah of Engineering

Silver nanoparticles (AgNPs) have been found to be helpful in various medical and life sciences related application. However, conventional production methods are found to be harmful when used in medical related applications. In this paper we report the extracellular production of silver nanoparticles (AgNPs) using *Candida cylindracea* (also known as *Candida rugosa*). In the biosynthesis of AgNPs by this yeast, the cultured yeast is exposed to the silver nitrate solution. The bioreduction process involved Ag⁺ ions which are reduced to metallic AgNPs through the catalytic effect of the extracellular enzyme. These silver nanoparticles were characterized by means of UV–Vis spectroscopy, Scanning Electron Microscope (SEM), Transmission electron microscopy (TEM), X-ray Diffraction spectrum (XRD) and and Fourier transform infrared spectroscopy (FTIR). UV–visible spectrum of the aqueous medium containing silver ion showed a peak at 417 nm corresponding to the surface plasmon absorbance of silver nanoparticles. FESEM and TEM micrograph showed formation of well-dispersed silver nanoparticles. The silver nanoparticles were confirmed with XRD spectrum which exhibited intense peaks corresponding to the (111), (200) and set of lattice plane of silver. The FTIR spectrum analysis evaluated the presence of different functional groups in capping the silver nanoparticles.

Keywords : *Silver Nanoparticles, Extracellular Biosynthesis, plasmon absorbance, Candida cylindracea sp.*

Category : Science, Engineering and Technology

1473 ENZYMATIC HYDROLYSIS OF POME FOR ENHANCED BIOGAS PRODUCTION#

Md Zahangir Alam, *Biotechnology Engineering, Kulliyah of Engineering*

Noor Mohammad, *Biotechnology Engineering, Kulliyah of Engineering*

Norshakila Sabri, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Md Zahangir Alam, Biotechnology Engineering, Kulliyah of Engineering

A renewable energy has been developed as to provide one of the solutions to the energy issues. Based on the origin of renewable energy and resources, many countries have researched and developed the renewable energies such as solar, wind, geothermal, nuclear and biogas. Among them, biogas has been evaluated as one of the most energy-efficient and environmentally beneficial technologies for bioenergy production. Energy from biogas not only compensates the imported fuel but also reduce the pollution associated with converting biowaste or even biomass to the valuable biogas. The most challenging step of enhanced biogas production by anaerobic digestion is the HYDROLYSIS among the three steps. This invention develops an effective enzymatic hydrolysis (hydrolytic enzymes: lipase and cellulose) of palm oil mill effluent (POME) for enhanced biogas production. Several treatment processes such as pretreatment (hydrolysis), acidogenesis, acetogenesis and methanogenesis are developed for bioconversion of POME into biogas.

Keywords : *Biogas, palm oil mill effluent, anaerobic digestion, hydrolysis*

Category : Science, Engineering and Technology

1475

PILOT SCALE PRODUCTION OF POME BASED INDUSTRIAL LIPASE#

Md. Zahangir Alam, *Biotechnology Engineeirng, Kulliyah of Engineering*

Md. Noor Salleh, *Biotechnology Engineeirng, Kulliyah of Engineering*

Devi Ratna Asih, *Biotechnology Engineering, Kulliyah of Engineering*

Aliyu Salihu, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Md. Zahangir Alam, Biotechnology Engineeirng, Kulliyah of Engineering

Lipases are industrial enzymes that are considered to be the third in volume of sales (after proteases and amylases), due to their application versatility. They owe potentials to catalyze both hydrolytic and synthetic reactions. The major obstacle hindering the expansion of lipase technology on large scale is the production cost; as medium for the production accounts for substantial amount of the total lipase production costs. The invention is on the palm oil mill effluent (POME) being abundantly available and cheap renewable residue in Malaysia can serve as a basal medium for lipase production. POME supplemented with nutrients and inducers was found to be the optimized medium for lipase production by *Candida cylindracea* ATCC 14830 using statistical design at lab-scale. The production of industrial lipase was able to subsequently increase with sequential statistical design of fermentation processes such as face Plackett-Burman design, OFAT and FCCCD. Based on the bench-scale studied and scale-up strategy, a 300L pilot scale production of lipase was successfully carried out and considerable activity of lipase was recovered. This study innovatively developed a fermentation medium utilizing renewable palm oil mill effluent (POME) to produce lipase and expecting to be a potential source of many industrial applications especially biodiesel production with high FFA feedstocks .

Keywords : *Lipase, palm oil mill effleunt, pilot scale*

Category : Science, Engineering and Technology

**1476 UNHEALTHY STATE MONITORING OF URBAN WATER BODIES USING
AQUATIC PLANT SPECIES AS ECOLOGICAL INDICATOR#**

RASHIDI OTHMAN, *LANDSCAPE ARCHITECTURE, Kulliyah of Architecture & Environmental Design*
Ruhul 'Izzati Shahrudin, *LANDSCAPE ARCHITECTURE, Kulliyah of Architecture & Environmental Design*
NOR HAFIZANA MAT JUSOH, *LANDSCAPE ARCHITECTURE, Kulliyah of Architecture & Environmental Design*
IZAWATI TUKIMAN, *LANDSCAPE ARCHITECTURE, Kulliyah of Architecture & Environmental Design*
Nurul Azlen Hanifah, *LANDSCAPE ARCHITECTURE, Kulliyah of Architecture & Environmental Design*

Exhibitor : RASHIDI OTHMAN, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*

Pollutants in aquatic system come from many resources either natural or anthropogenic activities in industrial, domestic and agricultural. Trace metals are very significant because many of these metals are essential nutrients when in lower concentrations but they become toxic if their concentrations achieved certain limits. Some heavy metals may transform into the persistent metallic compounds with high toxicity, which can be bioaccumulated in the organisms, magnified in the food chain, thus threatening human health. Heavy metals are the most abundant and persistent environmental inorganic pollutants, which cannot be degraded but the cleanup usually requires their removal. According to Malaysia Environmental Quality Report 2008, the estimated number of water pollution sources in Malaysia for 2008 were 17,633 comprising especially of sewage treatment plants, agro-based industries, manufacturing industries and animal farms. About 54.01 percent of the total number of sources was domestic sewage facilities (9,524 sources), followed by manufacturing industries (6, 830 or 38.73 percent), animal farms (788 sources or 4.48 percent) and agro-based industries (491 sources or 2.78 percent). Of the total number of effluent sources identified, Johor had the highest number (1 790, 24.45percent), followed by Selangor (1 693, 23.12 percent), Perak (1255, 17.14 percent) and Perlis had the least number (10, 0.01 percent). The aim of the research is to study the potential of aquatic plant species to be used as phytoindicator for unhealthy environment of freshwater bodies. Aquatic plants are excellent indicator because they respond to nutrients, light, toxic, contaminants, metals, herbicides, turbidity, water level change, and salt. In this study, sixteen samples of water were collected from different places where six different aquatic plant species were abundance and dominant. All the water samples were analyzed for six types of heavy metals which are iron (Fe), lead (Pb), copper (Cu), zinc (Zn), and nickel (Ni) and manganese (Mn). Results showed that the abundance of certain aquatic species indicate high concentration of certain heavy metal in that particular environment. Some of the concentration of heavy metal are exceeded the limits of recommended range by Canadian standard (CCME)-protection of aquatic life. The concentrations of metals in aquatic plants can be more than 100 000 times greater than in the associated water. Therefore, aquatic plant is effective in responding heavy metal at low level environmental contamination that might otherwise be difficult to detect as well as good ecological indicator for unhealthy environment especially in urban lakes.

Keywords : *Aquatic plant; ecological indicator; heavy metal; urban water bodies*

Category : Science, Engineering and Technology

1478

QUANTUM KEY DISTRIBUTION IN REAL LIFE#

Sellami Ali, *Science, Kulliyah of Engineering*
Abdallah Hassen Ahmed, *ECE, Kulliyah of Engineering*
Mohamed Hadi Habaebi, *ECE, Kulliyah of Engineering*

Exhibitor : Sellami Ali, Science, Kulliyah of Engineering

Quantum key distribution (QKD) was proposed as a method of achieving perfectly secure communications. Theoretically, QKD provides proven unconditional security guaranteed by the fundamental laws of quantum physics. The QKD has been practically demonstrated, but with imperfect sources, noisy channels and inefficient detectors, which affect the security. Fortunately, it is still possible to obtain unconditionally secure QKD, even with (phase randomized) attenuated laser pulses, as theoretically demonstrated by Gottesman-Lo-Lutkenhaus-Preiskill (GLLP). However, one must pay a steep price by placing severe limits on the distance and the key generation rate. These problems were solved using the decoy state method introduced by Hwang, 2003. In this paper, A method to estimate parameters of the decoy state method based on two decoy state protocol for both BB84 and SARG04 has been presented. This method has given different lower bound of the fraction of single-photon counts (y_1), the fraction of two-photon counts (y_2), the upper bound QBER of single-photon pulses (e_1), the upper bound QBER of two-photon pulses (e_2), and the lower bound of key generation rate for both BB84 and SARG04. The fiber based QKD systems also have been simulated using the proposed method for BB84 and SARG04. The numerical simulation has shown that the fiber based QKD systems using the proposed method for BB84 are able to achieve both a higher secret key rate and greater secure distance than that of SARG04.

Keywords : *Quantum cryptography, quantum key distribution, decoy state protocol and optical communications.*

Category : Science, Engineering and Technology

1479 PRODUCTION OF ZINC NANOPARTICLES USING ASPERGILLUS NIGER#

Ibrahim Ali Noorbacha, *Department of Biotechnology Engineering, Kulliyah of Engineering*

Ainnur Farhana Ariffin, *Department of Biotechnology Engineering, Kulliyah of Engineering*

Hamzah Mohd Salleh, *Department of Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Ibrahim Ali Noorbacha, Department of Biotechnology Engineering, Kulliyah of Engineering

Nanoparticles have gained interest due to its unique properties and benefits that can upgrade the future technologies. However, the current production of nanoparticles have adopted physical and chemical methods which have been proven as non-eco friendly and produces toxic products. The present study proposes an eco-friendly synthesis of zinc nanoparticles using varies type of fungi species. The synthesis of Zinc nanoparticles using *Aspergillus niger*, is presented in this paper. In brief , the fungus is grown in a suitable medium and challenged with the zinc nitrate salt solutions at different salt concentrations and under constant condition of temperature , pH and duration of the incubation time. We found that zinc nanoparticles were formed in three days exposure. The formations of nanoparticles were confirmed by UV-Vis spectrum. The maximum of the absorbance is found to be at ~370nm and increase with time which is in agreement with the previous literature works on zinc NPs. The other characterization of the nanoparticles were using Scanning Electron Microscope to ascertain the poly-dispersity of the nanoparticles produced.

Keywords : Zinc nanoparticles, Microbial production, *Aspergillus niger*

Category : Science, Engineering and Technology

1480 **ISOLATION OF PITHOMYCES SACCHARI AND PESTALOTIOPSIS MACULANS FUNGUS STRAINS FROM WASTE SLUDGE PALM OIL (SPO) OBTAINED IN MALAYSIA#**

Abass O. Alade, *Biotechnology Engineering, Kulliyah of Engineering*
Ahmad T. Jameel, *Biotechnology Engineering, Kulliyah of Engineering*
Suleyman A. Muyibi, *Biotechnology Engineering, Kulliyah of Engineering*
Ismail A. Karim, *Biotechnology Engineering, Kulliyah of Engineering*
Mohd Z. Alam, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Ahmad T. Jameel, *Biotechnology Engineering, Kulliyah of Engineering*

The desire to obtain eco-friendly microorganisms for biotechnology processes has now been extended to the wide biodiversity of Malaysia ecosystem. In this study, three microorganism associated with Sludge Palm Oil (SPO) were isolated by the 'pinpoint' inoculation based on solid media plate procedure. Solid media plates containing Potato Dextrose Agar (PDA), Sabouround Dextrose Agar (SDA) and Malt Extract Agar (MEA), respectively, were used to screen potential microorganisms from SPO. Finally, suitable media that can support the effective growth of the isolates were selected. The selected isolates were subjected to extracellular enzymatic activities such as amylolytic, gelatinolytic, cellulolytic and lipolytic. Thereafter they were identified via the Biolog System. The most suitable media is the PDA. The development of yellow zone around the three colonies of the isolates on the amylolytic assay plate, following the addition of iodine solution, suggests that the isolates are essentially fungi. The average diameter spread on the amylolytic, gelatinolytic, cellulolytic and lipolytic plates increased as the incubation periods of the three fungi increased. Based on the maximum diameter obtained for the three isolates, the activities investigated indicate that the isolates possess lipolytic activity compared to cellulase and protease activities. The results of the Biolog system indicate that the isolates are *Pithomyces sacchari* and *Pestalotiopsis maculans* due to the presence of conidiophore/conidia cells and phialdes/conidia cells, respectively. This further indicates that they are filamentous fungi. The study further substantiates the application of SPO, as renewable and sustainable raw material, for the production of lipase secreting enzymes. Furthermore these fungi are targeted for biodegradation of palm oil mill effluents and the ongoing study indicates a prospect in that direction.

Keywords : *fungus strain, microorganism, isolation, sludge palm oil (SPO), enzymatic activity*

Category : Science, Engineering and Technology

1488

LNF MICRO-CONTACT USING MEMS AND EFF TECHNOLOGY#

Moinul Bhuiyan, *Mechatronics, Kulliyah of Engineering*
Eiichiro Takemasa, *CIS, Advanced Engineering and Innovation Centre*
Munira Bhuiyan, *Public Health, Institute of Education*

Exhibitor : Moinul Bhuiyan, Mechatronics Engineering, Kulliyah of Engineering

Enable the design of a small contact spring for applications requiring high density, high speed and high durability. A low normal force contact spring with high performance is fabricated using a unique combined technology (photo resist lithography and electro fine forming technology). To determine an appropriate hertz stress by several radius contact (5-200 μ m) with low normal force (0.10N-0.16N at 0.45mm) is designed. For a reliable contact spring, Ni-Co material is selected because its material characteristics are better than commercial contact spring material. By the experiment, it is proved that a low normal force spring with higher hertz stresses which is 5 μ m radius can provide a stable reliable contact resistance from the first contact than 200 μ m radius. The evaluated results by the experiment currently proved the durability of 0.30 million contact cycles (less than 50mOhm) without any difficulty. In this research, we focused to investigate an appropriate Hertz stress, which will be utilize in future design concept for miniature size contact spring. We think this method will be very important to decrease a total material cost in connector business field.

Keywords : MEMS, LNF Contact, EFF, Hertz-stress, Resistance

Category : Science, Engineering and Technology

1489 PORTABLE DUAL ALCOHOL AND LARD DETECTOR IN FOOD/BEVERAGES#

Rini Akmeliawati, *Mechatronics Engineering, Kulliyah of Engineering*

Nurul Asyikeen, *Biotechnology Engineering, Kulliyah of Engineering*

Irwandi Jaswir, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Rini Akmeliawati, Mechatronics Engineering, Kulliyah of Engineering

An electronic nose (e-nose) is a device that identifies the specific components of an odour, analyses and identifies its chemical makeup. The existing devices for odour detection are typically bulky and expensive, and are either to detect alcohol or lard adulterations but not both. A portable e-nose prototype has been successfully designed and fabricated for detecting of both compounds in food/beverages by using a metal oxide sensor. The portable e-nose designed can act as a dual detector to detect both compounds. This poster describes the design, including the hardware and its electronics component, the detection mechanism and a brief evaluation on the performance of the designed e-nose. The paper shows that the designed e-nose offers not only rapid but also sufficiently reliable results, and is simple and portable - convenient for travelling and public use.

Keywords : *electronic nose, alcohol, lard, volatile compounds, metal oxide sensor*

Category : Science, Engineering and Technology

1490 LOCAL MICROALGAE – A POTENTIAL SOURCE FOR REMOVAL OF NITRATE AND PHOSPHATE FROM MUNICIPAL WASTEWATER#

AHMED JALAL KHAN CHOWDHURY, *Biotechnology, Kulliyah of Science*

Md. Zahangir Alam, *Biotechnology Engineering, Kulliyah of Science*

Wan Abdul Matin, *Bioitechnology, Kulliyah of Science*

Kamaruzzaman Yunus, *Biotechnology, Kulliyah of Science*

Tofazzel Hossain, *Kulliyah of Science*

Exhibitor : AHMED JALAL KHAN CHOWDHURY, Biotechnology, Kulliyah of Science

A comparative observation is conducted on three local freshwater microalgae: *Chlorella vulgaris*, *Spirulina platensis* and *Scenedesmus quadricauda* in assessing how they vary in nitrate and phosphorus removal from municipal wastewater sludge (MWS). Nitrate and phosphorus in wastewater contribute to health and environmental threats as they are linked to illnesses as well as ecosystem disruption via algal blooms in contaminated water bodies. Algae performance in removing nitrate and phosphorus was evaluated by measuring nitrate and phosphorus content of MWS incubated with the strains for one week. Instantaneous readings were taken every 48 hours to determine periodic levels of the nutrients, and BOD5 was also evaluated to identify the strain with the most robust growth that would demand for oxygen the most in the dark. *Spirulina platensis* was demonstrated to be the most efficient nitrate remover in MWS and the best-growing among the three, while *Chlorella vulgaris* removed phosphorus the most effectively. Thus *Spirulina* and *Chlorella* proved to be interesting candidates for application in wastewater treatment given their intrinsic merit in nutrient removal.

Keywords : *Chlorella vulgaris, Spirulina platensis, Scenedesmus quadricauda, Nitrate, Phosphorous, Waste Water*

Category : Science, Engineering and Technology

1491 MANGROVE PLANT AVICENNIA ALBA – PROSPECTIVE ANTIBIOTICS TO ANNIHILATE FISH PATHOGENS#

AHMED JALAL KHAN CHOWDHURY, *Biotechnology, Kulliyah of Science*

ZAIMA AZIRA ZAINAL ABEDIN, *Biotechnology, Kulliyah of Science*

HASNA AHMAD, *Bioitechnology, Kulliyah of Science*

Exhibitor : AHMED JALAL KHAN CHOWDHURY, Biotechnology, Kulliyah of Science

The wide usage of commercial antibiotics in aquaculture has led to antibacterial resistance, environmental pollution and residue build-up in fish tissue. All these may be harmful to human health. Therefore new sources of antibiotics need to be investigated to circumvent these problems. *Avicennia alba* leaves and stem-bark crude extracts were analyzed for antibacterial activity against five fish pathogenic bacteria: *Staphylococcus aureus* (IMR S 1386/07 A) (GP*), *Bacillus cereus* (ATCC 11778) (GP), *Pseudomonas aeruginosa* (ATCC 27853) (GN*), *Escherichia coli* (ATCC 20922) (GN) and *Proteus mirabilis* (IMR S 1386/07 A) (GN). Dried powdered leaves and stem- bark were extracted via maceration in n- hexane, ethyl acetate and ethanol. The crude extracts were then tested for antibacterial activity using the disc diffusion method. Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) values were determined for extracts with zones of inhibition in the disc diffusion method using microdilution method. All extracts exhibited inhibition zones varying between 7 to 18 mm. The most active extract was ethyl acetate extract of leaf, followed by leaf and stem ethanolic extracts, ethyl acetate extract of stem and finally hexane leaf and stem extracts. MIC and MBC values of the extracts obtained vary from 3.730 mg/ml to 33.33 mg/ ml. Further studies need to be carried out on this medicinal mangrove plant *Avicennia alba* to assess its potentiality as antimicrobial drug which can be applied in aquaculture and pharmaceutical industries.

Keywords : *Avicennia alba, Mangrove plant, Antibiotics, Fish Pathogens, Antibacterial activity*

Category : Science, Engineering and Technology

1492 PERSUASIVE TECHNOLOGY OPTIMIZATION: AN EXPERIMENTAL APPROACH FOR CHARITY-GIVING CONTEXT#

Husnayati Hussin, *Information Systems, Kulliyah of Information & Communication Technology*
Ainul Alwi Burhanuddin, *Information Systems, Kulliyah of Information & Communication Technology*

Exhibitor : Husnayati Hussin, Information Systems, Kulliyah of Information & Communication Technology

This is a study on two factors that affect persuasive technology effectiveness in changing users attitude and behaviour. The two factors are found to be significant through adaptation of various theories of persuasion that include ELM, TPB, SH, PIT to propose a new Persuasive Web Application Development framework (PWAD). The two factors are persuasion strategy choice and persuadability guidelines compliance. Charity domain has been selected to test the two factors by studying the effectiveness of a web application to induce positive charity giving attitude. Using a repeated measure experimental design with two factor ANOVA as the analysis tools a lab experiment has been conducted with 100 participants undergoing treatments. Four web interfaces has been constructed to deliver the four conditions related to two levels of each factor for the participants treatment. Charity domain (guilt appeal) and non charity domain (statistical appeal) strategies are the two levels for persuasion strategy choice factor while compliance and non compliance are the two levels for persuadability guidelines factor. In constructing the Compliance and noncompliance interfaces, 99 persuasive design guidelines have been collected from reliable sources and categorized through rigorous card sorting exercise to establish and validate 15 proposed persuadability guidelines. From the experiment it is found that, both Strategy choice ($F > 3.92$, $P=0.005$) and Persuadability guideline compliance ($F > 3.92$, $P=0.034$) carry main effects on positive charity giving decisions while the two factors carry no interaction effect ($F < 3.92$, $P=0.282$). It is concluded that the study has successfully contribute and test useful PWAD and persuadability guidelines for development of persuasive web applications. As far as the two main factors are concerned, correct strategy choice of domain of interest and close adherence to persuadability guidelines are necessary to build a persuasive web application.

Keywords : *persuasive technology, web design, experiment*

Category : Science, Engineering and Technology

1494 **INDUCTIVE LOOP BASED SENSING CIRCUIT SIMULATION & EXPERIMENTAL#**

Sofiane Larbani, *ECE, Kulliyah of Engineering*
Anis Nurashikin Nordin, *ECE, Kulliyah of Engineering*
Sheroz Khan, *ECE, Kulliyah of Engineering*

Exhibitor : Sofiane Larbani, Electrical and Computer Engineering, Kulliyah of Engineering

Sensing techniques are becoming more diversified now more than ever for movement, position, displacement, etc. The simpler is the conditioning system, the lowest is the consumption the better is the sensing technique. In this poster an inductive loop sensing technique is presented with a simple promising conditioning circuit. The circuit is made to produce an output signal equivalent to change in inductance sensed. Either the input signal is square or sinusoidal the change of inductance will result on a change in term of amplitude and shape. Experimental results are matching and confirming the simulation graphs. The shapes are very distinctive that we can they can be called signatures for specific variations and values of the inductance and then can be used for recognition. In this paper variation of 30uHenry had been detected by both simulation and experimental methods.

Keywords : *inductive sensing, inductive loop, inductive recognition, inductive detection system*

Category : Science, Engineering and Technology

1497

DEVELOPMENT OF PORTABLE CHARGER FOR DISASTER RECOVERY#

Nur Hanis Sabrina, *Electrical and Computer Engineering, Kulliyah of Engineering*
Rashidah Abu Bakar, *Electrical and Computer Engineering, Kulliyah of Engineering*
Teddy Surya Gunawan, *Electrical and Computer Engineering, Kulliyah of Engineering*
Mira Kartiwi, *Information Systems, Kulliyah of Information & Communication Technology*

Exhibitor : Teddy Surya Gunawan, Electrical and Computer Engineering, Kulliyah of Engineering

In the recent years, hundreds to thousands of people have been killed in the many calamities across Asian region, such as tsunami, floods, earthquakes and so on. During disaster, most of the electricity will be disrupted. Hence, the necessity to have portable charger arises. This project aims to design and develop portable charger for small electric appliance, i.e. mobile phone, which can be used effectively during disaster event. The energy harvester circuit is not limited to photovoltaic, but also mechanical, piezoelectric, heat, wind, etc.

Keywords : *Portable charger, disaster recovery, electric generation*

Category : Science, Engineering and Technology

1498 EFFECT OF CROSS SECTIONAL SHAPE ON THE ENERGY ABSORBING CHARACTERISTICS OF A TUBE UNDER QUASI-STATIC LOADING#

Kassim AbdulRahman Abdullah, *Mechanical Engineering, Kulliyah of Engineering*
J. S Mohamed Ali, *Mechanical Engineering, Kulliyah of Engineering*
Yulfian Aminands, *Mechanical Engineering, Kulliyah of Engineering*

Exhibitor : Kassim AbdulRahman Abdullah, Mechanical Engineering, Kulliyah of Engineering

In this study, numerical simulation of tubes of various cross section under axial compression is carried out using LS-DYNA. The effect of varying configurations of tube cross-section shape on the deformation response, collapse mode and energy absorption characteristics of tubes under quasi-static axial compression have been studied. The validation of the finite element tube model was made by comparison with the experimental results of the square tube subjected to quasi-static axial compression. Tabulated results are presented and plots have been included for the specific energy absorption for different cross sections. The study provides an insight on ways to increasing energy absorption of light weight aluminium tubes

Keywords : *Axial collapse, energy absorption, lightweight tubes, crashworthiness*

Category : Science, Engineering and Technology

1505 UNCONVENTIONAL OIL FROM SODOM APPLE (CALOTROPIS PROCERA) SEEDS#

Mohamed Elwathig Saeed Mirghani Mirghani, *Department of Biotechnology Engineering (BTE), Kulliyah of Engineering*
Nasereldin Ahmed Kabbashi Kabbashi, *Department of Biotechnology Engineering (BTE), Kulliyah of Engineering*

Exhibitor : Mohamed Elwathig Saeed Mirghani Mirghani, Department of Biotechnology Engineering (BTE), Kulliyah of Engineering

UNCONVENTIONAL OIL FROM SODOM APPLE (CALOTROPIS PROCERA) SEEDS Mohamed Elwathig Saeed Mirghani and Nasreldin Ahmed Kabbashi Department of Biotechnology Engineering, Kulliyah of Engineering, International Islamic University Malaysia (IIUM), Gombak 50728, KL, Malaysia Abstract: Sodom Apple (*Calotropis procera*) from the plant family Apocynaceae, that is native to north and tropical Africa, western and south Asia. The plant also known as apple of Sodom, desert apple, giant milkweed, rubber bush, Sodom's milkweed and Ushar (Arabic). The plant is green throughout the year has green globes are hollow but the flesh contains milky sap that is extremely bitter and turns into a gluey coating resistant to soap. The fruits are green turn to light yellow and dry upon maturity. The fruit contains numerous seeds, which are light, flat, brown and attached to long white silky hair (pappus) at one end that help the seeds to fly from place to another spreading the plant. In this project the silky hairs were used in textile and the seed were collected for oil extraction. The oil content is 18 – 24% having a yellow color. The oil was characterized for fatty acid composition, Iodine value (IV), saponification value (SV), free fatty acids (FFA) and other parameters. The oil been used in traditional medicine and cosmetics, however, no study found in literature about medicinal uses. In this study the oil was successfully used to produce soap and shampoo. It is also proposed for biodiesel production. Key words: Oil, Sodom apple, Caotropis procera.

Keywords : Oil, Sodom apple, Caotropis procera

Category : Science, Engineering and Technology

1506 NEW METHOD FOR CHANGING FISH WASTES INTO OMEGA-3 FISH OIL AS A VALUABLE HEALTH PRODUCT USING SUPERCRITICAL CO₂

Md Zaidul Sarker, *Department of Pharmaceutical Technology, Kulliyah of Pharmacy*
Sahena Ferdosh, *School of Industrial Technology, USM.*,
Norulaini Nik, *School of Distant Education, USM.*,
Omar Kadir, *School of Industrial Technology, USM.*,

Exhibitor : Md Zaidul Sarker, *Department of Pharmaceutical Technology, Kulliyah of Pharmacy*

Fish industry discarded a great amount of fish wastes as processing left over every year. Fish wastes have a huge unexploited potential for value adding health products such as fish oil. Fish oil especially EPA and DHA, are highly demanded by food and nutraceutical industries due to their potential health benefits. Conventional solvent extractions are generally employed to obtain fish oil; while often introduces contaminants that must be removed later. However, there is an increasing concern of the health & safety hazards associated with the use of organic solvents. Fish oil was simultaneously extracted and fractionated from fish wastes of fish process industry using supercritical carbon dioxide (SC-CO₂). Response surface methodology (RSM) was employed to optimize the operating conditions of temperature 45 to 65 °C, pressure 20 to 35 MPa and flow rate 1 to 3 ml min⁻¹ of the SC-CO₂ technique where the highest oil yield was obtained (53.1, 13.1 and 10.9 % in skin, head and viscera, respectively) on dry weight basis at 35 MPa, 60 °C, and 2 ml min⁻¹ which is closure to the yield (53.6, 13.6 and 11.3 % in skin, head and viscera, respectively) of soxhlet extraction. The correlation was successfully developed and found the reduction in the determination of coefficients ($R^2 = 0.9902$) predicting the effect of extraction parameters on the yield of SC-CO₂ extraction method. Thus, SC-CO₂ extraction of fish oil from fish sample could be successfully optimized using RSM design. Polyunsaturated fatty acid (PUFA) rich fractions especially omega-3, 6 fatty acids were simultaneously fractionated at optimized conditions at optimized conditions of 35 MPa pressure, 60 °C temperature and a flow rate of 2 ml min⁻¹. In each type of fractionation saturated fatty acids (SFA) were extracted at earlier fraction, whereas the latter fractions were rich in monounsaturated fatty acid (MUFA) and PUFA. This was due to relatively low molecular weight and long chain fatty acids eluted faster than the heavy and long chain unsaturated fatty acids. However, in the concomitant fractionation of fish oil into SFA-rich portions and PUFA-rich portion by using a single step method. This separation process does neither require further chemical processing nor purification of the fatty acids. The products of this possess total natural quality in terms of purity, physical properties and nutritional qualities. The process is low temperature; low CO₂ consuming, short-time, economy, safe, healthy, environmental friendly, and the products are totally organic residues free and regarded as green chemical processed.

Keywords : Fish wastes, Fish oil, omega-3 PUFA, Optimization, Supercritical fractionation

Category : Science, Engineering and Technology

1508 PRODUCTION CHAIN MANAGEMENT SYSTEM FOR SMALL MANUFACTURING INDUSTRIES (SMIS)#

Mira Kartiwi, *Information systems, Kulliyah of Information & Communication Technology*
Maryam Idris Bugaje, *Information systems, Kulliyah of Information & Communication Technology*
Dalia Fathi Ali Hamza, *Information systems, Kulliyah of Information & Communication Technology*

Exhibitor : Mira Kartiwi, Information systems, Kulliyah of Information & Communication Technology

Manufacturing industries are typically characterized by a large number of equipment, machines, labor, functional units and product variations. In order to monitor the efficiency of from one to another end in production chain, huge amounts of data are created daily. However for most small and medium scale manufacturing industries these data are collected manually – i.e. by filling a number of forms and then entered to spreadsheet for analysis. As a result, recording and keeping track of data over a period of time is tedious and problematic. Not to mention organizing all of this data to acquire useful information becomes very challenging for SMIs. Therefore, it is the aim of this study to develop a prototype of production chain management system would assist the textile manufacturing industry in managing production and inventory data, as each batch of raw materials (cotton yarn) passes through the production chain (Yarn Control, Production, and Quality Control) to eventually become finished fabric.

Keywords : *Data Management, SMIs, Production Chain*

Category : Science, Engineering and Technology

1511 DEVELOPMENT OF CONSUMER LOAD MONITORING SCHEME FOR ELECTRICITY THEFT DETECTION#

Momoh-Jimoh Eyiomika Salami, *Mechtronics Engineering, Kulliyah of Engineering*
Ayodele Isqeel Abdullateef, *Mechtronics Engineering, Kulliyah of Engineering*
Mohamud Ahmed Musse, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : Momoh-Jimoh Eyiomika Salami, Mechtronics Engineering, Kulliyah of Engineering

Electricity theft, which is the practice of using electricity without the authorization or consent of the utility, is a major challenge facing electricity provider worldwide. The consumers tend to avoid the payment of their electricity dues through various methods such as tampering with energy meter and illegal tapping via direct connection to the distribution feeder. These have led to huge revenue losses to the electricity supplying corporations as well as related government agencies and other stakeholders. This study is set to develop a consumer load prototype that would be used to monitor, simulate and detect, in real time, various types of electricity theft, that are associated with low voltage distribution systems, in order to study and solve the problem. The architectural drawing and electrical installation of a room apartment was designed with necessary electrical symbols, while the construction was carried out on a 4ft by 8ft plywood with all necessary electrical fittings fixed appropriately. The prototype would be operated as real life situation, with considerations for the types of electricity theft and the data obtained would be simulated in order to develop a robust model that would be effectively utilised by the electricity corporations. The study will facilitate the detection and isolation of the perpetrators which will lead to increase in revenue generation. Furthermore, the prototype developed can be used for academic purpose.

Keywords :

Category : Science, Engineering and Technology

1512

READY-TO-QUIT E-DIARY#

Zulkefli M Yusof, *Computer Science, Kulliyah of Information & Communication Technology*
Raja Muhammad Daniel Daniel, *Computer Science, Kulliyah of Information & Communication Technology*
Nabilah Abdul Razak, *Computer Science, Kulliyah of Information & Communication Technology*
Nurul Filzah Md Salih, *Computer Science, Kulliyah of Information & Communication Technology*
M Z Adnan Adnan, *Computer Science, Kulliyah of Information & Communication Technology*

Exhibitor : *Zulkefli M Yusof, Computer Science, Kulliyah of Information & Communication Technology*

This is a mobile phone application which allows users to self- monitor how the person is doing in order to stop smoking. Recommendations and guidance are the main functions, along with a diary to help analyzing the progress, and at the same time provide motivation to the users.

Keywords : *Stop-smoking, e-diary*

Category : Science, Engineering and Technology

1513

BANLACT – MILK PROMOTING BISCUIT FROM BANANA FLOWER#

Muhammad Nor Omar, *Department of Biotechnology, Kulliyah of Science*
Azizah Mahmood, *Department of Biotechnology, Kulliyah of Science*
Ahmad Muzammil Zuberdi, *Department of Biotechnology, Kulliyah of Science*

Exhibitor : Muhammad Nor Omar, Department of Biotechnology, Kulliyah of Science

Some plants are known to have high level of phytochemical constituents that promote lactation (galactagogue) for nursing mothers. Herbal galactagogues are recommended by practitioners of the traditional systems of medicine for increasing milk secretion in lactating women in several parts of the world. The present research was aim to find out bioactive constituents in banana flower (*Musa x paradisiaca*) extract on the effect of galactagogue in lactating rats. Banana flower extract of *Musa x paradisiaca* was developed into nutraceutical biscuit (BanLact) as milk increase agent and the effect of BanLact biscuit on lactating rats was carried out. Lactating rats in treatment groups were fed with BanLact biscuit while mothers in control group were given an equivalent amount of distilled water start from day 5 through day 14. Sample was administered via oral animal feeding tubes. Milk production was estimated from Day 6 through Day 15 of lactation by isolating the litters (size six) from the dam for 6 hr daily, then weighing the litter before and after 60 minutes of suckling. It was found that the amount of milk consumed by the pups increased in days of lactation, except when the dam did not feed their pups during a period of one hour milking. Besides that, the statistical data showed that there was a significant difference ($p < 0.5$) in milk yield in lactating rats between the control group and BanLact biscuit group. The data also showed that rats that were administered with the BanLact biscuit had significantly higher in milk yield compared to control and ethanol extract groups but not significantly difference in the yield compared to aqueous extract group.

Keywords : *Banana flower, milk promoting*

Category : Science, Engineering and Technology

1515 A NEW RELIABLE ALGORITHM FOR ANALYTICAL TREATMENT OF DIFFERENTIAL AND INTEGRAL EQUATIONS#

M. S. H. Chowdhury, *Science in Engineering, Kulliyah of Engineering*
Nur Isnida Razali, *Mechanical Engineering, Kulliyah of Engineering*
Selami Ali, *Science in Engineering, Kulliyah of Engineering*
M. M. Rahman, *Physics, Kulliyah of Science*

Exhibitor : M. S. H. Chowdhury, Science in Engineering, Kulliyah of Engineering

In this paper, the new modified homotopy perturbation method (HPM) is applied for analytical treatment of differential equations and integral equations. The new modified HPM yields an analytical solution in terms of a rapidly convergent infinite power series with easily computable terms. The efficiency of the new modified technique is examined by several illustrative examples. In all cases of differential and integral equations, the new modified HPM yields the exact solutions in minimal iterations only.

Keywords : *Homotopy-perturbation method, Modified HPM, Differential equations, Integral equations*

Category : Science, Engineering and Technology

1517

QIBLA DIRECTOR#

Ahmad Fadzil Ismail, ECE, Kulliyah of Engineering

Exhibitor : Ahmad Fadzil Ismail, Electrical and Computer Engineering, Kulliyah of Engineering

By implementing basic engineering radio frequency (RF) knowledge and technology, daily Muslim needs such as the direction of the Qibla prior performing sholat can be easily resolved.

Keywords : Qibla Direction

Category : Science, Engineering and Technology

1518

AQUAFON - AN INTEGRATED AQUAPONIC SYSTEM#

Muhammad Nor Omar, *Department of Biotechnology, Kulliyah of Science*
Fathin Nabiha Md Lazi, *Department of Biotechnology, Kulliyah of Science*
Ahmad Muzammil Zuberdi, *Department of Biotechnology, Kulliyah of Science*

Exhibitor : Muhammad Nor Omar, Department of Biotechnology, Kulliyah of Science

AQUAFON is an integrated system for rearing fish and plants in recirculating systems. Thus, this prototype was designed to rear tilapia fish (*Oreochromis niloticus*) together with chili plants (*Capsicum annum*). After experimental trial, the oil from fish flesh was extracted and its fatty acid content was analysed. It was found that ω -3 and ω -6 PUFAs composition in *O. niloticus* oil grown under the normal and AQUAFON systems were 2.95 ± 1.47 and 61.16 ± 3.40 and 21.09 ± 1.07 and 78.91 ± 1.07 respectively. Comparative study on ω -3 and ω -6 PUFAs indicated ω -3 PUFA in *O. niloticus* oil showed a significant difference ($p < 0.05$) in AQUAFON to normal recirculating aquaculture system however ω -6 PUFA of tilapia oil in AQUAFON system was not significantly different to normal recirculating aquaculture system. In overall, the percentage of total omega PUFA in *O. niloticus* oil grown under AQUAFON and normal recirculating aquaculture systems was not significantly different.

Keywords : *integrated aquaponic, tilapia, capsicum annum*

Category : Science, Engineering and Technology

1520 ONLINE RECOGNITION OF ARABIC HANDWRITTEN WORDS SYSTEM BASED ON REAL TIME MATCHING TECHNIQUES#

Akram Zeki, *DIS, Kulliyah of Information & Communication Technology*
Mustafa Abuzaraida, *DCS, Kulliyah of Information & Communication Technology*

Exhibitor : Akram Zeki, Information System, Kulliyah of Information & Communication Technology

ABSTRACT: This study describes an online handwriting recognition system for the Arabic text. Recognition of Arabic text is a difficult problem since it is naturally both cursive and unconstrained. This work introduces a modified alignment matching algorithm to provide solutions for most of the difficulties inherent in recognizing Arabic text. This work consists of several phases. Initially, a preprocessing phase is used to reduce hardware imperfections and the amount of writing variations. A feature extraction phase used the preprocessed data to construct observation sequences which are provided to the recognizer engine following by the recognition phase which consists of Matching Algorithm called global alignment algorithm to be used as recognition engine to recognize the Arabic handwritten word.

Keywords : *Arabic Text Recognition, OCR, Online Handwriting Recognition*

Category : Science, Engineering and Technology

1522 ACQUISITION OF HIGH QUALITY SEMG CONDITIONING CIRCUIT DESIGN#

Mohammed M. Shobaki, *ECE, Kulliyah of Engineering*

Noreha Abdul Malik, *ECE, Kulliyah of Engineering*

Anis Nurashikin Nordin, *ECE, Kulliyah of Engineering*

Sheroz Khan, *ECE, Kulliyah of Engineering*

Exhibitor : Noreha Abdul Malik, Electrical and Computer Engineering, Kulliyah of Engineering

Acquisition of Surface Electromyography (SEMG) signal is used for many applications including the diagnosis of neuromuscular diseases and prosthesis control. Such signal bearing characteristics could be used as a diagnostic tool for estimating muscle fatigue or evaluating low backache, and disorders of motor control units. The diagnostic quality of a SEMG signal is highly dependent on the conditioning circuit of the acquisition system. This poster presents a design of a SEMG conditioning circuit that could guarantee collecting high quality signal that is immune to environmental noise. The conditioning circuit consists of four stages; an instrumentation amplifier that has a gain of around 1000; 4th order band-pass filter in the frequency range of 20-500Hz as the initial stages. The third stage is an amplifier with adjustable gain using a variable resistance that can be varied from 1k to 50k. In the final stage the signal is translated to meet the input requirement of an ADC of a data acquisition device. Acquisition of accurate signals will allow extraction of required characteristic to be analyzed for medical and clinical applications.

Keywords : *acquisition, surface EMG, conditioning circuit, bandpass filter, amplifier*

Category : Science, Engineering and Technology

1523 CATALYST COATING ON STARCH BASED COMPOSITES FOR SUSTAINABLE AUTOMOTIVE APPLICATION#

Zuraida Ahmad, Manufacturing and Materials Engineering, Kulliyah of Engineering
Hadi Purwanto, Manufacturing and Materials Engineering, Kulliyah of Engineering
Nur Humairah Abdul Razak, Manufacturing and Materials Engineering, Kulliyah of Engineering
Nor Najiah Zubir, Manufacturing and Materials Engineering, Kulliyah of Engineering
Khairul Anam Rabuan@Ridzuan, Manufacturing and Materials Engineering, Kulliyah of Engineering

Exhibitor : Zuraida Ahmad, Manufacturing & Materials Engineering, Kulliyah of Engineering

The motivation of this work is to minimize the dependence of nonrenewable synthetic polymers and fibers in numerous automotive interior parts, whilst still reducing weight and cost and maintaining reliability and sustainability. In this work, local available sago starch was plasticized and reinforced with kenaf bast fibers to improve the thermoplastic mechanical properties. The composites which utilized eco-friendly materials were prepared through compression moulding technique. The performance characteristics of the biocomposites, such as durability, thermal stability, water resistance and appearance, were enhanced with a catalyst coating via spray coating technique. Therefore, this innovation may augment environmental awareness and knowledge among society as well as providing significant socio-economic transformation of Ummah.

Keywords : *coating, composites, sago starch*

Category : Science, Engineering and Technology

1525 HYBRID NUMERIC-ANALYTIC METHOD FOR SOLVING CHAOTIC SYSTEM#

Nur Isnida Razali, *Mechanical Engineering, Kulliyah of Engineering*
M. S. H. Chowdhury, *Science in Engineering, Kulliyah of Engineering*
Waqar Asrar, *Mechanical Engineering, Kulliyah of Engineering*

Exhibitor : M. S. H. Chowdhury, Science in Engineering, Kulliyah of Engineering

In this paper, a numerical scheme based on adaption of standard Adomian decomposition method (ADM) is applied to the chaotic Lü system. Then, the standard ADM is converted into a hybrid numeric-analytic method called the multistage ADM (MADM). Numerical comparisons with the standard ADM and the fourth-order Runge-Kutta method (RK4) is made in order to prove that MADM is the reliable method for nonlinear problems.

Keywords : *Standard Adomian Decomposition Method; Multistage Adomian Decomposition Method; Fourth-order Runge-Kutta; Chaotic Lü system*

Category : Science, Engineering and Technology

1526 AUTOMATED NEIGHBORHOOD WATCH SECURITY SYSTEM NETWORK#

Akram Zeki, *DIS, Kulliyah of Information & Communication Technology*
Elbara Elnour, *DIS, Kulliyah of Information & Communication Technology*

Exhibitor : Akram Zeki, Information System, Kulliyah of Information & Communication Technology

This project intends to create a system to eventually, partially or fully, substitute the neighborhood watch. A neighborhood watch can be defined as an organized group of concerned citizens who patrol their neighborhood to prevent crime and robberies and to protect their houses, property and families from crime. This system will be called the Automated Neighborhood Watch Security System or NWSS (Neighborhood Watch Security System). The system will have a hardware and a software element. Motion detection sensors and camera to capture pictures of suspicious activity will be connected to the houses of interested participants. No video recording is intended in the first implementation of the system. The captured images of intruders or robbers are then stored in the home owner's computer and in an online system. The online system will be accessible from anywhere using a homeowner's username and password and will show images of suspicious activity and of robbers captured throughout the neighborhood. Neighbours are also able to communicate with each other and post information to a commonly accessible board in the online system to discuss any issues or to see if anyone recognizes the felons on the images. Images of interest can then be transmitted to law enforcement authorities to help with apprehending the offenders. The system also links neighbours and allows them to interact and can even be seen as alarm system based social networking. When an intruder is detected, the system will then proceed to alert the house owner and any other persons or neighbors and members of the watch. Other houses equipped with the NWSS are also alerted with information about which house is the victim. Notifications to the owner can be sent to the owner's Smartphone or online if the owner has a Smartphone with an internet connection. If the neighbours respond quickly they may hold the robber until the police arrives. If the robber escapes, his picture will be sent to the police and he may eventually be caught.

Keywords : *Security System, Neighborhood Watch, NWSS, Motion Detection Sensors, Camera Capture Pictures*

Category : Science, Engineering and Technology

1527 VIBRATION ENERGY HARVESTING USING COMB-SHAPED PIEZOELECTRIC MATERIALS : OPTIMIZATION STUDIES#

Asan Gani Abdul Muthalif, *Mechatronics, Kulliyah of Engineering*
Nor Hidayati D. Nordin, *Mechatronics, Kulliyah of Engineering*
Anis Nordin, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : Asan Gani Abdul Muthalif, Mechatronics Engineering, Kulliyah of Engineering

Of late, many have shown a great interest in the area of energy harvesting. Researchers from all over the world have been working on methods to produce an efficient energy harvester. In line with the spirit of green technology, energy harvesting will surely be a major contributor towards saving our environment and utilizing ambient sources of energy. For years, people have been harvesting energy from solar panels, wind turbines, hydroelectric generators and many more. These macro scale energy harvesting technologies have successfully grown in meeting the world's energy demand as its ultimate goal is to reduce oil dependency. However, to operate low powered electronic devices, micro scale energy scavenging comes into the light. The most promising method is via vibration energy scavenging which converts mechanical energy (from vibration) to electrical energy. In this research, the conversion is done through piezoelectric materials. The optimal beam shape and configuration is studied to maximize produced voltage in a given frequency range. Mathematical modelling are based on Euler-Bernoulli beam theory and simulations are done in MATLAB as well as Comsol Multiphysics softwares. Simulation is carried out for single and comb-shaped beam models with different width ratio.

Keywords : *Vibration Energy harvester, Piezoelectric,*

Category : Science, Engineering and Technology

1530

SMART WALKING STICK#

Ahmad Fadzil Ismail, ECE, Kulliyah of Engineering

Exhibitor : Ahmad Fadzil Ismail, Electrical and Computer Engineering, Kulliyah of Engineering

Walking stick or walking cane is used by the visual impaired as means for them to walk around by themselves. Wireless technology has been expanded and widely exploited particularly in communication field. By making use of the fundamental concept of wireless technology, walking stick which can receive and transmit the signal to the users without even touching the ground to map the environment can be created

Keywords : *Walking Stick, Visually Impaired, Radio Frequency*

Category : Science, Engineering and Technology

1531

IMPACT OF IMPLEMENTATION ELECTRONIC HEALTH RECORD#

Maznah Ahmad, *ICT, Center for Foundation Studies*

Exhibitor : Maznah Ahmad, ICT, Center for Foundation Studies

The applications of the Internet technology have advanced many fields including healthcare. To facilitate the administrative process and reduce medical errors, healthcare institutions may decide to adopt the electronic health records (EHR) and will most likely undergo changes in its clinical work processes. Besides difficulty in the implementation, complexity in its content, integration of various workflows and communication of databases, the resistance from the people involved remains the biggest challenge. While numerous researches can be found in the area of technology acceptance in healthcare systems, much work needs to be done in investigating the implementation process of the system and its impact within the healthcare institutions, especially in the Malaysian context. As such, this study seeks to investigate the implementation process of EHR in the selected Malaysia healthcare institutions and its influence on the healthcare practitioners using a case study approach. This multi-method research incorporates a qualitative study which identifies the different models of implementation being used in the selected institutions and prominent issues on the EHR system. The following quantitative survey among healthcare practitioners studies whether the implementation process impacts the system service quality of the EHR system. The study also examines if system service quality of the EHR system influence their individual performance in terms of job performance, professional autonomy and wellbeing. This research aims to contribute in the development of relevant model on individual performance of EHR implementation among healthcare practitioners to assist in the development of successful EHR systems and appropriate implementation strategy and policy.

Keywords : *EHR, Impact of Implementation, Healthcare*

Category : Science, Engineering and Technology

**1541 COMPACTRIO NI-FPGA IMPLEMENTATION OF QUANTUM KEY DISTRIBUTION
EXPERIMENT.#**

Suryadi ., Department of Physics, Kulliyah of Science

Exhibitor : Suryadi ., Physics, Kulliyah of Science

In this poster we address one of the basic questions on the QKD experiment – how to control and synchronize overall equipments and both stations with high speed, high accuracy, and with reasonable cost. We present the implementation of the C-RIO NI-FPGA which is capable to control and synchronize all equipment in the QKD experiment only by using single modular card per station with the accuracy of the I/O voltage pulse up to 12.5-ns.

Keywords : *QKD, FPGA, LabView*

Category : Science, Engineering and Technology

1544 REALIZATION OF MAQASID AL-SHARIAH TOWARDS SUSTAINABILITY: A STUDY ON MALAYSIAN URBAN RURAL NATIONAL INDICATORS NETWORK (MURNINETS)#

AZILA AHMAD SARKAWI, *URBAN AND REGIONAL PLANNING, Kulliyah of Architecture & Environmental Design*
NURUL AIDA SALIM, *URBAN AND REGIONAL PLANNING, Kulliyah of Architecture & Environmental Design*
ALIAS ABDULLAH, *URBAN AND REGIONAL PLANNING, Kulliyah of Architecture & Environmental Design*

Exhibitor : AZILA AHMAD SARKAWI, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

In recent years, sustainability is seen as one of the yardsticks for assessing quality of living in cities around the world (Oduwaye, 2009). Melbourne, Australia was recently ranked as the world's most livable city in 2011 (EIU, 2012). The selection was conducted by the Economist Intelligence Unit (EIU), who based their selection on a combination of indicators related to the environment, health care, culture and infrastructure systems. In Malaysia, the government also puts an effort to develop a set of indicators that can measure the sustainability of a city. Initially, the concept of sustainable development has been adopted by Malaysia since the Third Malaysia Plan (1976-1980). In the year 2004, a set of indicators known as Malaysian Urban Indicators Network (MURNInet) System was formed by the Federal Department of Town and Country Planning Peninsular Malaysia through 56 indicators and it is Malaysia response to measuring sustainable development at the city and town level before it was being rebranding to Malaysian Urban Rural National Indicators Network (MURNInets) in November, 2012 based on 36 indicators. Inspired by the above notion, this research offers a blending between religion and contemporary concept of sustainable by realizing Maqasid al-Shariah. For many, separation between worldly living and religion can be considered as the main root of environmental crisis (Ramzan, 1996). Admittedly, religions help to shape our attitude toward nature. Available evidence indicates that technical solutions have not been resulting in satisfactory outcomes. Thus, by having urban sustainability indicators which the formations are in accordance with the needs of Shariah, it then will secure our built environment .

Keywords : *Sustainability, Maqasid al-shariah, sustainable indicator, built environment*

Category : Science, Engineering and Technology

1547 CONTROL SYSTEM DESIGN FOR PART TRANSPORTER IN FMS USING SIMULATION BASED SCADA SYSTEM#

Mohammad Iqbal Mohammad Iqbal, *Manufacturing and Material Engineering Department, Kulliyah of Engineering*

Exhibitor : *Mohammad Iqbal Mohammad Iqbal, Manufacturing & Materials Engineering, Kulliyah of Engineering*

Introduction Flexible Manufacturing System (FMS) is a fully integrated manufacturing system, consist of a group of processing work stations interconnected by an automated material handling system and controlled by a computer control system. Operations are allocated to work stations and parts are transferred from one station to another according to the routing determined by the operational allocation decisions. It was proven in previous researches that dispatching rules of the routing give significant effects to the performance of the FMS. Dealing with this fact, FMS requires a control system that able to schedule parts into stations according to selected dispatching rules. Objective This project developed the mechanical design and control system design for part transporter of the FMS. The design was evaluated under different dispatching rules, and the performance of the FMS was measured. Method The mechanical design was conducted by using Solidworks 2 D CAD Design software. It starts with the development of the system plan layout, followed by the determination of part transporter system, and detail design of mechanical components. The mechanical performance of the system was evaluated by using animation simulation. The system was controlled by using Programmable Logic Controller (PLC). The ladder diagram of the PLC was developed by using Cx-One programming software. The performance was evaluated by integrating the CAD design, PLC device and PLC ladder diagram under a Supervisory Control and Data Acquisition (SCADA) system. The Experimental Study The FMS has three machine workstations and a part transporter system that consists of conveyor-in, conveyor-out, part loading station, product unloading station and a gantry machine. Conveyor-in transfer parts into the system. Gantry machine takes the part from part loading station and send it to either station 1, 2 or 3 according to dispatching rules and the availability of the station. Finish product will be taken from the station by the gantry machine and sent to product unloading station, to be sent out from the system by conveyor-out. Results The FMS model was tested to produce three different parts with different processing times and different due dates. Three dispatching rules were determined to schedule parts processing, i. e. first come first serve, earliest due date and shortest processing time. Three performance measures were considered, i. e. mean waiting time, station utility and mean tardiness. The result of the simulation study shows that the system able to schedule parts among the stations under selected dispatching rules, and gives different performances accordingly. By using the proposed method, the control system of the FMS could be developed more efficient and accurate.

Keywords : *Flexible Manufacturing System, Part transporter, Controls system, Simulation, Scada system*

Category : Science, Engineering and Technology

1549 TREATMENT OF BIOTREATED PALM OIL MILL EFFLUENT (BPOME) USING POWDERED ACTIVATED CARBON (PAC) PRODUCED FROM PALM EMPTY FRUIT BUNCHES (EFB)#

Mutiu Amosa, *Biotechnology Engineering, Kulliyah of Engineering*
Mohammed Saedi Jami, *Biotechnology Engineering, Kulliyah of Engineering*
Suleyman A. Muyibi, *Biotechnology Engineering, Kulliyah of Engineering*
Ma'an AlKhatib, *Biotechnology Engineering, Kulliyah of Engineering*
Dzun N. Jimat, *Biotechnology Engineering, Kulliyah of Engineering*
Tamrin Tajari, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Mohammed Saedi Jami, *Biotechnology Engineering, Kulliyah of Engineering*

Accessibility to clean water is currently shrinking, therefore putting man under severe threat of water borne diseases. Besides increasing world population, the volume of water available for domestic use is being tapped for use and consequently the used water by the industry are injected into the water bodies thereby rendering them unsafe for use. In the light of this, there is the need to effectively treat the wastewater and reused in the industry for in-house keeping processes in order to conserve world water volume. Various treatment methods have been proposed for this purpose, however adsorption treatment processes involving the use of activated carbon has attracted interest due its efficacy, availability and cost-effectiveness. This study investigated the application of powdered activated carbon (PAC) developed from a palm oil solid waste - empty fruit bunch (EFB) for treatment of biotreated palm oil mill effluent (BPOME) for reuse in the industry. The PAC was produced by CO₂ activation at 800-OC, N₂ (2.5 L/min) for 30 mins and CO₂ (0.1L/min) for 15 mins. Batch adsorption was conducted under various conditions such as agitation (100 – 200 rpm), dosage (5 – 10g) and contact time (30 – 60 mins). The maximum Chemical Oxygen Demand (COD) removal was 56.6% at the operating conditions of 10 grams, 200rpm and 30 mins contact time. Optimization of the production conditions of PAC from EFB is expected to improve the adsorption capacity, however its availability and renewable sources indicates its prospect as a cost-effective adsorbent for industrial applications. This study further supports waste to wealth and zero waste discharge policy.

Keywords : POME, PAC, EFB

Category : Science, Engineering and Technology

1551 ENERGY SAVING STRATEGY FOR SEQUENTIAL BATCH REACTOR (SBR)#

Mohammed Saedi Jami, *Biotechnology Engineering, Kulliyah of Engineering*

Suleyman A. Muyibi, *Biotechnology Engineering, Kulliyah of Engineering*

Nur Faizah Ismail, *Biotechnology Engineering, Kulliyah of Engineering*

Exhibitor : Mohammed Saedi Jami, Biotechnology Engineering, Kulliyah of Engineering

SBR is a wastewater treatment technology which provides flexibility for NH₃-N removal with suitable aeration time for complete nitrification to occur. Performance of SBR at Bandar Tun Razak Treatment Plant was evaluated to ensure DOE standard is complied. Besides, process dynamics of biological process in SBR system through simulation of ASM1 were studied. The simulation of ASM1 by MATLAB Software was run for one fill and 6 hour batch time with 1.5 hour of aeration. Standard computational approach of SBR design was used to compute the optimal aeration time with energy consumption for NH₃-N removal in full scale plant. By reducing current aeration time, 1.5 to 1.35 hours gives 80 to 93% NH₃-N removal in which total energy reduced by up to 10 % and saved RM 5,000 per year.

Keywords : SBR, NH₃-N, ASM, Energy

Category : Science, Engineering and Technology

1555 DESIGN OF DIFFERENTIAL SENSING ARCHITECTURE FOR CIRCUITRY AND BIOMEDICAL IMPLANT APPLICATION#

Abdulwahab Deji, *ECE, Kulliyah of Engineering*
Sheroz Khan, *ECE, Kulliyah of Engineering*
Jalel Chebil, *ECE, Kulliyah of Engineering*

Exhibitor : Sheroz Khan, Electrical and Computer Engineering, Kulliyah of Engineering

This poster presents a novel approach of an inductive sensor based on the basic principle of producing inductive changes in proportion to sea saw oscillations of a horizontal bar. The circuit is supported by resistances and capacitances meant for deriving a signal from implantable devices. Basically, it's a pressure sensor which can be used for the acquisition of medical signal, and is very helpful in diagnostic procedures. Using an inductive coil sensor working on a differential manner, a physical parameter is translated into a signal with proportionate output frequency change. The results shown can be used for characterizing the materials and hence sensor with high sensitivity, linearity and responsiveness in harsh environmental condition. The experimentation is done to provide a real time implementation and processing. The frequency properties for paramagnetic and ferromagnetic materials are obtained, providing a realization of how system disturbances and oscillation have been translated into useful wireless electrical pulses. The detection and optimization of the vibrations and oscillation produced in servomechanisms and electro-mechanical devices has been implemented to verify its obtained derivations and simulations.

Keywords : *Differential, sensory system, inductance to frequency conversion*

Category : Science, Engineering and Technology

1561 SUBDISTRIBUTION TO COX'S MODEL FOR PARTLY INTERVAL-CENSORED DATA WITH APPLICATION TO AIDS STUDIES#

Faiz Elfaki, *Science In Engineering, Kulliyah of Engineering*
Jamal Daoud, *Science In Engineering, Kulliyah of Engineering*
Mohamad Azram, *Science In Engineering, Kulliyah of Engineering*

Exhibitor : Faiz Elfaki, Science In Engineering, Kulliyah of Engineering

In this paper, we consider incomplete survival data that are, partly-interval failure time data where observed data include both exact and interval-censored observation on the survival time of interest. We present a modification of Fine and Gray (1999), which proposed a class of estimation procedures for semi-parametric proportional hazards regression model for the subdistribution of a competing risks model using the partial likelihood principle and weighting techniques. The method is evaluated using simulation studies and illustrated by AIDS data set.

Keywords : *Survival Fuction, Competing Risk, Party Interval-censored*

Category : Science, Engineering and Technology

1562

STAIR CLIMBING WHEELCHAIR (SCWC)#

Asan Gani Abdul Muthalif, *Mechatronics, Kulliyah of Engineering*

Muhammad Fazreen Zainal, *Mechatronics, Kulliyah of Engineering*

Mohamad Hilmi Mat Idris, *Mechatronics, Kulliyah of Engineering*

Exhibitor : Asan Gani Abdul Muthalif, Mechatronics Engineering, Kulliyah of Engineering

As the market of the wheelchair and demand of most reliable wheelchair increases year to year plus increased in computing power, low cost microcontrollers and greater variety of sensors, people are competing in designing various types of mobility devices which have a wide range of cost and functions. The willing and need of disable to become completely independent becomes more critical. The recent technology still could not find the best cure for affordable high tech wheelchair. Thus, this project deal with the design and development of technologically advanced wheelchair which able to climb and descending stair reliably. The project talk in length of mechanism involves in ascending and descending steps. The project explains the design of mechanical and electrical such as wheel cluster, tilt angle regulator and motor speed controller. It aims to give most reliable wheelchair which is affordable to most users. It presents a complete review of attempt to deal with stair with various companies around the world.

Keywords : *Stair climbing, wheelchair, disabled people*

Category : Science, Engineering and Technology

**1563 GRAM POSITIVE BACTERIA WITH COMMERCIAL POTENTIALS ISOLATED FROM THE
INTESTINES OF MALAYSIAN HOLOTHURIA (MERTENSIOTHURIA) LEUCOSPILOTA
(BRANDT, 1835) (TIMUN LAUT) AND STICHOPUS HORRENS SELENKA, 1867 (GAMAT)#**

Kamarul Rahim Kamarudin, *Biotechnology, Kulliyah of Science*

Nurziana Ngah, *Chemistry, Kulliyah of Science*

Tengku Haziya Amin Tengku Abdul Hamid, *Biotechnology, Kulliyah of Science*

Ridzwan Hashim, *Biomedical Science, Kulliyah of Allied Health Sciences*

Deny Susanti, *Chemistry, Kulliyah of Science*

Exhibitor : Kamarul Rahim Kamarudin, Biotechnology, Kulliyah of Science

This preliminary study aimed to isolate and identify bacteria that inhabit the intestines of two local species of Malaysian sea cucumbers - the most abundant 'timun laut' species in Malaysia i.e. *Holothuria (Mertensiothuria) leucospilota* (Brandt, 1835) and a commercial 'gamat' species i.e. *Stichopus horrens* Selenka, 1867. Phylogenetic analyses of partial 16S mitochondrial rRNA gene sequences suggest the presence of at least six bacterial genera in the intestines of both sea cucumber species i.e. six genera of Gram-positive bacteria representing order Bacillales and order Actinomycetales i.e. *Bacillus*, *Brevibacillus*, *Dermacoccus*, *Lysinibacillus*, *Micrococcus*, and *Staphylococcus* isolated from the intestines of *H. leucospilota*; and three genera of Gram-positive bacteria representing order Bacillales i.e. *Bacillus*, *Brevibacillus*, and *Lysinibacillus* isolated from the intestines of *S. horrens*. Interestingly, 60% of the bacterial species have been known to have commercial potentials especially as antibiotics producers. The intestines of *S. horrens* showed the presence of all bacteria with commercial potentials while the intestines of *H. leucospilota* also showed the presence of unknown potentials of bacteria that could be pathogenic. We speculate that less diverse microbial population in *S. horrens* as compared to *H. leucospilota* plus the presence of all bacteria with commercial potentials in the intestines of *S. horrens* could be due to the higher level of antimicrobial properties of intestines in *S. horrens*. Further studies with more specimens of *S. horrens* and *H. leucospilota* from broader geographical locations, and the use of complete mtDNA genes along with morphological approaches for species identification may facilitate to provide better insights into the bacterial communities in the intestines of both Malaysian sea cucumber species. This study also suggests that the two Malaysian sea cucumbers are the new sources of bacteria with known commercial potentials that can be developed towards industrial applications.

Keywords : *Sea cucumbers, Malaysia, Holothuria (Mertensiothuria) leucospilota (Brandt, 1835), Stichopus horrens Selenka, 1867, intestines, bacteria, mitochondrial 16S rRNA gene*

Category : Science, Engineering and Technology

1566 **NEGATIVE ALTITUDE ENVELOPE FOR AEROELASTIC ANALYSIS OF TRANSPORT AIRCRAFT AND UAV#**

Erwin Sulaeman, *Mechanical Engineering, Kulliyah of Engineering*

Exhibitor : *Erwin Sulaeman, Mechanical Engineering, Kulliyah of Engineering*

Operational flight speed is a key issue in aircraft design. To ensure flight safety within the operational flight envelope, all transport aircraft designs should satisfy airworthiness standard regulation. One fundamental issue of the aircraft design that relates directly to flight safety as well as commercial aspect of the aircraft is on the evaluation of the maximum speed within the designated flight envelope. In the present work, a study is performed to evaluate the negative altitude requirement related to aeroelastic instability analysis as one requirement that should be fulfilled to design the maximum speed. An analytical derivation to obtain the negative altitude is performed based on the airworthiness requirement that a transport airplane must be designed to be free from aeroelastic instability within the flight envelope encompassed by the dive speed or dive Mach number versus altitude envelope enlarged at all points by an increase of 15% in equivalent airspeed at both constant Mach number and constant altitude. To take into account variation in atmospheric condition as function of altitude, the international standard regulation is used as referenced. The analysis result shows that a single negative altitude can be obtained using these criteria regardless the dive speed or dive Mach number. A further discussion on the application of the negative altitude concept to UAV (Unmanned Aerial Vehicle), in relation to UAV Standard Airworthiness Requirement STANAG 4671, is presented.

Keywords : *Aeroelasticity, flutter, aircraft standard regulation, UAV*

Category : Science, Engineering and Technology

1577 PINEAPPLE FIBRE THREAD AS GREEN AND INNOVATIVE INSTRUMENT FOR TEXTILE RESTORATION#

Zumahiran Kamarudin, *Applied Arts and Design, Kulliyah of Architecture & Environmental Design*
Nur Farhana Mohd Yusof, ,

Exhibitor : Zumahiran Kamarudin, Applied Art and Design, Kulliyah of Architecture & Environmental Design

Traditional or natural fibre has been forgotten especially when the development of new technology in textile industry whereby the use of synthetic fibre become eminent. Since the application of the nature-based thread in the textile restoration has not yet been explored through scientific research, the objective of this research was to determine the suitability and potentiality of pineapple fibre as instrumental threads in the restoration work of batik textile. Exploratory and experimental investigation on the traditional making of pineapple leave as a fibre thread was conducted through several stages involving extracting and removing the fibre from the surfaces of leaves and its drying process. Series of analysis were conducted to determine the mechanical and physical properties of the thread including tensile and moisture content tests. This study found that this type of thread has high potential values in tensile strength, extensibility, shape and moisture content which is suitable for application. Later, further analysis on the application techniques of the thread was also conducted based on its potentiality in the restoration work for batik textile. It was found based on its compatibility with the batik fabric, the thread has suitability in the restoration work of the textile. The use of the pineapple fibre thread in the textile restoration is not only safe to the artifact but also is an innovative way for caring and maintaining the artifact from future damage. Besides that, it also has high potential to become an eco friendly technology for textile use and making fabrics. This certainly requires extensive research works on the chemical properties, biotechnology and engineering aspects of the pineapple fibre to improve their quality and application.

Keywords : *Fibre thread, textile restoration, pineapple leave, innovative material*

Category : Science, Engineering and Technology

1578 ANALYSIS OF CRYPTOGRAPHIC BOOLEAN FUNCTIONS IN HAAR DOMAIN#

Hashum M. Rafiq, *Electrical and Computer Engineering, Kulliyah of Engineering*
Mohammad Umar Siddiqi, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : Mohammad Umar Siddiqi, Electrical and Computer Engineering, Kulliyah of Engineering

Boolean functions have been of great interest in many fields of engineering, science, and mathematics. In the context of cryptography, they play a central role in the design and application of information protection methods. The strength of cryptographic systems against any potential attack is determined by several criteria which the cryptographic functions should meet. These criteria can be analyzed and measured using certain specific tools or methods of approach. In this research work, we take the help of an alternative tool for the analysis of cryptographic Boolean functions. We employ Haar spectral transform as an alternative method of approach to analyze the cryptographic functions and measure their cryptographic strength. The focus of this work is based on the analogy between the Walsh and the Haar spectral transforms. We first present a brief overview of the cryptographic functions, cryptographic systems, and the current tools used for the task under context. Then we introduce the Haar spectral method and explore concisely its progress and significance in representing Boolean functions. The next step in this presentation is the initial results for the analysis phase of the research work. In the process we look at some general properties of cryptographic functions that include Hamming weight, distance, and balanced criterion. We present their general representation using the Haar transform, as well as the Haar-representation for the general class of Bent functions. For the Bent functions, we explore the representation in connection to the Walsh transform and the Autocorrelation function. In doing so, we present the Walsh transform in different orderings of its functions. Finally, we present as a conclusion, a discussion for the status of the ongoing research work at hand including the expectation for the future work.

Keywords : *Spectral transform (Haar/Walsh), Cryptographic Criteria, Cryptographic Boolean Functions, Autocorrelation Function, Haar Spectrum*

Category : Science, Engineering and Technology

1579

CUTTING TEMPERATURE#

Erry Yulian Triblas Adesta, *Manufacturing and Materials Engineering, Kulliyah of Engineering*

Muhammad Riza, *Manufacturing and Materials Engineering, Kulliyah of Engineering*

Mohammad Yuhan Suprianto, *Manufacturing and Materials Engineering, Kulliyah of Engineering*

Exhibitor : Erry Yulian Triblas Adesta, Manufacturing & Materials Engineering, Kulliyah of Engineering

Excessive temperature is known to cause various types of thermal damages to the cutting tool and workpiece, such as rapid tool wear and thermal expansion of the workpiece. To explain the effect of temperature on the thermal damage and to determine suitable cutting conditions, an accurate knowledge of machining temperature is necessary. The cutting temperature behaviors and tool wear development during pocketing of AISI H13 in high speed end milling especially by taking into consideration tool path strategy and its relationship seems to be left uninvestigated. The findings of temperature behaviors of cutting tool and AISI H13 materials with zigzag tool path strategy on high speed end milling.

Keywords : Tool-path, Cutting Temperature, Cutting Force, AISI H13, High Speed End Milling

Category : Science, Engineering and Technology

1580 AN INVESTIGATION OF THE USE OF DIFFERENT CRYPTOGRAPHIC PRIMITIVES IN CRYPTOGRAPHICALLY GENERATED ADDRESS ALGORITHMS#

Sana Qadir, *Electrical and Computer Engineering, Kulliyah of Engineering*
Mohammad Umar Siddiqi, *Electrical and Computer Engineering, Kulliyah of Engineering*
Wajdi Fauzi Al-Khateeb, *Electrical and Computer Engineering, Kulliyah of Engineering*
Farhat Anwar, *Electrical and Computer Engineering, Kulliyah of Engineering*

Exhibitor : *Mohammad Umar Siddiqi, Electrical and Computer Engineering, Kulliyah of Engineering*

Cryptographically generated addresses (CGAs) are IPv6 addresses for which the interface identifier is generated by computing a cryptographic one-way hash function from a node's public key and some auxiliary parameters. In this way, the algorithm used to generate a CGA ensures that the IPv6 address of a node is cryptographically bound to its public key. This binding can be verified by any node using the CGA verification algorithm. There are two more algorithms related to the use of CGA for authentication in Mobile IPv6. These are the CGA Signature Generation Algorithm and the CGA Signature Verification Algorithm. These algorithms are seen as promising candidates for authenticating the Binding Update message sent by a mobile node when it moves to a foreign network. At present, these algorithms use traditional cryptographic primitives like RSA and SHA-1. Over the last decade, the mobile computing world has changed significantly (esp. in terms of processing power) and cryptographic primitives that were thought to be too computationally expensive are now being considered feasible for low end MIPV6 nodes. Also, the possibility of quantum computing has increased the urgency to search for cryptosystems that are resistant to quantum computers. Hash-based signatures schemes are being widely regarded as the best alternative to the traditional cryptosystems, such as RSA and ECC. These traditional cryptosystems are not considered resistant to quantum computers. Hash-based signature schemes are based on one-time signatures and so this study undertakes to investigate the feasibility of using Winternitz one-time signature (W-OTS) algorithm in CGA Signature algorithms. There are also several new hash functions that have recently gained popularity and undergone extensive scrutiny as part of the SHA-3 competition. In light of this, this study also analyzes the performance of the four CGA algorithms when implemented with SHA-3, BLAKE and Skein hash functions. From the results obtained, it is seen that W-OTS algorithm has a lower mean key generation time and a lower mean CGA Generation time than RSA (at comparable level of security). However, using W-OTS results in significantly slower performance in all the other three CGA algorithms. The performance of the new hash functions was also demonstrated to be much slower than SHA-256 (except during W-OTS key generation). These results show that the performance of the investigated cryptographic primitives is promising in only a few operations or cases (e.g. in BLAKE or for the CGA generation algorithm). Further work remains to be done before these primitives can be considered good overall candidates for adoption by low-end MIPV6 nodes esp. for CGA Signature algorithms.

Keywords : *Cryptographically generated addresses (CGAs), Secure hash algorithm (SHA), One-time signature (W-OTS), Signature generation, Signature Verification*

Category : Science, Engineering and Technology

1581

SIMILARITY COEFFICIENT MEASURES#

Erry Yulian Triblas Adesta, *Manufacturing and Materials Engineering, Kulliyah of Engineering*
Sanaa Ali Hamzah, *Manufacturing and Materials Engineering, Kulliyah of Engineering*

Exhibitor : Erry Yulian Triblas Adesta, Manufacturing & Materials Engineering, Kulliyah of Engineering

Similarity coefficients (SC) measures are used to evaluate cellular manufacturing system (CMS). Those measures have variation in the accuracy, Yin and Yasuda had conducted comparative study to compare their accuracy. The results showed minor differences among the majority and few are less accurate. However, Basher and Karaa tried one of this measures (Jaccard) in different phase (feasibility assessment). In this paper we repeat Basher experience with 19 General Purpose Similarity Coefficients (GPSCs) measures in order to prove that any of measures evaluated by Yin and Yasuda in cell formation (CF) can be utilized in feasibility assessment (FA). The results revealed above 80% of them are capable to be used in feasibility assessment.

Keywords : *Similarity Coefficient, Cell Formation, Feasibility Assessment, Cellular Manufacturing*

Category : Science, Engineering and Technology

1582

DAMAGE PREDICTION OF SCARF JOINT#

Irfan Hilmy, *MME, Kulliyah of Engineering*

Exhibitor : Irfan Hilmy, MME, Kulliyah of Engineering

The number of applications of adhesives in bonded structural components is rising rapidly. High interest in adhesives is in aerospace, infrastructure, automotive, marine, and biomedical communities. Structural adhesive joints offer many advantages over conventional fasteners such as welding, riveting, brazing and bolting. The behaviour of damage parameters in adhesive bonding has been investigated numerically and experimentally in order to predict the location of the initial crack in the adhesive region. It was found that stress state that occurred in the adhesive region was relatively complex. From the numerical analysis validated with the experiment, it was found that damage initiated at a location where the von Mises stress and triaxiality have a maximum value.

Keywords : *scarf joint, damage prediction*

Category : Science, Engineering and Technology

1583 DEVELOPMENT OF WALKING FISH (AMBLUTORY FISH) ROBOT TO DEMONSTRATE THE RESCUE OPERATION#

Mahbub Rashid, *MCT, Kulliyyah of Engineering*

Exhibitor : Mahbub Rashid, Mechatronics Engineering, Kulliyyah of Engineering

The capability of autonomous and semi-autonomous platforms to function in the shallow water surf zone is critical for a wide range of military and civilian operations. Of particular importance is the ability to transition between locomotion modes in aquatic and terrestrial settings. Walking fish or ambulatory fish, is a general term that refers to fish that are able to travel over land for extended periods of time. This fish can propagate a number of locomotion's, including springing, snake-like lateral undulation, and tripod-like walking. This study walking fish or ambulatory of animal locomotion mechanisms can provide specific inspiration to address these demands for our FYP1. In this work, we summarize on-going efforts to create a semi- autonomous, highly mobile ambulatory robot that can move forward and backward. The development of a conceptual design for an ambulatory fish robot in this project considered several aspects such as swimming and walking performance, leakage test and motion controller. This required us to do some mechanical design which we finally have come out with quick-return mechanism for the body of the ambulatory fish. We decided to make the body into three parts which are the head, the body and the tail. We used five servo motor to make the propulsion system. Finally, to control the motion of the robot is really crucial, especially when there is an obstacle around the robot. The main controller for all the motors and sensors is the servo controller, which is been placed at the head of the fish. The complementary work is presently underway for semi-autonomous control. We believe these results will lay the foundation for the development of a generation of amphibious robots with an unprecedented versatility and mobility.

Keywords : *AMBLUTORY FISH) ROBOT*

Category : Science, Engineering and Technology

1584 PLANNING & CONTROL GAIT FOR MINIATURIZED QUADRAPED ROBOT PET#

Mahbub Rashid, *MCT, Kulliyah of Engineering*

Exhibitor : Mahbub Rashid, Mechatronics Engineering, Kulliyah of Engineering

This work proposes a systematic gait planning for a miniature quadruped robot. The proposed design will ensure reliable motion for the robot. Static stability is the main focus in the gait planning procedures. The gait should take an animal movement as gait reference for the locomotion of the robot. The systematic gait planning & control are developed by calculating the forward & inverse kinematics of each joint in one leg. Ground coordinate representation is used for an efficient gait planning. Next, the decision for material, hardware & software design requirement was made to implement in the robot prototype. For prototype used CATIA V5 CAD software to design the robot. The simulation of the proposed gait is done by using SolidWorks 2009 SP0.0's feature called Motion Study. It provides a detailed gait diagram which explains the position and movements of link at different times. The proposed design will ensure reliable motion for the robot. A real time simulation of the proposed gait is implemented on the 4-legged prototype based on the software simulation. A control algorithm will be implemented to make the joints more controllable and tractable. A gait planning for quadruped robot pet based on animal movement was developed using software simulation & real time prototype simulation. A control algorithm was implemented in the quadruped robot pet prototype. The real time capability of a quadruped pet robot was realized by using systematic gait planning.

Keywords : *Gait control, quadruped robot*

Category : Science, Engineering and Technology

1585

TWO STAGE CMOS OP-AMP FOR 10 MHZ MEMS OSCILLATOR#

Muhammad Syamsi Mohd Taufik, *ECE, Kulliyah of Engineering*
Anis Nurashikin Nordin, *ECE, Kulliyah of Engineering*

Exhibitor : Anis Nurashikin Nordin, Electrical and Computer Engineering, Kulliyah of Engineering

Micro Electro Mechanical System (MEMS) resonator is claimed to be the best choice to substitute quartz crystal resonator for oscillators used in consumer, commercial, industrial and military applications. This is due to its compatibility with CMOS technology which offers thinner, cheaper, and lowers timing solution and potential for on-chip integration. Another good characteristic of MEMS is it has Q-factors of generating frequency close to the crystals. This research focuses on developing a CMOS operational amplifier (op-amp) for MEMS resonators operating in the 10 MHz. Two-stage CMOS op-amp is chosen to integrate with MEMS resonator. Two-stage CMOS op-amp consist of two stages. The first stage provides a high gain whereas the second stage provides large swing. Each stage can be designed with various amplifier topologies. For real implementation, the two-stage CMOS op-amp will be simulated with 10 Mhz resonator. The two-stage CMOS oscillator achieves a gain of 13.09 dB at VDD of 3.3 V and VSS of -3.3 V with the phase noise -174.9 dBc/Hz. The oscillator satisfied Barkhausen criteria of oscillation. The oscillator is simulated using Cadence.

Keywords :

Category : Science, Engineering and Technology

1586

PROXIMITY POWER HANDOVER FOR BIO-IMPLANT ELECTRONICS#

S. M. A. Motakabber, *ECE, Kulliyah of Engineering*

M.I. Ibrahimy, *ECE, Kulliyah of Engineering*

AHM Zahirul Alam, *ECE, Kulliyah of Engineering*

Exhibitor : S. M. A. Motakabber, Electrical and Computer Engineering, Kulliyah of Engineering

Lifesaving bio-implant electronic devices such cardiac pacemaker, gastric pacemaker, cochlear implant, drug-delivery implant and so many systems require power supply for their intended functions. Usually a battery is implanted with the system or wires are connected to an external source for powering the devices. In this research work a simple and low-cost wireless power delivery system is considered for rechargeable battery that can be used for powering the electrical stimulation bio-implant system. A loosely coupled RF power transmitter and receiver systems have been designed. The receiver antenna can harvest the energy from the near field of the transmitter antenna. The power transfer efficiency between a transmitter loop antenna and a receiver loop antenna when the orientations are markedly different is investigated. For a fixed distance maximum power is transferred between transmitter and receiver when their antennas orientation is zero degree.

Keywords : *Bio-implant, energy harvesting, near-field far-field communication*

Category : Science, Engineering and Technology

1587 POTENTIAL OF DURIAN SKIN FIBRE (DSF) AS NANOFILLER FOR BIOCOMPOSITE APPLICATIONS#

Hazleen Anuar, *Manufacturing and Materials Engineering, Kulliyah of Engineering*
Nur Aimi Mohd Nasir, *Manufacturing and Materials Engineering, Kulliyah of Engineering*
Mohd Romainor Manshor, *Manufacturing and Materials Engineering, Kulliyah of Engineering*
Maizirwan Mel, *Biotechnology Engineering, Kulliyah of Engineering*
Wan Nazri Wan Busu, , *Reseach Institute*
Ahmad Fitrie Mohd Ithnin, *Manufacturing and Materials Engineering, Kulliyah of Engineering*

Exhibitor : *Hazleen Anuar, Manufacturing & Materials Engineering, Kulliyah of Engineering*

Nanocellulose is the crystalline domains obtained from renewable cellulosic sources, used to increase mechanical properties and biodegradability in polymer composites. There are many types of potential renewable cellulosic sources such kenaf, jute and pineapple leaf fibre. However, there is no literature on durian skin fibre (DSF) as one of it. This work was conducted to study how biological fermentation affects the DSF morphology from micro to nanoscale. Microscopy studies showed the unique morphology of interconnected web-like structure of DSF. The produced nanofibers were bundles of cellulose fibers of widths ranging between 49 to 81 nm and estimated lengths of several micrometers. Evaluation on chemical composition of fibre that revealed the removal of hemicelluloses and lignin after it was biologically treated was conducted via Fourier Transform Infrared spectroscopy (FTIR) and TAPPI method. Crystallinity's assessment also been conducted using X-ray diffractometer confirmed the improvement have been occurred during biological treatment. The thermal stability of DSF and DSnF were also investigated using thermogravimetric analysis (TGA) and differential scanning calorimetry (DSC).

Keywords : *durian skin fibre, rhizopus oryzae, fermentation, durian skin nanofibre*

Category : Social Sciences and Humanities

1008 “ THE OUTCOME OF CONTINUOUS ASSESSMENTS ON UNDERGRADUATE PHARMACY STUDENTS' PERFORMANCE”#

May Soe, *Department of Basic Medical Sciences Department, Kulliyah of Pharmacy*
Tin Han, *Community Dentistry Department, Kulliyah of Dentistry*

Exhibitor : May Soe, Basic Medical Sciences, Kulliyah of Pharmacy

Mid semester examination (MSE) was abolished and replaced by continuous assessments (CA) in Kulliyah of Pharmacy, International Islamic University Malaysia at 2010. The overall score of CA and MSE contribute 40% of total score. This study examined the outcome of CA on the students' academic performance in Medical Biochemistry. We studied the impact of CA on overall students' performance before and after curriculum changes. A retrospective desktop study was done by using the records of students' performance. Total 373 students from two different groups were included. Group I consisted of 175 students who had taken the MSE under the old curriculum whereas Group II consisted of 198 students. Both groups received the same structure of questions for the end semester exam (ESE). The comparative analyses of scoring in CA versus MSE and a cross analysis of final grading in accordance with academic years were done. Group II achieved better results with CA (27.91 ± 3.28) than group I (23.91 ± 3.41) with MSE [$p < 0.05$]. The ESE result in group II (67.84 ± 7.2) was significantly higher than that of group I (61.56 ± 8.52) [$p < 0.05$]. Total 8 students (4.6%) from group I failed but no failure from Group II. Thus, CA assists the students in improving their grades at the ESE. This CA is not favored by the students as they have to work hard to meet the commitments and has more credibility than MSE in evaluating students' study progress. Thus, the new system of assessment (CA) is more applicable and beneficial than previous MSE for students.

Keywords : *Pharmacy Education, Continuous Assessments, Mid- Semester Exam, End- Semester Exam, Students' Academic Performance*

Category : Social Sciences and Humanities

1009 TSUNAMI: A COLLECTION OF SHORT STORIES ABOUT LIFE IN MALAYSIA (IN ARABIC)#

Hassan A. El-Nagar, , *International Institute of Islamic Thought and Civilization*

Hassan A. El-Nagar, , *International Institute of Islamic Thought and Civilization*

Exhibitor : Hassan A. El-Nagar, ISTAC, International Institute of Islamic Thought and Civilization

TSUNAMI:(A collection of Short Stories About Life in Malaysia) (In Arabic) This book is a collection of short stories (in Arabic) about different aspects of life in Malaysia. As its title suggests, the stories deal with tragedy, with human suffering, with the human being's need for care, love and sacrifice, especially when disaster strikes or a member of the community slips. In some of these cases family or friends come to the rescue. In others the government emerges as the sole agent for maintaining the social fabric. Some of the stories portray the dehumanizing quality of poverty while others depict the destructive power of wealth. But above all are the stories that highlight the fact that tragedy brings out the best in the human being; the quality of giving. Prof. El-Nagar who has been in Malaysia for two decades provides a social insight into Malaysians society characterized by a compassionate humanistic style by which he tries to attract our attention to the need of creating a collective spirit among all Malaysians. It is perhaps the first time a non-Malaysian writes about issues relating to Malaysia with such intensity of emotion. This collection of short stories is in the process of being translated into Bahasa Malaysia. The titles of the ten stories in this collection are: 1. Tsunami 2. Separation 3. A Preposition 4. Mercy 5. Beginning 6. Two dummies 7. Brotherhood 8. No. 20, Lorong Dato Sulaiman 9. Swings 10. Homecoming

Keywords :

Category : Social Sciences and Humanities

1010

CONCEPT OF BEAUTY IN ISLAM#

Hassan A. El-Nagar, , *International Institute of Islamic Thought and Civilization*

Exhibitor : Hassan A. El-Nagar, ISTAC, International Institute of Islamic Thought and Civilization

CONCEPT OF BEAUTY IN ISLAM In an authentic hadith reported in Muslim, Abdullah Ibn Mas'ud relates that the Prophet (peace be upon him) said: "Allah is Elegant and Beautiful and He likes elegance and beauty..." Starting with this hadith, this research undertakes the task of defining, discussing and critically examining the different manifestations of the concept of Beauty in Islam. It begins with identifying the root verb for the Arabic noun *jamal* which is derived from the root *jamula* which means: to be beautiful, to be handsome. The word *jamil* (beautiful) is an adjective derived from the same root. The question here is, what does the "Beauty of Allah", "Allah is beautiful" mean?; what constitutes beauty whether we encounter it in a moon-lit sky, a fresh fragrant flower, the smile of a baby or the sight of a physically charming young woman? The above quoted hadith focuses on two major factors: that Allah is beautiful and that He likes beauty. What does the Beauty of Allah mean? And what kind of beauty does He like? Is beauty a physical quality only or does it include both physical and spiritual essences as well? In his *Lisan al-'Arab*, Ibn Manzur states that the root *jamula* (to be beautiful) applies to both *al-fi'l* (action) as well as *al-khalq* (physical entities). Both physical and spiritual beauty are considered to be blessings from Allah for which one has to thank Allah Ta'ala. However, in the eye of Allah it is only the beauty of the heart, the beauty of *al-fi'l* that counts. An authentic hadith states: "Allah does not look at (does not consider) your physical shapes or your wealth, but (rather) He looks into your hearts and actions", it is here that the author discusses in detail the ideas of Abu Hamid al-Ghazali and Ibn Qayyim al-Jawziyya, two of Islam's most prominent scholars in the field of metaphysics, and numerates their vision on the issue of *jamalu fi'l* versus *jamal al-sura*. Thus, in Islam the beauty of character (*jamal al-fi'l*) is held most high in contrast to Western culture which places little or no consideration to the beauty of character, and display, instead, so much cultic infatuation with human beauty to the point of worship. In this respect Prophet Muhammad (peace be upon him) emerges as an embodiment of both physical and spiritual beauty. He is highly praised in the Holy Qur'an for his outstanding character, as the perfect man, the role model whose character we must emulate in all aspects of our life. In addition to the beauty of the human being, the quality of beauty encompasses all existents in our universe. However, more important than beauty is the quality of *tathauq al-jamal* (savouring, perceiving beauty) which Allah has planted within all of his human creation.

Keywords :

Category : Social Sciences and Humanities

1023 #البشرية الموارد في وأثرها الجامعات في الشاملة الجودة

علي شحادة عاصم , ARABIC DEPARTMENT, Kulliyyah of Islamic Revealed Knowledge and Human Sciences

Exhibitor : عربي شحادة عاصم , Arabic Language & Literature, Kulliyyah of Islamic Revealed Knowledge and Human Sciences

والأعمال الإدارية الوسائل بين تمزج وهي الموجهة الحديثة الإدارية المفاهيم أحد لى الشاملة الجودة مفهوم يرتكز إدارة وحظيت . الإدارة مستوى إسناء أجل من وذلك الدقيق التخصص ذات الفئحة المهارات وبيّن ،أخرى جهة من ،الابتكارية أداء على إيجابي بشكل يعكس الشاملة الجودة إدارة تطبيق أن الدراسات معظم وجدت الشدّد بالاهتمام ،الشاملة الجودة مستوى وارتفاع العاملين بين العلاقة وتحسين الأداء وتحسن التكاليف انخفاض عبر ،وذلك ،تطبيقها منظمة أي وتطبيقها (الجامعات) العالي التعليم في الشاملة الجودة إدارة مفهوم بتناول الدراسة تبدأ .بينهم الوظيفي الرضا التطرق ثم ،العاملية البشرية الموارد في وأثرها الجامعات في الشاملة الجودة إدارة نظام بناء خطوات بيان ثم ،ومعاييرها العاملة البشرية الموارد وتخريج الجامعات في الشاملة الجودة إدارة تطبيقات في العالم في الجامعات تجارب بعض إلى في الجودة أثر ،الشاملة الجودة إدارة : المفتاح الكلمات .والمراجع والتوصيات بالنتائج الدراسة نختم ثم .المتميّزة البشرية الموارد ،الجامعات تجارب ،الجامعات

Keywords : asem shehadeh ali

Category : Social Sciences and Humanities

1025

OWNERSHIP STRUCTURE AND AUDIT FEE#

Sherliza Puat Nelson, *Accounting, Kulliyah of Economics and Management Sciences*
Nurul Farha Mohamed Rusdi, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Sherliza Puat Nelson, Accounting, Kulliyah of Economics and Management Sciences

Increased in focus to the impact of different ownership structures is attracted by the existence of monitoring differences by shareholders on corporate affairs including in the financial reporting process. The external auditors' reliance on the corporate internal control is varied among different ownership structures and has directed to vary in fees charged to their client. A number of corporate collapses worldwide have highlighted the need for strong corporate governance of which to strengthen the financial reporting process and to emphasis on audit quality. The purpose of this study is to investigate the association between corporate ownership structure and audit fees paid to external auditors by Malaysian listed companies in Bursa Malaysia. This study will focus on to what extent the auditor reliance on clients' internal control provided that corporate ownership structures are varied among them and eventually influent the auditors' fees. This study applied agency theory and formulated three hypotheses that guided the analysis. By employing a multi regression model for a sample of 345 Malaysian listed companies in Bursa Malaysia, this study will test three types of ownership which are managerial ownership, foreign ownership and government ownership with the audit fees using the latest available data 2010. The result shows a significant positive relationship between audit fees and the firms with larger foreign ownership and government ownership but have no significant relationship with the firms with higher managerial ownership. This study contributes recent evidence on the relationship between corporate ownership structure and audit fees. The regulator may consider ownership structure on the standards or regulation setting in order to be practical and operationalized in line with the impact associated with different ownership. The practitioners also may design appropriate methodologies and procedures in the different ownership structure for high quality service and to standardize the risk mitigation process.

Keywords : *Ownership structure, audit fee, corporate governance*

Category : Social Sciences and Humanities

1026 INTERNAL AUDIT FUNCTION AND EXTERNAL AUDIT FEE: A MALAYSIAN SCENARIO#

Sherliza Puat Nelson, *Accounting, Kulliyah of Economics and Management Sciences*
Fatimah Mat Yassin, *Accounting, Kulliyah of Economics and Management Sciences*
Zaini Zainol, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Sherliza Puat Nelson, Accounting, Kulliyah of Economics and Management Sciences

The study attempted to investigate the association of internal audit functions and board characteristics, with the external audit fees. The characteristics that were investigated included audit committee expertise, frequency of audit committee meeting, structure of internal audit function and size of internal audit function. Using publicly available information of 400 Malaysian public listed companies for the financial year end 2009 and 2010, this study provides recent evidence of a positive relationship between external audit fees and two board characteristics: frequency of board meeting and board size. Further, a positive relationship is found between external audit fees and internal audit function characteristic, i.e. size of internal audit function. Results indicate that more effective board of directors and well-resourced internal audit units tend to be positively associated with the external audit fees. The results found in this study may serve as an input for the regulator to encourage strict enforcement for Malaysian listed companies to incorporate corporate governance practices.

Keywords : board of directors; internal audit; external audit fee; corporate governance; Malaysia

Category : Social Sciences and Humanities

1031 SHARED PARENTING AS AN INTERPRETATION OF THE BEST INTEREST OF THE CHILD IN CUSTODY DISPUTES: AN OVERVIEW OF THE PRACTICE IN MALAYSIA#

Roslina Che Soh, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*
Najibah Mohd Zin, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*
Nora Abdul Hak, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Roslina Che Soh, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

In most western countries, there is now a consensus that shared parenting is the best alternative for children when their parents separate or divorce. Maintaining relationships with both parents after their divorce, by way of a shared parenting arrangement is said to be the best for the child compared to merely providing contact for the child and the non-resident parent by way of a sole custody arrangement. Such an arrangement would minimise conflict between divorced parents and provide a healthy environment for the child to get adjusted to the divorce, therefore diminishing the probable detrimental effects of parental conflict on the child. The best interest of the child would be preserved as the child is able to retain a strong bond with both parents despite the parental separation. The basis of this concept is as stated in the United Nation Convention on Right of Child 1989, which clearly emphasizes on the importance of both parents to be equally responsible for the upbringing of their children. This study seeks to examine the extent of the laws and the judicial decisions in Malaysia in upholding shared parenting for the best interest of the child in custody disputes after parental divorce. In doing so, it attempts to provide an overview of the current law and the approach of the courts in granting custody orders. The study also highlights the problems of implementing shared parenting arrangement, particularly in cases involving determination of the religion of the child and domestic violence. For purposes of comparison, it examines the Australian legislation on custody disputes which has undergone a tremendous shift from that of sole custody standard to that of shared parental responsibility. The Australian experience in advocating shared parenting as the primary custody standard for the best interest of the child in custody disputes should assist Malaysia in improving further the current legislation in custody disputes.

Keywords : *Shared parenting, Custody disputes, Best interest of child, Parental divorce*

Category : Social Sciences and Humanities

1032 THE CONVENTION ON THE ELIMINATION OF ALL FORMS OF DISCRIMINATION AGAINST WOMEN (CEDAW): WITH REFERENCE TO VIOLENCE AGAINST WOMEN AND TRAFFICKING IN WOMEN#

Nora Abdul Hak, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*
Mek Wok Mahmud, *Fiqh and Usul, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Najibah Mohd Zin, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Nora Abdul Hak, Legal Practice, Ahmad Ibrahim Kulliyah of Laws

The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) is the international human rights treaty that is exclusively devoted to gender equality. It was adopted by the United Nations General Assembly on 18 September 1979 and entered into force on 3 September 1981. It is one of the most widely accepted human rights treaties and is often described as an international bill of rights for women. Article 2 provides that States parties condemn discrimination against women in all its forms and agree to pursue by all appropriate means and without delay a policy of eliminating discrimination against women. The Convention requires that all States Parties reports to include statistical data on firstly, the incidence of violence against women, secondly, information on legislative and other measures taken to protect women against violence and finally, information on the provision of services for victims. Thus, the study deliberates the relevant articles of the Convention which are included with the aim to protect the rights of women. Special focus of the discussion is on the issues of violence against women and women trafficking in Malaysia. These issues require special attention as to gauge the extent of compliance to CEDAW by the Malaysian government in combating these unresolved problems. Legal effects of reservations to CEDAW and the enforcement mechanisms are also deliberated.

Keywords : CEDAW, Law, Right of Women, Gender Discrimination, Violence against Women, Trafficking in Women

Category : Social Sciences and Humanities

1033 THE EMERGING ISSUES UNDER SECTION 106 OF THE LAW REFORM (MARRIAGE AND DIVORCE) ACT 1976: A NEED FOR FAMILY MEDIATION IN MALAYSIA#

Noraini Md. Hashim, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*
Nora Abdul Hak, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*
Nur Ezan Rahmat, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Noraini Md. Hashim, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

Dispute resolution outside of court is not new; societies world-over have long used non-judicial and indigenous methods to resolve conflicts. Family disputes, more often than not, are rarely concerned with matters of fact but is almost invariably complicated by the intense and intimate emotions of the parties in conflict. Therefore, the utilization of other processes, such as conciliation and mediation, independent of litigation will lead to a more satisfactory resolution of disputes rather than relying on the judgments of the court of law. Section 55(2) of the Law Reform (Marriage and Divorce) Act 1976 (the 1976 Act) provides that even when the parties have presented a petition for divorce, if it appears to the court at any stage of the proceedings that there is a reasonable possibility of a reconciliation between them, the court may adjourn the proceedings for such period as it thinks fit to enable attempts to be made to affect such a reconciliation. In the case of a petition for divorce based on the irretrievable breakdown of the marriage, the petitioner must first refer the matrimonial difficulty to a conciliatory body before filing the petition. No person shall petition for divorce, except under sections 51 and 52 of the 1976 Act, unless he or she has first referred the matrimonial difficulty to a conciliatory body and that body has certified that it has failed to reconcile the parties. Practitioners of family law are of the view that the conciliation process in Malaysia has not been very successful in helping disputing couples resolving their problems and this is supported by statistics which shows that the success rate for these reconciliation sessions is very low. This study highlights on some emerging issues related to the effectiveness of conciliatory bodies appointed under section 106 of the 1976 Act especially the marriage tribunal under the National Registration Department. It highlights the problems and constraints faced by the conciliatory bodies and suggests amendments to the laws and policy.

Keywords : *Family Law, Conciliation and Divorce*

Category : Social Sciences and Humanities

1034 MEDIATION IN CUSTODY DISPUTES: CHALLENGES AND PROSPECTS IN MALAYSIA#

Nora Abdul Hak, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*

Norliah Ibrahim, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*

Roslina Che Soh, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*

Zuhairah Ariff Abd. Ghadas, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Nora Abdul Hak, Legal Practice, Ahmad Ibrahim Kulliyah of Laws

In dealing with custody and visitation disputes especially, mediation is generally considered as a process more humane than the confrontational approach taken in the adversarial system, (Pearson and Thoennes 1989). Mediation is claimed to not only avoid adversary settlement procedures, but also to be a ‘family-friendly’ intervention program employed in helping post-separating families deal with divorce and conflict (Emery et al. 2005). The focus of mediation is encouraging the parties to solve their conflict amicably. Moreover, according to Vincent (1996, p. 264), in mediation involving custody disputes, the decision about the children’s future is shifted to their parent: the people who know them best. Other commentators, including Menkel-Meadow (1991), also maintain that the informal and flexible nature of the mediation process enables the parties to address issues that might not be raised in a more formal dispute settlement approach. In fact, rather than restricting the decision making process to legal matters, mediation accommodates to the prospective needs and interest of the parties, leading to a whole and more satisfactory resolution in most cases. Thus, this study focuses on the use of mediation in custody disputes looking at the nature of mediation, its advantages and disadvantages; and its challenges and future in Malaysia.

Keywords : Mediation, Custody Disputes, Alternative Dispute Resolution, Law, Court

Category : Social Sciences and Humanities

1035 WHEN SHAKESPEARE DOES SOCRATES: CONTESTING CLASSROOM SPACES FOR CRITICAL THINKING#

Faizah Idrus, *Department of Language and Literacy, Institute of Education*

Exhibitor : Faizah Idrus, Department of Language and Literacy, Institute of Education

Critical thinking skills can be traced back to as long as Socrates era. However, how critical thinking has developed or under developed remained indistinct. This paper examined how teachers of literature in English in the Malaysian classrooms perceived, introduced and incorporated critical thinking into their lessons. Examination was performed within the framework of teachers' responses to curricula changes and theory regarding strategies of interdisciplinary instructions. Qualitative inquiry was conducted employing semi structured interviews, video recordings, classroom observations with 7 English language teachers and their students. Data collected from these instruments were analysed thematically following Braun & Clarke (2006). Findings revealed 4 phrases of recurring patterns of behaviour and interactions. 1. Retrieving information on critical thinking, 2. Pedagogical reasoning 3. Cycles of processing and refinement, and 4. Unwarranted assumptions. Teachers' perceptions of critical thinking skills differ to some extent and somehow underestimated students' ability in applying critical thinking in their literature classroom activities. Teachers had set rules in which what should be taught and what students should learn. The study shed some light on the involvement of teacher and student cognition and culture of literature teaching in English, the application of critical thinking skills in the classroom and materials evaluation and adaptation. A deeper understanding of the factors from a cognitive process may inform teacher professional development and curriculum developer as well as promote implementation of curricula reforms.

Keywords : *Critical thinking, literature in English, contested space, narrative inquiry*

Category : Social Sciences and Humanities

1036 FORMILITY OF HRM PRACTICES AND EMPLOYEES' COMPETENCIES AMONG SME'S#

Junaidah Hashim, *Business Administration, Kulliyah of Economics and Management Sciences*

Yusof Ismail, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Junaidah Hashim, Business Administration, Kulliyah of Economics and Management Sciences

Purpose The purpose of this study is twofold: firstly, to examine the formality of HRM practices among knowledge-intensive and non-knowledge-intensive SMEs in Malaysia and secondly, to compare the practices between the two types of SMEs. A survey was administered to ascertain whether there are differences, if any, in the employees' competencies in both types of SMEs. The same instrument also evaluates whether there are relationships, if any, between HRM practices and employees' competencies. **Methodology** The respondents of this study comprised employees from selected knowledge-intensive SMEs and non-knowledge-intensive SMEs in Malaysia. **Findings** The results revealed that both types of the SMEs adopt informal HRM practices. There is no significant statistical difference between them in HRM practices as well as in competencies among the employees of the two types of SMEs. HRM practices portray a strong significant relationship with employees' competencies. In addition, compensation is identified as the best predictor of employees' competencies within knowledge-intensive SMEs; while employee relations is identified as the best predictor of employee competencies in the non-knowledge-intensive SMEs. **Implication** This study has demonstrated that regardless of their industry, SMEs adopt informality in their HRM practices and the latter significantly influence employees' competencies. SMEs can emphasise on certain HRM functions in order to increase the employees' competencies. **Originality** This study responds to the scant attention paid to examining how the broader HRM practices in managing knowledge employees differ between knowledge-intensive and non-knowledge-intensive SMEs in Malaysia.

Keywords : *Knowledge-intensive, SMEs, Competencies, HRM practices, Non-knowledge-intensive SMEs, Malaysia*

Category : Social Sciences and Humanities

1037 **MEDIATING EFFECT OF INTEGRITY ON WORKPLACE SPIRITUALITY AND
COUNTERPRODUCTIVE WORK BEHAVIOURS#**

Junaidah Hashim, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Junaidah Hashim, Business Administration, Kulliyah of Economics and Management Sciences

The objective of this research is to determine if and how spirituality is mediated by integrity which in turn influences organisation performance. Organisation performance is measured in term of the occurrence of counterproductive work behaviour. A total of 1203 employees of all levels from several prominent Islamic organisations in Malaysia responded to the questionnaires. Workplace spirituality was measured by a scale adopted from Petchsawang and Duchon (2009). Employees' integrity was tested by using the Substance, Production loss, and Interpersonal Problem Inventory (SPI). It is a measure of overt integrity. Counterproductive work behaviour (CWB) measure was adapted from dimensionality of counterproductive work behaviour by Gruys and Sackett (2003). The results showed that the employees have moderate level of workplace spirituality and integrity. The findings revealed that the relationship between integrity and counterproductive work behaviour is very low and it is negative. This result supports integrity to partially mediate the relationship between workplace spirituality and counter-productive work behaviour.

Keywords : *Spirituality, Integrity, Islam, Counterproductive Work Behaviour*

Category : Social Sciences and Humanities

1038 "ISLAMIC COMPANIES" PROPOSED LEGAL FRAMEWORK FOR SHARIAH COMPLIANCE CORPORATION#

Zuhairah Ariff Abd Ghadas, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Muhammad Abdurrahman Sadique, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Zuhairah Ariff Abd Ghadas, Civil Law, Ahmad Ibrahim Kulliyah of Laws

The decision of House of Lords in *Salomon v A Salomon & Co. Ltd* [1897] AC 22, HL is often credited with the principle of separate legal entity of the corporation distinct from the members. The legal entity of beings other than the human has long been recognized and the jurisprudence theories on juristic person had been established since the early Roman law to justify the existence of the State, ecclesiastical bodies and education institutions as a legal entity distinct from the members. As a creature of the statute, the existence, going concern and dissolution of a company is totally dependent on the Companies Act. Under the Islamic law (Shari'ah), the existence of business entity is based upon agreement between the parties rather than on the business medium. The legal basis of Shari'ah business entity is contractual principles. The existence of various types of Musyarakah or Shirkah is all subjected to agreement between the parties. With the recent vast and rapid development in Shari'ah compliance businesses such as Islamic banking and finance, halal products, halal-tech etc, there is question on whether such Shari'ah businesses could be carried out in a Civil law business structure which are deem not to be Shari'ah compliance. This paper analyze the attributes of a company under the Civil law and compare them with the attributes of Shirkah, the recognized "business entity" under Shari'ah. The outcome of this paper is a proposed legal framework for an "Islamic Company" in comparison to the legal framework of a Civil law corporate structure.

Keywords : *Islamic Companies, Body Corporate*

Category : Social Sciences and Humanities

1040 THE APPROPRIATE APPROACHES FOR SUCCESSFUL TRANSFER OF KNOWLEDGE IN CONTEMPORARY MUSLIM CIVILIZATION#

AHM Zehadul Karim, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Mohd Isa Hj. Bakar, ,

Exhibitor : AHM Zehadul Karim, Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences

It is often argued that the most important aspect of knowledge and technology is that it must be disseminated properly among the beneficiaries for whom it is actually created. The scientists and the researchers therefore have suggested a number of approaches through which knowledge and technologies have been diffused to many cultures of the world. Likewise, the knowledge and technology created by the modern world and as they are approved by social norms and religious values, may also be disseminated especially to the present Muslim communities. In this context, it is important to identify the most suitable and appropriate approaches and their proper uses in the contemporary Muslim societies. Our understanding of the production, dissemination and the application of knowledge and technology may be enhanced through an attitudinal change of the people and mobilizing them properly through the socio- religious guidance and values. It also tries to evaluate some successful approaches so far employed in transferring knowledge and technology pertinent to agricultural development throughout the Muslim world. Based on the discussion, the paper concluded in the form of some suggestions which the policy planners in the Muslim countries may adopt in their planning strategies for scientific innovation and transferring knowledge

Keywords : *Dissemination of Knowledge, Approaches, Muslim Societies*

Category : Social Sciences and Humanities

1043

WAR FOR THE PEACE IN PAKISTAN#

Dr. Syed Masroor Ali, *Psychiatry, Kulliyah of Medicine*
Aidil Faszrul Abdul Rahim, *Psychiatry, Kulliyah of Medicine*

Exhibitor : Dr. Syed Masroor Ali, Psychiatry, Kulliyah of Medicine

Pakistan because of its geographical location became a front line state in the war against terror since the attack on the World Trade Centre on September 11, 2001. Pakistan decided to align with USA to combat the so-called fundamentalist and Islamic terrorist. Currently, the biggest threat to the state and citizens is the killing of innocent civilians in suicidal and other attacks. It's a war whose main purpose is to save people from terrorism. Now lives of Pakistan's own citizens are at stake. Innocent people have become the targets of deadly bombs. It has resulted in much more loss of lives than 9/11 attack. Moreover, law and order situation in the country has constantly deteriorated since 2001. One obvious and tragic price of this open war is the toll of death and destruction. There is an additional cost, a psychological cost borne by the survivors of war and socio-economic pressure. The civilian victims of war may suffer the greatest psychological harm, for they have not been prepared to manage the stress, shock, and fright of violence. The civilian population, who were drawn away from their safe surroundings and the children who have lost their parents in this war are the real casualties we need to take into consideration. It's a matter of concern for understanding and discussing these issues from various perspectives, including an Islamic perspective. This poster will highlight the psycho-social aspects of war which could not achieved peace yet.

Keywords : war, peace, pakistan, terrorism

Category : Social Sciences and Humanities

1048 CHARACTERISTICS OF HIGH POTENTIAL EMPLOYEES: EMPLOYEES' PERSPECTIVE#

NURITA JUHDI, *BUSINESS ADMINISTRATION, Kulliyah of Economics and Management Sciences*

FATIMAH PA'WAN, *UNITAR INTERNATIONAL UNIVERISITY MALAYSIA,*

RAMMILAH HANSARAM, *UNITAR INTERNATIONAL UNIVERISITY MALAYSIA,*

Exhibitor : NURITA JUHDI, Business Administration, Kulliyah of Economics and Management Sciences

The objective of the study was to determine the major characteristics of high potential (HIPO) employees. Three hundred and twenty nine employees participated in the study. HIPO was mainly described by three major characteristics – high performance, learning agility and leadership spirit. The data were collected using survey forms and the items were adopted from various studies that discussed HIPO traits and characteristics. The multiple linear regressions showed that the first characteristic – high performance – was significantly predicted by learning agility, leadership spirit and low turnover intention. The second HIPO characteristic – learning agility – was significantly predicted by leadership spirit, high performance, organizational engagement and job engagement. The third HIPO characteristic - leadership spirit – was significantly predicted by high performance, learning agility, increased job scope, organizational engagement, number of years in the organization, education level and higher turnover intention.

Keywords : *high potential, high performance, learning agility, leadership spirit, development program.*

Category : Social Sciences and Humanities

1049 EMPLOYERS' EXPERIENCE IN MANAGING HIGH POTENTIAL EMPLOYEES IN MALAYSIA#

NURITA JUHDI, *BUSINESS ADMINISTRATION*, *Kulliyah of Economics and Management Sciences*
FATIMAH PA'WAN, *UNITAR INTERNATIONAL UNIVERSITY MALAYSIA*,
RAMMILAH HANSARAM, *UNITAR INTERNATIONAL UNIVERSITY MALAYSIA*,

Exhibitor : NURITA JUHDI, Business Administration, Kulliyah of Economics and Management Sciences

The main objective of the survey was to study the practices in high potential employee development in Malaysia. Two hundred and thirty seven establishments from various industries participated in the survey. The findings indicated that employers put highest emphasis on employees who were customer service oriented and able to create high performing teams. In terms of methods used to identify high potential employees in organizations, the most common method was performance appraisal by immediate superiors and the least common method was nomination method. Two most common methods to develop high potential employees were job enlargement and executive development programs and the least used was executive MBA program. A factor analysis was used to reduce the eighteen items used to measure high potential competence and it resulted in three type of competence - results-oriented character, interpersonal competence and technical competence/flexibility. A t-test showed that out of the three type of competence, significant difference was only found in terms of technical competence/flexibility between local and MNCs. There was no significant difference in terms of type of competence across different establishment sizes. The study revealed that the most common problem in high potential employee development programs was in dealing with those who had problems in balancing personal and work life balance. Generally the respondents indicated their high potential employee development programs as effective. The findings also revealed that the effort in identifying high potential employees was consistent with the amount of development programs provided.

Keywords : *high potential employees, high potential competence, development program, identification of high potential employees*

Category : Social Sciences and Humanities

1055 **FAMILY CHARACTERISTICS ASSOCIATE WITH RISK TAKING BEHAVIOUR
AMONG URBAN AND RURAL ADOLESCENTS IN TWO DISTRICT IN SELANGOR.
A COMPARATIVE STUDY#**

Siti Hazariah Abdul Hamid, *Special Care Nursing, Kulliyah of Nursing*

Exhibitor : Siti Hazariah Abdul Hamid, Special Care Nursing, Kulliyah of Nursing

Risk taking behaviour has become a major concern and it rated as one of the public health issue that need special attention. However, most of studies carried out in Malaysia amongst adolescent were focus on either urban or rural area. The objectives of study are to compare the prevalence of risk taking behaviour and its associate factors among urban and rural adolescent. A comparative cross sectional study was conducted among 306 form four students by multistage sampling from two selected school and their parent also participated in this study. Data were collected using a self administered questionnaires and analyzed using SPSS software version 17.0. The results showed risk taking behaviour had no association with location of study and the prevalence were 81.7% (urban) and 84.7% (rural) compared to previous study. Most of the parental background factors such as parent's education level, marital status, health status and income were unrelated to risk taking behaviour among adolescent. Multiple logistic regression test had shown being a male ($p < 0.05$, AOR = 4.55, 95% CI : 2.28-9.07), inadequate number of bedroom ($p < 0.05$, AOR = 11.54, 95% CI : 1.48-89.75), large number of household ($p < 0.05$, AOR = 1.27, 95% CI : 1.05-1.54), family conflict ($p < 0.00$, AOR = 3.64, 95% CI : 1.49-8.89) and no family cohesion ($p < 0.05$, AOR = 3.12, 95% CI : 1.15-8.46) were the negative predictor among adolescent in both area. In conclusion, the absence of balanced healthy family and conducive environment would lead to negative influence towards adolescent behaviour which may individual and community. It is necessity for parents and family to protect their children as they must face utmost challenges during transitional period. Therefore, it will be useful if prevention and good approach should be start in an early stage of their life.

Keywords : *Risk taking behaviour, parenting styles, Adolescent, rural and urban.*

Category : Social Sciences and Humanities

1060 DETERMINANTS OF RISK TOLERANCE ON FINANCIAL ASSET OWNERSHIP#

Jarita Duasa, *Economics, Kulliyah of Economics and Management Sciences*
Selamah Abdullah Yusof, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Jarita Duasa, Economics, Kulliyah of Economics and Management Sciences

The present study intends to shed new light on the issue of determinants of risk tolerance among Malaysians using data obtained from a survey. The main analysis is based on ordinary least square (OLS) method of regression using level of financial risk tolerance as the dependent variable and socio-economic factors as regressors. The preliminary analyses found that majority of the respondents prefer to keep their money in liquid assets, such as in saving account and cash. These assets definitely have the lowest level of risk compared to other forms of assets. A further analysis, using OLS regression reveals several significant determinants of risk tolerance among the sample respondents. Risk tolerance is higher among the young, males, those with higher level of education and those in non-public sector. In addition, the study also finds that Malays are more risk averse than Chinese and those in Kedah are more risk averse than those in Kuala Lumpur.

Keywords : *Financial assets; Malaysians; Risk tolerance*

Category : Social Sciences and Humanities

1061 RELATIONSHIP OF CO2 EMISSION WITH ECONOMIC GROWTH, MANUFACTURING AND ENERGY CONSUMPTION IN MALAYSIA: AN ARDL BOUND TESTING APPROACH#

Jarita Duasa, *Economics, Kulliyah of Economics and Management Sciences*
Nur Fakhriana Ab. Rashid Ab. Rashid, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Jarita Duasa, Economics, Kulliyah of Economics and Management Sciences

This study attempts at empirically examine the relationships between CO2 emission with economic growth, road sector energy use and manufacturing in Malaysia using the time series data from 1970 to 2010. Using the bound testing approach to cointegration and error correction model developed within an autoregressive distributed lag (ARDL), we investigate whether a long-run equilibrium relationship exists between energy consumption from the two sectors and CO2 emission. Additionally, we adopt impulse response analysis to account for each variable response to innovation for further inferences. Using this approach, we find evidence of positive relationship between CO2 emission, income, manufacturing production and energy consumption from road sector. The trend of positive relationship and statistically significant among CO2 emission and manufacturing can only be observed on short-run period. It is also found that, in the long-run, income and manufacturing production are statistically insignificant relates to CO2 emission which indicates that the relationship of carbon emission with economic growth and manufacturing does not hold in the case of Malaysia. Meanwhile, energy consumption for road transport increases CO2 emissions in long-run significantly but insignificant in the short-run.

Keywords : ARDL; Energy consumption; Manufacturing; Economic growth and CO2 emission

Category : Social Sciences and Humanities

1064

STUDIES IN WORLD RELIGIONS: AN INTRODUCTION#

Ahmad Yousif, *ISTAC, International Institute of Islamic Thought and Civilization*

Exhibitor : Ahmad Yousif, ISTAC, International Institute of Islamic Thought and Civilization

Presently, the majority of research and work conducted in the field of World Religions takes either a secular and/or Judeo-Christian perspective. It completely neglects the Islamic point of view on “other” religions. Most traditional Muslim intellectuals who devoted their writings to this area, tended to examine world religions from a personal viewpoint, rather than using scientific techniques and methodologies. Many base their arguments strictly on primary Islamic sources and personal religious commitment; consequently, their writings have left a largely negative perception of “other” religions. This research project is able to combine the best aspects of these two methodologies and produce a uniquely “objective” material on world religions. Upon clarifying some of the fundamental assumptions of studying world religions, the next task is to commence with the exploration of Judaism and Christianity, while examining “fundamentalism” within monotheistic traditions. References have been made, in both English and Arabic sources written by Muslims and non-Muslim scholars. The main objective of this research project is to undertake a critical examination at the discipline of Comparative Religion, by introducing Judaism, Christianity and fundamentalism. This research is designed to produce an introductory material on monotheistic religions, for Muslim students and public readers. A multidisciplinary approach has been employed throughout the research stages to examine the religion in question, through its historical, sociological, theological, institutional and contemporary dimensions. It is expected that this research project will produce a valuable introductory resource book on world religions, from an Islamic viewpoint. It is hoped that this effort will fill-in the existing deficiency of research-based literature on the field.

Keywords : *Comparative Religion, Judaism, Christianity, Islam, Worship, Rituals, God, Prophet, Methodology, Qur'an, Bible, Fanaticism, Fundamentalism*

Category : Social Sciences and Humanities

1071 LEARNING STRATEGIES OF ARABIC SPEAKING SKILLS AMONG MALAY LEARNERS#

SUERAYA CHE HARON, *LANGUAGE AND LITERACY, Institute of Education*

Exhibitor : SUERAYA CHE HARON, Philosophy & Educational Leadership, Institute of Education

In Malaysia, studies have shown that most Malay learners learning Arabic exhibit weak Arabic speaking skill despite spending years of learning the language. However, given the same learning environment and experience, some of them could be considered as good Arabic speakers as revealed by the results of Arabic Placement Test conducted by the Center of Languages and pre-Academic Development (CELPAD) of the International Islamic University Malaysia (IIUM). These learners have successfully scored band 7 and above out of 10 in Arabic speaking skill test. The researchers believe that being aware of certain learning strategies in enhancing their speaking skills would help these learners to become good Arabic speakers. This assumption is based on several theories in language learning strategies which postulate that learners' success in language learning or lack of it is attributable to the various strategies which different learners bring to the tasks and not solely relying on the environment per say. Therefore this study attempts to understand the assumption by investigating the learning strategies for Arabic speaking skills of selected Malay good Arabic speakers and Malay poor Arabic speakers at the (IIUM) within and outside the parameters of the educational settings. The researcher has conducted a case study on 14 Malay good and poor Arabic speakers at the International Islamic University Malaysia (IIUM) employing individual and focus group interviews as the methods to collect the data. The researcher used interview content analysis as the tool for data analysis. The participants are selected purposively using the results of Arabic speaking skill test (APT) conducted by (CELPAD). The results of this study confirm the above mentioned theories. However the effectiveness of the strategies is highly influenced by the learners' perceptions on the nature of Arabic as a language and the perceptions of the pre-requisites to become good Arabic speakers. Perception on these aspects is also proven to affect the problems faced by them to develop Arabic speaking skill and their approach to overcome the problems. Simultaneously most participants of both groups of speakers are more active and creative seeking out opportunities to activate their language outside the classroom than in the classroom especially the Malay good Arabic speakers. They have shown more types, quality and quantity of strategies than do the Malay poor Arabic speakers.

Keywords : *ARABIC SPEAKING SKILLS, LANGUAGE LEARNING STRATEGIES*

Category : Social Sciences and Humanities

1074 INEQUALITY AND UNCONSCIONABILITY: PROPOSAL FOR SUBSTANTIVE FAIRNESS IN COMMERCIAL CONTRACTS#

Siti Aliza Alias, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Zuhairah Ariff Abd Ghadas, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Siti Aliza Alias, Civil Law, Ahmad Ibrahim Kulliyah of Laws

The issues on unconscionability and inequality of bargaining power are common legal dictum which are constantly and continuously discussed in consumer contracts. However, the predicaments caused by unconscionability and inequality of bargaining power in commercial contracts are often left side ways despite the alarm which had been set on by the contractual parties in commercial contracts. Terms on earnest payment, performance bond, per-determined damages, standard exemption and limitation terms in commercial contracts are examples of practices which arise from the unconscionability and inequality of bargaining power of the contractual parties. This paper looks into the *raison d-etre* and legal discussion on the principles of unconscionability and inequality of bargaining power under the law of contract and to highlight its application and effect in commercial contracts. References of the discussion are mainly made to the common law principles with occasional reference to the Australian law and Malaysian law. Research methodologies applied in this research are doctrinal and statutory analysis.

Keywords : *Unconscionable Contracts, Inequality of bargaining Power, Commercial Contracts*

Category : Social Sciences and Humanities

1075 “HEALING ARCHITECTURE”: PATIENT AND STAFF SATISFACTION OF VISUAL COMFORT IN THE WARD ENVIRONMENTS OF PUBLIC HOSPITAL DESIGNS IN MALAYSIA#

Srazali Aripin, *Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Srazali Aripin, Architecture, Kulliyah of Architecture & Environmental Design

Visual comfort is a subjective phenomenon. It is a condition of mind expressing satisfaction with the visual environment. In the context of hospital designs, much literature on the healing environment has reached a consensus that the physical aspects of the built environment could indirectly contribute to the health outcomes of patients and staff (doctors and nurses). Among the physical aspects, daylighting is considered one of the most influential factors to achieve visual comfort contributing to a healing environment that is physically and psychologically appropriate. In this paper, qualitative analysis (observation, questionnaire and interview) serves as the first part of the overall investigation of visual comfort. There are 6 steps involve in the in the satisfaction survey of patients and staff, which are to 1) identify the target-groups, 2) establish questions which are focused on daylighting design, 3) carry out sampling selection (random stratified sample), 4) launch a pilot study of the questionnaire, 5) review the questionnaire survey prior to conducting the fieldwork, and 6) analyse data qualitatively and quantitatively using SPSS software. The findings of the survey would lead to a measurement field survey of the existing daylighting conditions in the ward environments in order to corroborate the opinion survey. Based on the findings of these two surveys, parametric studies using a daylighting simulation software would then be conducted in order to arrive at daylighting design criteria to achieve visual comfort in the wards environment.

Keywords : *Healing Architecture, Daylighting, Visual Comfort, Public Hospital Design.*

Category : Social Sciences and Humanities

1078 REFLECTION OF HEALING AND LEARNING ENVIRONMENT IN HOSPITAL SCHOOLS, MALAYSIA#

Fadzidah Abdullah, *Department of Architecture, Kulliyah of Architecture & Environmental Design*
Noor Fatehah Mat So'od, *Department of Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Fadzidah Abdullah, Architecture, Kulliyah of Architecture & Environmental Design

The notion of providing special education services to the children with medical needs is relatively new in Malaysia. During recovery process in any medical centre, children's education should not be overlooked as the hospitalized children still need learning activities to maintain a sense of normality. The exterior and interior architectural elements are proven to encourage healing and promote learning for hospitalized children. This study aims to investigate the spatial requirements for healing and learning especially in Malaysian hospital schools. The observations towards architecture elements and quality of spaces were conducted upon pediatric wards in Hospital Kuala Lumpur, Hospital Ampang, and Hospital Serdang. Implications of the findings would be discussed and photographic were documented for evidence. Result of the study helps to understand exterior and interior environment setting, which can be used to enhance healing and learning environment of Malaysian hospital schools.

Keywords : *Hospital Schools, Children, Education, Healing and Learning*

Category : Social Sciences and Humanities

1081 EXAMINING CLASSROOM TRANSFORMATIONAL SPACES IN DEVELOPING STUDENT AGENCY-A CASE-BASED STUDY#

Faizah Idrus, *Department of Language and Literacy, Institute of Education*

Exhibitor : *Faizah Idrus, Department of Language and Literacy, Institute of Education*

This study examines students' experiences in exploring narrative texts through transformational spaces which could contribute to the development of the sense of collective identity in the classroom. Identity construction in a class with students from diverse backgrounds can sometime complicate the teaching and learning processes as culture collides so does communication. Thus, it is imperative to find a space where students could develop a sense of shared identity to facilitate and thus enhance learning. This investigation employs a qualitative inquiry using semi-structured interviews with teachers, group interviews with students and classroom observations. A Malaysian short story, *Deep Fried Devils* (by Shih Li Kow) is used as a case. This study considers ways in which the curriculum may be interpreted as an interstice (Bhabha, 1994) between students' home and community to that of a more formal school-based experience. Teachers' feedback and responses are sought after on the premise that they have had the first hand experience observing students' reactions and interactions in the classroom and as to whether there are possibilities of affording the 'space' for students to develop a sense of collective identity. The findings revealed students were positive and keen to pursue the idea of collective identity based on their responses to the *Deep Fried Devils*' case used. They made the classroom spaces as transformational spaces to their advantage in that their cultural diversity helped them to recreate a play. The play is based on *Deep Fried Devils*' storyline with their own interpretation and turned it into a class project for the school concert. Teachers' flexibility and ability to relinquish little or some authority to the students in activities planned, showed how students agency played a vital role in the decision making process. Teachers nonetheless, were more skeptical and showed some reservations on the possibility of 'making the space' a regular practice. The findings highlighted possibilities in which material selection may or may not contribute to the shaping of students collective identity in ways not anticipated by teachers, administrators and policy makers.

Keywords : *student agency, transformational spaces, narrative texts, collective identity, case-based teaching*

Category : Social Sciences and Humanities

1082 A STUDY ON THE CODE OF ETHICS FOR THE CONTRACTORS AS A MECHANISM OF SELF-REGULATION IN MALAYSIAN CONSTRUCTION INDUSTRY.#

Ainul Jaria Maidin, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Zuhairah Ariff Abd Ghadas, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Wan Izzat Wan Ahmad, *Postgraduate Department, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Ainul Jaria Maidin, Civil Law, Ahmad Ibrahim Kulliyah of Laws

Self-regulation benefits various industries in terms of its flexibility in the mechanisms adopted by specific industries or associations. This recent trend is seen as the response to the criticism that bureaucracy and laws limit businesses' freedom and autonomy. Construction industry also receives the imperative treatment of self-regulation and this is manifested for example, in the formulation of code of ethics for the contractors. The code of ethics for contractors is viewed as crucial, given that the level of disputes that are involved in a construction project are high and also because this profession is often tainted with having the reputation for being involved in unethical behaviours or at least it is highly seen as such by the community. However, the impact of the implementation of the codes of ethics is debatable due to its self-regulatory status. This paper study the effectiveness of the code of ethics for contractors as a mechanism for the self-regulation in the Malaysian construction industry.

Keywords : Self Regulation

Category : Social Sciences and Humanities

1087

THE PERCEPTIONS OF ISLAMIC BUILT ENVIRONMENTS IN MALAYSIA#

Ismawi Zen, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Norliza Mohd Isa, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Norliza Mohd Isa, Landscape Architecture, Kulliyah of Architecture & Environmental Design

The main purpose of this poster is to utilize the perceptions of experts--those who are relevant as Malaysian opinion builder or related in the decision-making process in design on the issues of an Islamic built environment in Malaysian open public spaces. Because Islam is the nation's religion, the government of Malaysia strives to adopt Islamic values in its regulation of Malaysia's built environment. Yet, given Malaysia's multi-racial and multi-religious society, have Islamic concepts been implemented correctly and appropriately in the construction of Malaysia's open public spaces? This ongoing research employs descriptive and survey-based research designs rooted in qualitative and quantitative research paradigms. The research method implemented is a Delphi method that uses structured and semi-structured interviews for primary data collection to achieve two objectives: (1) to define the perceptions of experts from a variety of races and religions on the issues of Islamic built environments and (2) to evaluate and analyze the findings with regard to the degree to which the selected open public spaces are truly Islamic and are compatible with the criteria associated with an Islamic built environment in Malaysia. This paper presented anticipates and initials outcome from the study to determine the definitions of "Islamic built environment" in Malaysian context based on the input of "experts" and the factors that make the built environment "Islamic" in Malaysian open public spaces.

Keywords : *Perception, Islamic Built Environment, Delphi Method, Nvivo, Malaysia*

Category : Social Sciences and Humanities

1089

THE SHAPING OF IIUM IBADAH FRIENDLY HOSPITAL – LEARNING FROM THE BIMARISTAN OF THE EVERGREEN PAST AND THE PRACTICALITY OF TODAY’S DEMANDS#

Norwina Mohd Nawawi, *Architecture, Kulliyah of Architecture & Environmental Design*

Abdul Razak Sapian, *Architecture, Kulliyah of Architecture & Environmental Design*

Mohammed Fauzi Abdul Rani, *Medicine, Kulliyah of Medicine*

Exhibitor : Norwina Mohd Nawawi, Architecture, Kulliyah of Architecture & Environmental Design

The history of medicine and the healing environment we promote today in healthcare design is not a new phenomenon. It has been a continuous effort through centuries by caregivers that recognizes environment as contributing factors to human wellbeing with or without scientific evidences, to provide appropriate environment under their care. It is an intuitive, honest, and sincere consideration that reflects the caring environment of people of that day based on their faith and not on any gains. Today, with advance medical technology and the circumstantial demand of healthcare services and industry, hospitals begin to mushroom seemingly beautiful but without the soul. Why is this so? Although the answer to the question lies on the basic intention or *niyah*, the transparent process of implementation, clear design outcomes that support the functions and finally the acceptance of the people-users and caregivers, the live on-going experiment on a teaching hospital for International Islamic University Malaysia (IIUM), as an Ibadah Friendly Hospital, will hopefully be the testament to this enquiry. This paper thus intends to share the findings on what makes the hospital with a soul or Ibadah friendly. Ibadah means to do good deeds and actions for Allah's blessings only. It is a spiritual connotation and fundamental way of life for those who submit to Islam. For the purpose of this design, based paper, a vivid description on the initial conception of the hospital project for IIUM, based on learning of the *bimaristan*, the shariah or Islamic law and industry experiences were extracted. Through qualitative approach of literature reviews, observations, discussions, workshops, interviews and meetings from all parties (user-client of academic background, and the contractors (with design consultants)) team under the Private Public Partnership (PPP) procurement system, findings made through project briefing, design development to current development stage prior construction were consolidated. As a design based paper, exclusions to details irrelevant in the discussion is intentional. Though preliminary as the hospital is yet to be built, in the spirit of Ibadah, the findings made should be shared and discuss in the shaping of a hospital of the future, with a soul. Wallahualam!

Keywords : Hospital, Design, Ibadah Friendly

Category : Social Sciences and Humanities

1093

BRAND EQUITY AND MUSLIM CONSUMERS#

Khaliq Ahmad, *Business Administration, Kulliyah of Economics and Management Sciences*
Selim Ahmed, *Business Administration-(Ph.D Students), Kulliyah of Economics and Management Sciences*

Exhibitor : Khaliq Ahmad, Business Administration, Kulliyah of Economics and Management Sciences

Sportswear items became a common and popular category of consumer goods as it gives young people a more relaxed lifestyle and greater comfort. Consumers wear athletic apparel not only in sports activities alone, but also at home, in school, at work, or at leisure time. Today's sportswear industry is booming in Malaysia. We, therefore, embarked on this study to discuss why sportswear brand equity is important for the Malaysian Muslim consumers. This study is also concerned with comparing a range of different brands since a consumer based brand equity measures with the intention to buy and trying to determine how a brand performed in sportswear industry. An important, dimension of this research is highlighted on the existing Muslim consumer behavior and measures the Muslim youth brand loyalty vis-à-vis traditionally used measures in the sportswear market in Malaysia. The purpose of this research is to investigate how the Muslim consumers are influenced by factors of brand equity (perceived quality, brand awareness, brand association, brand loyalty, and halal branding) towards sportswear brands in the country. This study also focuses on the study of brand equity in the context of Malaysian environment, followed by the results to obtain accurate use of information based on the research findings and analysis for marketing decisions by the sportswear products.

Keywords : *Islamic leadership, Servant leadership, Islamic management.*

Category : Social Sciences and Humanities

1095

ISLAMIC CIVILISATION: AWAKENING PARAMETERS#

Saim Kayadibi, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Saim Kayadibi, Economics, Kulliyah of Economics and Management Sciences

The Muslim world's significant contribution to the development of world civilization deserves further investigation. History's leading Muslim empires all assumed momentous responsibilities in adapting Islamic civilisation to changing times. The author argues that researching and studying the input of their intelligentsias and elites would be a necessary requirement for any Islamic 'renaissance'. Western civilisation, often presented as the only civilisation that has enabled the world to progress, ignores the contributions of all other civilisations. This article underlines the significance of Islamic civilisation by exploring the Muslims' reawakening process and humanity's need for a new world system, one that reflects Islamic civilisation's understanding and practice of ontological freedom, security, and human rights. Keyword: Islamic Civilisation; Freedom; Human Rights; Awakening Parameters; Western-Centred Civilization. Publication details: Kayadibi, Saim. Islamic Civilisation: Awakening Parameters, Islam and Civilizational Renewal, Pluto Journals, vol. 3 (April) 2012, p. 489-505, ISSN: 2041-871X.

Keywords : *Islamic Civilisation; Freedom; Human Rights; Awakening Parameters; Western-Centred Civilization.*

Category : Social Sciences and Humanities

1099

PERFORMANCE EVALUATION FROM AN ISLAMIC PERSPECTIVE#

Ridhwan Fontaine, *Business Administration, Kulliyah of Economics and Management Sciences*
Gapur Oziev, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Gapur Oziev, Economics, Kulliyah of Economics and Management Sciences

To date, there has been little research on performance appraisal from an Islamic perspective. The purpose of this research is to fill this gap. This study compares the practices of Western management, Japanese management and the ideal Islamic approach to performance appraisal. The life of the Prophet Muhammad (SAW) is analyzed to deduce the Islamic perspective on performance evaluation. We found that an Islamic performance evaluation system must fit the local culture, fit the spirit and the letter of Islam and seek to identify root causes to performance problems. The top management is accountable for performance, but other employees are more accountable to following processes, improving them and being disciplined. The greater the level of interdependence, the greater the evaluation must focus on processes rather than performance. We find that the Islamic ideal seems closer to Japanese management practices than Western management practices.

Keywords : *Islam, performance appraisal, Japanese, Western.*

Category : Social Sciences and Humanities

1101 CAREER AND TECHNICAL EDUCATION PROGRAM'S INFLUENCES ON POST-RELEASE OUTCOMES FOR OFFENDERS IN VIRGINIA#

Rosemaliza Mohd Kamalludeen, *Curriculum & Instruction, Institute of Education*

Exhibitor : Rosemaliza Mohd Kamalludeen, Curriculum and Instruction, Institute of Education

The effectiveness of correctional education programs in the United States is continuously debated to justify the impact on post-release outcomes among offenders. The purpose of this study was to describe post-release employment outcomes and recidivism rates of inmates based on their participation in career and technical education (CTE) programs at correctional institutions in Virginia. The outcomes investigated were time taken to secure employment post-release, and length of employment. This study was part of a comprehensive study done by Virginia Tech's Center for Assessment, Evaluation, and Educational Programming (CAEEP) and the Virginia Department of Correctional Education (VDCE). The rationale for correctional education's existence can be explained by the human capital theory. Becker (1993) explained that this theory suggests investment in education and training leads to better employment outcomes for ex-convicts. Ubah and Robinson (2003) explained that optimists emphasize the relationship between correctional education's success and moral-development, social-psychological development, and opportunity theories, but pessimists argue that there is little proof of reducing recidivism. Gordon and Weldon's (2003) investigation revealed inmates who participated in some form of correctional education had significantly lower recidivism rates as compared to the non-participants, supporting the optimists' view. This study utilized VDCE's dataset of offenders who were released from Virginia prisons between 2003 and 2006 and were followed for a total of three years post-release. Respondents represented 8206 out of 10,500 records. Non-respondents were those with no recidivism or employment records, with the assumption that they might have secured employment or recidivated outside of Virginia. ANOVA was used to investigate mean differences between program participants and non-participants on time taken to secure employment, length of employment, length of consecutive employment, and average quarterly earnings. Chi-square test of association was utilized to investigate CTE program participation's association with the ability to secure employment and recidivism rates. Statistical analyses were performed using PASW Statistics 17 software package. The findings revealed CTE program participants were more likely to gain employment faster post-release, and stay employed longer as compared to non-participants. This agrees with the human capital theory that the more investment made on education and training, the better the employment outcomes are for individuals. In explaining lower recidivism rates among participants, they were most likely not willing to let their time investment on education in prison go to waste by being reincarcerated, which coincides with the opportunity theory discussed by Ubah and Robinson (2003). The outcomes from this study seem to validate the human capital theory that suggests positive economic outcomes due to education and training investments. Correctional education evidently supports the improvement of an ex-offender's opportunity of becoming an employable citizen. More investigations should be made in other states and other correctional education programs, to further support rehabilitation efforts instead of punishment. However, employment and recidivism rate differences between participants and non-participants might be enhanced by factors other than CTE program participation. Studies on the interaction between variables such as demographics and unemployment rates should be conducted to further clarify the effects of CTE on post-release outcomes among ex-convicts.

Keywords : *Career and Technical Education, recidivism, vocational*

Category : Social Sciences and Humanities

1102

**DUTY OF FULL AND FRANK DISCLOSURE IN THE DIVISION OF
MATRIMONIAL PROPERTY: THE LAW AND PRACTICE IN MALAYSIA#**

Norlia Ibrahim, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*
Nora Abdul Hak, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*
Roslina Che Soh, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Norlia Ibrahim, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

Matrimonial property is generally refers to any property acquired during the marriage and property owned before the marriage provided that it has been substantially improved during the marriage by both parties or by the other party who did not acquire the property. It is found that the claim on a division of matrimonial property is very pertinent especially after a divorce when both parties start to distinguish the ownership of property and desire it to be returned to the original owner or to be sold and the proceeds to be divided upon them. Some divorce proceedings are concluded smoothly but in most cases the parties will fight over practically everything of what has been accumulated throughout their marriage to be divided between them. The governing statute provides a proper guideline on how the property is to be divided between the parties. However, fair distribution is almost impossible if the parties fail to discharge a duty of full and frank disclosure of all information relevant to the case particularly the total assets, income and liabilities. This study seeks to examine the duty of full and frank disclosure in the division of matrimonial property. This will include a discussion on the power of the court to make an adverse inference against the party if they fail to discharge their duty for the purpose of ensuring fair distribution of the matrimonial property in Malaysia by referring to the relevant provisions and decided cases.

Keywords : *Matrimonial Property, Civil Court, Family Law*

Category : Social Sciences and Humanities

1111 PREVENTION OF CRIMINAL VICTIMIZATION: AN ISLAMIC APPROACH#

Nasimah Hussin, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*
Majdah Zawawi, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Nasimah Hussin, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

The economic well being of a country and the livelihood of a community depends on the degree of safety in the country as it enhances productivity. In order to achieve it, crime prevention is considered the main agenda of public authorities. Nevertheless, it has usually been overlooked that the victim him/herself can be the contributing factor to the criminal incident. The objective of this paper is to provide suggestions as to how these questions could be answered. The key to these problems lies in educating the community on the preventive measures that could be taken in order to avoid victimisation of individuals. Such suggestions are based on the Islamic approach which emphasises on individual responsibility towards one's own safety through the observation of Shari'ah rulings. This will then lead to community welfare and the concept of hisbah. Hence this paper discusses the preventive measures that can be observed by both individuals and the community to prevent criminal victimization. This research is based on doctrinal analysis of Qur'anic verses and hadith. Data are also obtained from contemporary books and other materials particularly those discussing the theories of victimization. The obvious limitation of this research is that it is not an empirical research. Due to this limitation, it opens an avenue for future research to be done. The research shows that in order to ensure a safe community, concentration cannot only be given to the physical environment. For a long time, criminologists gave emphasis to the role of the criminal. But over the years, it has been discovered that the role of the victim is actually significant, as it can directly or indirectly influence fate and motivate a criminal. Thus, it is important for us to know how victims can play a role in protecting themselves from being targeted. Islam has long been concerned about this issue and provides a unique approach in the prevention of criminal victimization. This can be derived from the rulings of the Qur'an and Hadith of the Prophet as well as the juristic opinions.

Keywords : *Criminal victimization, safe community, Shari'ah rulings, community and education*

Category : Social Sciences and Humanities

1114 **“LAW PLT” ; THE IMMINENT BODY CORPORATE ENTITY FOR LAWYERS.#**

Halyani Hassan, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Zuhairah Ariff Abd Ghadas, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Halyani Hassan, Civil Law, Ahmad Ibrahim Kulliyah of Laws

Prior to 2012, advocates and solicitors in Malaysia are only allowed to carry out their private practices via sole proprietorships or partnerships structure. Such restriction is derived from the Bar Council Rulings which clearly stated that legal firm refers to a firm of Advocates and Solicitors whether a partnership or a sole proprietorship. Despite the rigidity of the governing rules, the market acknowledge the importance of the lawyers to carry out their private practices and this can be seen in the number of registered legal firms in Malaysia. In Singapore, other than the conventional business entities, the legal professions can choose LLP, Law Corporation or limited partnerships (LP) as their business vehicles. These business entities allow the legal practitioners to manage risks in business and at the same time maintaining a high standard of professionalism. In Malaysia, the Limited Liability Partnerships Act 2012 was enacted in February 2012 but instead of using the universal term of LLP, the Malaysian Act provides that the local LLPs shall be known as Perkongsian Liabiliti Terhad (PLT). This new business entity allows general traders and few professionals, including Advocates and Solicitors to set up a business entity which has a body corporate status but not totally subjected to the Companies Act 1965. This paper highlight general attributes of Malaysia PLT with specific reference to the professionals LLP and also the disadvantages of the PLT to the legal practitioners and to the third party.

Keywords : *Limited Liability Partnership, Perkongsian Liabiliti Terhad, Private Leagl Practices*

Category : Social Sciences and Humanities

1120

**ENTREPRENEURSHIP'S INTEREST OF AIKOL STUDENTS: A STUDY ON THE
RELATIONSHIP BETWEEN INVOLVEMENT IN ENTREPRENEURSHIP PROGRAMS AND
INTEREST TO BE ENTREPRENEURS#**

Halyani Hassan, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Zuhairah Ariff Abd Ghadas, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Zarinah Abd Hamid, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Halyani Hassan, Civil Law, Ahmad Ibrahim Kulliyah of Laws

In Malaysia, the Government has been supportive in inculcating entrepreneurship at the higher learning institutions through policies such as training providers, funding, infrastructure and facilities to encourage students to start their own businesses. Such support is seen as one of the effort to transform the country's economy into the knowledge-based economy whereby entrepreneurship has been identified as one of the key elements to the development of the knowledge economy. It is contended that in developing successful entrepreneurs, an early exposure in entrepreneurial studies is an essential consideration and one of the ways to inculcate entrepreneurship culture amongst youths is through entrepreneurship education and programs. At the higher learning institutions, For the law graduates in Malaysia, the job opportunity are multi structured whereby they could either be in the judiciary, government agencies, corporate and banking sectors or private practice. In most circumstances, law graduates will be attached to private practices and this eventually will lead to most of them opening their own legal firm. Despite the legal nature of legal firms, lawyers could not avoid the standard business practices such as preparing the cash flow report, the business and succession plan and the audited account report. There are also many lawyers who set up business of different nature than legal, such as construction and trading companies. As such, it is perceived that law graduates are one of the potential entrepreneurs, which are produced by higher learning institutions. This paper discuss the relationship between involvement in entrepreneurship programs and the interest of law undergraduates to become entrepreneurs when they graduated from the University. The study is based upon a survey conducted on law undergraduates at Ahmad Ibrahim Kulliyah of Laws, International Islamic University Malaysia (IIUM). A quantitative research methodology is adopted in this study.

Keywords : Entrepreneurship, Law Students, IIUM

Category : Social Sciences and Humanities

1129 RIGHTS IN FUTURE INTEREST AS MATRIMONIAL PROPERTY; SPECIAL REFERENCE TO EARNING CAPACITY#

Norliah Ibrahim, *Islamic law, Ahmad Ibrahim Kulliyah of Laws*
Zuhairah Ariff Abd Ghadas, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Nora Abd Hak, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Norliah Ibrahim, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

The claim on “human capital” as a property within the context of marriage and divorce is one of the contentious issue in family law. Such an issue becomes more pertinent in the millennium era where improvement in life via academic qualification is flagrant and employees are encouraged by the employers to enhance their academic qualification during employment. The discussions in this paper focus on whether enhancements to earning capacity, which is a major assets acquired during a marriage should be considered as matrimonial property and therefore subject to division upon divorce. This argument is made with respect to an educational degree or professional license obtained by the spouses during the marriage and leads to enhancement in the earning capacity of the individual. This paper established the legal justifications to recognize earning capacity as a matrimonial property and therefore should be subjected to division upon divorce. Findings of this paper shall be relevant to resolve claims on future earning or future interest due to initiatives which occurred during the marriage and may not be limited merely to earning capacity but also to future interest in business, assets and investment. Research methodology adopted in this paper is doctrinal and statutory analysis. Keyword: Matrimonial Property, Earning Capacity, Future Interest

Keywords : Future Interest, Matrimonial Property, Earning capacity

Category : Social Sciences and Humanities

1131 COMMON ARABIC VERBS USED IN ARABIC NEWSPAPERS- A CORPUS BASED STUDY#

Haslina Hassan, *Arabic Language & Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Noor Asyikin Yashim, *Arabic Language & Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Haslina Hassan, Arabic Language & Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences

This paper reports on a project that developed a corpus of online Arabic newspapers. The corpus is named as Arabic World News (AWN). The size of AWN is approximately 14 million words extracted from Bernama online Arabic newspapers. The corpus is aimed to create a word list of frequent Arabic verbs used in media language. The word list is aimed to be a source of reference in language research and development as well as in the teaching and learning of the Arabic language.

Keywords : *Arabic corpus, Arabic verb, media, teaching, learning*

Category : Social Sciences and Humanities

1132 A LOCATION QUOTIENT ANALYSIS ON THE ROLE OF EDUCATION IN THE DEVELOPMENT OF THE EAST COAST ECONOMIC REGION IN MALAYSIA#

Abdul-Mumin Abdulai, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Chamhuri Siwar, *Institute for Environment and Development, Universiti Kebangsaan Malaysia (UKM),*

Abdul Ghafar bin Ismail, *Centre for Economic Studies, Universiti Kebangsaan Malaysia (UKM),*

Noor Azlan Mohd Noor, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Pute Rahimah Makol-Abdul, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Abdul-Mumin Abdulai, Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences

The authors have performed location quotient (LQ) analysis on the role of education in the development of the East Coast Economic Region (ECER) in Malaysia. Malaysia is striving to become a developed and high-income economy by 2020 (i.e., Vision 2020). To achieve the status of a developed economy can be hard, especially in the midst of deep-seated development disparities among regions in the economy. Tackling regional development imbalances reduces income inequalities among citizens and regions in the country. It is claimed that inadequate human capital is one factor underlying the development woes of the ECER, particularly the shortage of skilled labour in the various economic sectors (ECERDC, 2007, Chapter 9). To do that, ECERDC emphasised on enhancing quality education at the primary, secondary and tertiary educational levels to produce the requisite human capital. The question is: What is the level of providing education in ECER now? The objective of this paper is to address this question using the LQ technique.

Keywords : *Sustainable Development, Education, Regional Development, ECER, Location Quotient.*

Category : Social Sciences and Humanities

1133 BASIC NEED SATISFACTION, LEARNING CLIMATE, STUDY ENGAGEMENT AND PERFORMANCE#

Arif Hassan, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Arif Hassan, Business Administration, Kulliyah of Economics and Management Sciences

The self-determination theory suggests that motivation comes from the degree to which a person experiences autonomy of choice, feeling of competence, and approval from others. This depends upon the way they are treated such as by parents and teachers. As such this study was conducted on undergraduate students of IIUM to examine the following research questions. 1. To what extent students are able to fulfil the three basic needs, namely, autonomy, competence, and relatedness while pursuing their education in IIUM? 2. Does gender influence the satisfaction of these needs? 3. How do students' rate the motivational strategies of their teachers? Are they controlling or autonomy supportive? Do they provide recognition for competence and fulfil their need for relatedness? 4. How do students' intrinsic need satisfaction contribute to their study engagement and academic performance. Sample: 529 undergraduates (Males = 224; Females = 305) were randomly drawn from six faculties. The sample included 434 Malaysians and 74 International students. They were distributed across different years of study (Year 1 = 27.7; Year 2 = 29.1; Year 3 = 32.6; and Year 4 = 10.4) Instruments: Data were collected with the help of standardised instruments which included (a) Basic Need Satisfaction Scale (c) Self Determination Scale, (c) Learning Climate Questionnaire, and (d) Study Engagement Scale. Results: Mean scores indicated that students were moderately satisfied on basic needs and perceived the learning climate moderately autonomy supportive. Multiple regression indicated strong influence of autonomy supportive learning climate and satisfaction of basic need for competence on students' study engagement. Gender and nationality also had significant contribution on engagement suggesting that females compared to males and international compared to local students were more engaged in other studies. Interestingly while gender indicated a significant positive contribution on students' performance (measured in terms of CGPA), the satisfaction of relatedness need contributed negatively. Obviously CGPA is determined by many other variables such as ability and situational factors besides motivation. No significant difference was found between males and females and between local and international students on the study variables.

Keywords : *Motivation, Learning Climate, Study Engagement*

Category : Social Sciences and Humanities

1134 RESPONDENTS VS. INFORMANTS METHOD OF DATA COLLECTION: IMPLICATIONS FOR RESEARCH IN SOCIAL SCIENCES#

Arif Hassan, *Business Administration, Kulliyyah of Economics and Management Sciences*

Exhibitor : Arif Hassan, Business Administration, Kulliyyah of Economics and Management Sciences

Objectives of the Study The study compares data collected from two methods, namely, individuals acting as respondents and individuals acting as informants. The former involves self-rating while the later asks individuals to rate other's beliefs, preferences, and actions. The study objective was to examine the role of social desirability factor in self-rating method of data collection. Good number of business and management studies uses self-rating questionnaires and interviews which may not yield data that truly reflect the reality due to respondents' tendency to present himself/herself in a socially desirable manner. This may be even more pronounced in a collectivistic culture where individual's thoughts and perception are deeply influenced by the social norms and values. **Significance of the Study** No such study has been conducted that compares the two method of data collection in a single study, providing the justification for this research. **Methodology** A sample of 100 adults of mix background from India and 127 students from Malaysia rated predominantly positive and negative description of beliefs, values and preferences twice--first for the people residing around them and then for themselves. They also rated themselves on a scale of social desirability. **Findings** The findings confirmed that the respondents attributed negative cognitions (beliefs, values and preferences) to the people more than themselves. They attributed predominantly positive beliefs, values and preferences to themselves and people, although a shade more to themselves. The social desirability orientation was meaningfully related to respondents' self but not to people's related perceptions. The findings thus favored the use of respondents in informants' role of judging people's cognitions of social reality.

Keywords : *Social desirability effect, Social research, Method of data collection*

Category : Social Sciences and Humanities

1136 BRIDGING THE DIGITAL DIVIDE TO ENHANCE TEACHING AND LEARNING FOR HUMAN CAPITAL DEVELOPMENT IN THE EAST#

Abdul-Mumin Abdulai, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Chamhuri Siwar, *Institute for Environment and Development, Universiti Kebangsaan Malaysia(UKM),*

Abdul-Ghafar Ismail, *Centre for Economic Studies, Universiti Kebangsaan Malaysia(UKM),*

Noor Azlan Mohd Noor, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Pute Rahimah Makol-Abdul, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Abdul-Mumin Abdulai, Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences

This paper has examined the extent to which addressing the issue of digital divide can enhance teaching and learning in order to produce the human capital required to support the development agenda of the east coast economic region (ECER). This region consists of three relatively less developed states and a district in Malaysia (i.e., Kelantan, Pahang, Terengganu, and Mersing District). Inadequate human capital, especially skilled labour, has been identified as one of the major factors underpinning ECER's underdevelopment. Although Malaysia happens to be one of the few Southeast Asian countries with medium to high internet penetration, the fact that the regions and states differ in terms of the available resources, social and public infrastructure underscores the likelihood of unequal access to digital technology among them. Making digital technology readily available and accessible in the ECER may facilitate the training of the right calibre of manpower. It is argued that developing human capital is possible only through strong and efficient educational system (Chamhuri, 2005; Abdulai and Chamhuri, 2008, p. 7). And the use of digital technology that includes, of course, information and communications technology in the teaching and learning process has tremendously enhanced educational system in the majority of countries, particularly in research and development endeavours. It is the belief of the authors that the Malaysian Government will not be oblivious of the crucial benefits associated with tackling the digital divide issue in the ECER. In that light, what measures does the Government put in place to tackle this issue? And how effective are such measures? Addressing these questions constitutes the main objective of the paper.

Keywords : *Digital Divide, Teaching and Learning, Human Capital, Education, Regional Development, ECER*

Category : Social Sciences and Humanities

1144 INDEGENEITY AND UNIVERSALISATION OF KNOWLEDGE THROUGH ISLAMISATION#

Jamil Farooqui, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : *Jamil Farooqui, Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Knowledge, as a matter of fact, should be universal, applicable at least, to the most situations but it is seldom possible in case of knowledge about human and social world. It is said that knowledge is, to a great extent, conditioned by existential conditions. This is apparent when the relevance and applicability of social sciences to the rest is considered and evaluated by third World social scientists. They observe that social sciences as developed in the West are indigenous and not applicable to the rest. Thus, they felt the need of indigenisation: to study social realities within their own socio-cultural context. The epistemological issue here is whether knowledge based on indigenous conditions is relevant to other societies and whether universality in knowledge is possible. The present research suggests that it is possible through theoretical construct and method of 'Islamisation of knowledge', which is based on tawhidic paradigm and, as such, studies and analyzes social realities and their bases on 'Absolute Reality'. Islamisation of knowledge develops the corpus of knowledge on the basis of three factors: the identification of 'Absolute Reality and on that basis the construction of other realities, the linkage between truth and goodness and the balance between individual aspirations and societal needs. This knowledge is genuine and beneficial, cuts across socio-cultural boundaries and is hence applicable to all. The example of basic norms: honesty, justice, human rights, helping and not harming others, respecting other's rights and service to humanity are but to mention a few. Islamisation of knowledge is, thus, an effective tool for universalisation of knowledge: knowledge applicable to and in the best interest of entire humanity.

Keywords : *INDIGENEITY, UNIVERSALISATION, CONSTRUCTION OF REALITY, TRUTH AND GOODNESS, HUMAN ASPIRATION AND SOCIETAL NEEDS*

Category : Social Sciences and Humanities

1146

CIVILIZATION IN AN ISLAMIC PERSPECTIVE#

Jamil Farooqui, *Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Md Sayed Uddin, *Sociology and Anthrpology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Jamil Farooqui, Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Civilization is a multidimensional concept used with different connotations and meanings. It signifies the ideological fervor that contours the edifice of a society and shapes the formation of social institutions. It sets up the goals which individuals and society strive to attain and to develop different social mechanisms and organizations to that effect. It directs individuals to lead life in a distinct way for a distinct purpose. Civilization in Islamic intellectual ethos is to uphold Allah's guidance, and establish His order on earth. Islamic civilization is based on the revelatory doctrine underlying the sovereignty and ascendancy of Allah (swt) and its manifestation in every walk of individual and social life. It reflects a composite system of life based on the supremacy of Allah (swt), respect for human dignity, the maintenance of righteousness and justice, and the promotion of moderation in thought and action.

Keywords : ONTOLOGICAL OR COSMOLOGICAL VISION, CONCEPTION TRANS-MUNDANE AND MUNDANE REALITY, HUMAN DIGNITY, COMPOSITE SYSTEM

Category : Social Sciences and Humanities

1156 TIME MANAGEMENT FROM AN ISLAMIC PERSPECTIVE: AN EXPLORATORY STUDY#

Rafikul Islam, *Business Administration, Kulliyah of Economics and Management Sciences*
Ali mohamed Wahra, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Rafikul Islam, Business Administration, Kulliyah of Economics and Management Sciences

Time is a precious commodity and extremely important amanah from Allah (swt). Proper utilization of time leads to success in this mundane world and eternal bliss in the hereafter. Since time is limited in our life, we must utilize it in the best possible manner so that we can attain eternal success. Most of the existing guidelines on time management are developed by Western scholars some of which may not be consistent with teachings of Islam. The main purpose of the present research is to develop some guidelines on time management from Islamic perspective. In this study, a self-administered questionnaire has been used to collect data from people belonging to different organizations in Malaysia. The findings are expected to provide some useful tips on time management from Islamic perspective. However, the study should be regarded as an exploratory one only.

Keywords : *Time management, islamic perspective*

Category : Social Sciences and Humanities

**1158 ANTECEDENTS OF THE USE OF ONLINE BANKING BY STUDENTS IN MALAYSIA:
EXTENDED TAM VALIDATED THROUGH SEM#**

Muhammad Tahir Jan, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Muhammad Tahir Jan, Business Administration, Kulliyah of Economics and Management Sciences

Purpose – The radical advances in the electronic banking technologies have inaugurated unique methods of transaction with a bank, especially using online banking medium. The main purpose of this study is to replicate an extended technology acceptance model (TAM) in order to determine those factors that impact the students' intention to use online banking, in Malaysian context. Two main banks were selected for data collection purposes, namely, Bank Muamalat Malaysia Berhad and Bank Islam Malaysia Berhad. Design/methodology/ approach – A self-administered questionnaire, which was already developed and tested previously by various scholars, have been adapted for the present study. The questionnaire was distributed through convenience sampling to 550 students of different faculties and universities in Malaysia. A total of 451 usable responses were finally selected for the data analysis purpose. First, the descriptive analysis was undertaken in order to observe the data for various trends. After descriptive analysis, data was inferentially analyzed by deploying Structural Equation Modelling (SEM). The main steps of SEM followed in this particular research were; Confirmatory Factor Analysis (CFA) and full fledged Structural Equation Modelling, which led to hypothesis testing using AMOS computer software. Findings – The results indicate that Perceived Usefulness, Perceived Enjoyment, and Quality of Internet Connection are the main antecedents of the use of online banking by students. Moreover, the Information on Online Banking significantly affects Perceived Ease of Use, and Perceived Enjoyment. Furthermore, Quality of Internet Connection statistically significantly impact Perceived Enjoyment and Security & Privacy. Descriptive statistics indicates 71.8% males and 28.2% females, 46.3% have their accounts in Bank Muamalat Malaysia Berhad and 34.6% in Bank Islam Malaysia Berhad. A total of 90.7% students were in between 15 to 35 years of their age. Most of them (64.5%) were the master's students of different fields, with majority of them (35.9%) pursuing their MBA. Research limitations/ implications – The use of convenience sampling in this study weakens research objectivity and the relatively small size of the sample somewhat limits generalizations. Originality/ value – The use of complex modelling techniques, namely, Structural Equation Modelling is a novel attempt in validating the extended TAM. Further, this study also extends the understanding of the technology acceptance model from students' behaviour perspective. Perhaps the model validated in the present research can be adopted by future researchers for further investigation, especially in other countries and industries.

Keywords : Online banking, TAM, SEM, Students behaviour, Malaysia

Category : Social Sciences and Humanities

1159 THE IMPACT OF TECHNOLOGY CSFs ON CUSTOMER SATISFACTION AND THE ROLE OF TRUST: AN EMPIRICAL STUDY OF THE BANKS IN MALAYSIA#

Muhammad Tahir Jan, *Business Administration, Kulliyah of Economics and Management Sciences*

Kalthom Abdullah, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Muhammad Tahir Jan, Business Administration, Kulliyah of Economics and Management Sciences

Purpose – The primary objective of this paper is to identify and test technology related critical success factors (CSFs) and its impact on trust and customer satisfaction. Design/methodology/approach – This paper analyses the causal relationship that exist between technology CSFs and customer satisfaction. It also investigates the mediating role of trust between technology CSFs and customer satisfaction. For this purpose data was collected quantitatively from 349 employees working in different banks, through self-administered questionnaire. The data analysis was conducted using SPSS and AMOS software programme packages for windows. Factor analysis was performed to extract and decide on the number of factors underlying the measured variables of interest. Structural equation modelling (SEM) was then used to examine the variables and the fitness of proposed model. Findings – The result revealed that technology CSFs positively affect customer satisfaction. It is also revealed that trust partially mediates the relationship between technology CSFs and customer satisfaction. Interestingly, a significant positive impact of technology CSFs on trust, and trust on customer satisfaction have also been obtained. Practical implications – The significant influence that technology CSFs have on customer satisfaction and trust shows that technology related CSFs are inevitable for the success of CRM in financial services industry. Policy makers of services industry in general and financial service industry in particular may benefit from the findings of this study. Originality/value – Despite the plethora of research on CSFs for CRM, very limited attention has been given to testing and validating the identified CSFs. Further, negligible research has been conducted to investigate trust as a mediating variable in the relationship between technology CSFs and customer satisfaction. This paper, therefore, offers valuable insight into technology related CSFs and trust with their impact on customer satisfaction.

Keywords : *Technology CSFs, Customer Relationship Management (CRM), Customer Satisfaction, Trust, Banking sector, Structural Equation Modelling, Malaysia.*

Category : Social Sciences and Humanities

1160 ENHANCING GRADUATES' EMPLOYABILITY SKILLS: A MALAYSIAN CASE#

Rafikul Islam, *Business Administration, Kulliyah of Economics and Management Sciences*

Mohamad Shukri bin Abdul Hamid, *Business Administration, Kulliyah of Economics and Management Sciences*

Noor Hazilah Abd Manaf, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Rafikul Islam, Business Administration, Kulliyah of Economics and Management Sciences

In an era of globalization and competitiveness, employers are looking for versatile graduates who are able to drive their organizations to compete successfully in the market. Now-a-days, obtaining a good degree is no longer sufficient to get a job. Graduates should equip themselves, not only with technical skills, but more importantly with soft skills. The main objectives of this study are to identify Malaysian graduates' required employability skills, to identify the priority of each skill and to highlight the gap between the importance of graduates' employability skills to employers and their satisfaction on those skills. In general, the results of the gap analysis showed that employers perceive graduates' employability skills performance as being lower than the importance assigned to those skills. The widest gap was found in communication skills, especially the skill on the English language usage. Using the Importance-Performance Analysis (IPA), 13 attributes fell into the improvement quadrant. This means that improvement efforts and corrective actions must be taken to improve employers' overall satisfaction.

Keywords : *Employability, Importance performance analysis, Malaysia*

Category : Social Sciences and Humanities

1162 DESIGNING ARABIC GRAMMAR EXERCISE BOOK FOR NON-NATIVE SPEAKERS IN MALAYSIA USING MALAY LANGUAGE AS A MEDIUM#

Mohd Zulhisyam Mustapai, *Quranic Language Department, Center for Language and Pre University Acad. Development*
Zairul Mat Zain, *Quranic Language Department, Center for Language and Pre University Acad. Development*
Marzidah Hashim, *Quranic Language Department, Center for Language and Pre University Acad. Development*
Raja Munirah Raja Sulaiman, *Quranic Language Department, Center for Language and Pre University Acad. Development*

Exhibitor : Mohd Zulhisyam Mustapai, Quranic Language Department, Center for Language and Pre University Acad. Development

This project aims at the design of an Arabic grammar exercise book for non-native speakers in Malaysia using Malay language as a medium. The mixed-method approach was implemented which employed techniques such as quantitative survey, interviews, content analysis, field notes and observations. This project will contribute theoretically in the form of design a new approach in Arabic grammar studies and practically in the design of suitable Arabic grammar exercise book for Malay learners in Malaysia using Malay language as a medium.

Keywords : *Arabic grammar, Malay learners, Malay language, medium*

Category : Social Sciences and Humanities

1163 PRACTISE OF ARABIC SPEAKING SKILL LEARNING STRATEGIES: A STUDY ON B.A.R AND I.R.K. STUDENTS AT CENTRE FOR FOUNDATION STUDIES (CFS), IIUM#

Mastura Arshad, *Quranic Language Department, Center for Language and Pre University Acad. Development*
Marzidah Hashim, *Quranic Language Department, Center for Language and Pre University Acad. Development*
Raja Munirah Raja Sulaiman, *Quranic Language Department, Center for Language and Pre University Acad. Development*
Norasmazura Muhammad, *Quranic Language Department, Center for Language and Pre University Acad. Development*
Kaseh Abu Bakar, *Jabatan Pengajian Arab dan Tamadun Islam,*

Exhibitor : Mastura Arshad, Quranic Language Department, Center for Language and Pre University Acad. Development

Language skills is often associated with the use of learning strategies. Studies found that the use of appropriate and effective strategies can enhance students' speaking skill. Thus, this research explores the practice and knowledge of Arabic Speaking Skill Learning Strategies among Malay students at the Centre for Foundation Studies (CFS) IIUM, to identify the relationship between the achievement in APT Skills Test and the strategies being practiced, and to identify the factors in the practiced strategies. This study divides speaking skill learning strategies into in-classroom, use of media, participation in co-curricular activities, speaking with partners and individual strategies. This research involves 163 respondents taking B.A.R. and I.R.K. courses, using the Cluster Sampling Method. Questionnaire is used to collect data for this study and is confirmed by three experts. Cronbach Alpha reliability level of the questionnaire is high (0.7). The data are analyzed through descriptive and inferential analysis, using mean, standard deviation, percent, Chi-Square Test, and Multiple Regression Analysis. The findings show that the level of the practiced strategies is moderate while the most unknown strategy category to the students is the Self Learning Strategy. Inferential data analysis shows that there is a positive relationship between the achievement of APT Skills Test, and the use of media strategy and the use of self-learning strategy. In addition, the demographic factors such as gender, achievement in APT Skills Test, Arabic language learning background and learning period are not the factors in the practice of Arabic Speaking Skill Learning Strategies.

Keywords : *learning strategies, Arabic speaking skill, Malay students, I.R.K and B.A.R students, APT skills*

Category : Social Sciences and Humanities

1170 FOSTER CARE: CONCEPT AND PROVISIONS OF THE LAW IN MALAYSIA#

Azizah Mohd, *Islamic law, Ahmad Ibrahim Kulliyah of Laws*
Nadhilah Abdul Kadir, *Islamic law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Azizah Mohd, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

Foster Care refers to temporary or permanent placement of a child with a person who is not his direct family members. This is to provide a family living environment to children who are deprived of rights to live in such family life. This study examines the concept of foster care, the law and practice in Malaysia. Discussion includes the practice of Social Welfare Department on Foster Care as well as several non Governmental Institution such as Orphan Care and Kewaja. Examination extends to the provisions of the law on Foster Care in several Countries which include United Kingdom, Australia, Singapore, Egypt, Algeria and Bahrain to serve as a comparison and to provide a sample for improvement of foster care practise leading to child protection in Malaysia. This research will serve as useful reference to all academicians, legal practitioners, researchers, students, social workers and public at large.

Keywords : *Foster Care, Adoption, Malaysian Law, Islamic law*

Category : Social Sciences and Humanities

1172 PIOUS WAY TO POLITICS: THE RISE OF POLITICAL SALAFISM IN POST-MUBARAK EGYPT#

Maszlee Malik, *Fiqh and Usul al-Fiqh, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Maszlee Malik, Fiqh and Usul al-Fiqh, Kulliyah of Islamic Revealed Knowledge and Human Sciences

The term Salafiyyah in the modern contemporary political usage implies a radical trend of conservative Islam that rejects amongst others, democracy, which they perceive as unIslamic. This objection towards democracy includes all the mechanistic means and tools related to the democratic system such as election, political party, opposition, demonstration and others. However, the Egyptian 2011 revolution and the post-Mubarak political ambience in Egypt have challenged these established concepts, despite the general prevailing discourse of global Salafism ideology. The participation of Salafi preachers and their followers during the revolution and the establishment and participation of Salafi-oriented parties in the Egyptian post-Mubarak general election shows that it is possible to harmonise Salafism with democracy. This article will critically analyse the participation of Salafis in the Egyptian uprising and the motivations that pushed the Salafists in Egypt towards democratic participation. This participation in the democratic process will be deconstructed within the theoretical framework of global Salafism to understand the current emergence of demo-Salafism as its synthesis.

Keywords : *Salafism, Post-Mubarak Egypt, Political Islam, Islam and Democracy*

Category : Social Sciences and Humanities

1173

SOCIAL MEDIA USE AMONG YOUTHS IN MALAYSIA#

Saadah Wok, *Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Syed Arabi Idid, *Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Norealyna Misman, *Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Saadah Wok, Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Social media is popular among youths for sharing information. This study was developed based on the users and gratifications theory (Blumler and Katz, 1974). This study tries to explore the popularity of the social media sites, commonly known as social networks sites (SNS), in terms of the level of use of the SNS, the types of information-sharing activities involved in the SNS, to compare youths of various backgrounds in relation to information-sharing activities, and to analyze the relationship between the level of social media use and information-sharing activities among youths. This study employs a quantitative research design, using survey method with questionnaire as the research instrument used for data collection. In this study, youths of aged between 17-40 years old, nationwide were surveyed. Randomly selected communication students from different levels of the program were initially used as the starting point for data collection. This is because this research involved no grant but because of passion for research, the researchers absorbed all the expenses for the study. The students, in turn, were asked to find youths, encompassing those of different race, gender, within the university and outside the university. A total of 704 youths (Malaysian and foreigner) participated in the study. Data were analyzed using SPSS WIN 16 for descriptive statistics and inferential statistics to answer the research objectives of the study and to test its hypotheses. Youths in the study encompassed slightly more male than female, mostly Malaysian Malay/Bumiputra, who are single, and doing first degree in the higher learning institutions. Majority of them subscribed to SNS, mainly to facebook and yahoo mail. The finding on the facebook is congruent with Hui's (2010) findings who found that 83% of facebook users in Malaysia are youths. Findings showed that youths always (five to seven days per week) use social media to share information, that is, either positively-oriented or negatively-oriented in nature, emerged based on the factor analysis results. They were also found to share personal information such as educational background, favorites, contact information, photos and activities. Results also showed that youths used the social media more for sharing negatively-oriented information (latest photos, recent activities, personal information, and links related to entertainment with movies, music, video) compared to the positively-oriented information (religious-related issues, ideas on projects/course, web-links related to assignments, academic-related news, and religious values). The results are supported by a strong relationship between frequency of use and the negatively-oriented information-sharing activities. In conclusion, it can be said that youths use SNS for different purposes and reasons, and the SNS, in general, is a new platform for youths to express their true selves. The patterns of social media use differ for different race, nationality and religion. As such, it is suggested that relevant authorities take heed on these results and start enforcing appropriate strategies to refrain youths from going astray from their responsibility of searching for knowledge and information for their benefit and betterment in the future. A paper was presented at AMIC international conference and then submitted to UiTM journal.

Keywords : *Youths, social networks sites (SNS), social media use, users and gratifications theory, information-sharing activities*

Category : Social Sciences and Humanities

1179 WOMEN ON BOARDS AND ITS IMPACT ON MARKET AND ACCOUNTING PERFORMANCE#

Shamsul Nahar Abdullah, *Accounting, Kulliyah of Economics and Management Sciences*
Ku Nor Izah Ku Ismail, *Universiti Utara Malaysia,*
Lilach Nachum, *City University New York,*

Exhibitor : Shamsul Nahar Abdullah, Accounting, Kulliyah of Economics and Management Sciences

We offer some reconciliation for the conflicting views regarding the impact of women presence on boards on firms' performance. Drawing on agency and resource dependency theories, combined with psychology theories that articulate the behavior of women in the workplace, we suggest that this impact differs in relation to market- and accounting-performance. Further, it is firm-specific and varies with governance structure and composition of the board, which we measure respectively by family ownership and the ethnic diversity of the board. The empirical analysis is based on a sample of 841 publicly-listed companies in Malaysia. The results show negative impact of women participation on market-performance and positive impact on accounting-performance. No support is found for the firm-specificity of the relationships. We discuss the normative implications of the findings for government authorities and for firms.

Keywords : *Board diversity; women; firm performance; ownership; Malaysia*

Category : Social Sciences and Humanities

1180

THE CAUSES OF GENDER DIVERSITY IN MALAYSIAN LARGE FIRMS#

Shamsul Nahar Abdullah, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Shamsul Nahar Abdullah, Accounting, Kulliyah of Economics and Management Sciences

The issue of women representation at the decision-making level in Malaysia has received special attention from the government since 2004, the year in which it adopted a policy requiring that 30 per cent of the posts at decision-making level in the public sector be filled by women. In 2011, the policy was extended to the private sector where 30 per cent of listed firms' board seats are to be allocated to women with 2016 being the deadline for compliance. To this end, this paper aims at to examining the factors that determine the appointment of women to the boards of Malaysian large firms. Large firms were chosen in this study because they have the resources and the capacity to adopt the policy more readily compared to smaller firms. The results reveal that gender diversity is positively associated with board size and the presence of family on the board. That is, the larger the board is, the more likely it is that women sit on it. The fact that the presence of women on the board is associated with the presence of one or more family members on the board means that the appointment of women to the board is very much influenced by family ties rather than commercial reasons. The results also show that firm performance is negatively associated with gender diversity. That is, firms with low financial performance are more likely to have women on their boards. Hence, taken altogether, the evidence suggests that the appointment of women to the board is very much driven by tokenism and family connection rather than by the business case.

Keywords : *women directors; board independence; board size; family directors; firm performance*

Category : Social Sciences and Humanities

1182 PERSPECTIVE APPLICATION OF PETRI-NET PROGRAMME IN THE ASSESSMENT OF HEAVY-RAIL-BASED PUBLIC TRANSPORTATION PERFORMANCES UNDER NATIONAL KEY RESULTS AREA (NKRA) 2011-2013: THE CASE OF KTM KOMUTER#

Ummi Aqilah Khalid, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Syahriah Bachok, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Mansor Ibrahim, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Ummi Aqilah Khalid, Urban and Regional Planning, Kulliyah of Architecture & Environmental Design

Keywords : *transportation, heavy rail, passengers, performances*

Category : Social Sciences and Humanities

1185 METHODS OF ASSESSING SCENIC BEAUTY OF NATURE BASED LANDSCAPE#

Jamilah Othman, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Nur Shazwani Rusli, *Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Jamilah Othman, Landscape Architecture, Kulliyah of Architecture & Environmental Design

Studies on landscape preference observed to flourish tremendously due to the advance of knowledge in the fields of science, technology and socio-political. Various ideas and theories/concepts found to interest many scenic beauty researchers of the contemporary. Among these are the expert and perception based theories. Though both paradigms have received positive acceptance over the last century, the choice of selecting the right paradigm can still be debatable. The expert based is found to dominate the environmental management practice, while the perception based is highly accepted among the researchers in the studies of landscape preference. In general, both methodologies recognise the scenic beauty assessment of using the biophysical features of a landscape, which include landscape of high ecological value. However, the difference only occurs in the method of assessing; e.g. perception-based requires public assessment, while the expert based requires the trained professionals in the art and design and etc. Looking at this, perhaps, the latter approach may receive more acceptance, since assessment involved professionals with good ecological or art and design backgrounds. Thus, this paper presents a case study, in which the validity of perception based can be improved.

Keywords : *Keywords: Nature Based Landscape; Scenic Beauty, Assessment, Expert Based, Perception Based and Case study.*

Category : Social Sciences and Humanities

1191 TEACHING ARABIC FOR TOURISM (TAT): AN EMPIRICAL STUDY#

Zalika Adam, *QLD, CELPAD, Center for Language and Pre University Acad. Development*
Abdul Rahman Chik, *Department Arabic, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : *Zalika Adam, QLD, CELPAD, Center for Language and Pre University Acad. Development*

□ The aim of this study is to investigate the needs of Arabic language for the purposes of tourism from Islamic perspective. The researcher used a questionnaire, interviews, observation and documents. 292 questionnaires were collected and 59 interviews were conducted among Malaysians and Middle-Easterners. The researcher introduced a list of vocabulary suitable for lesson content design. In the interview, the researcher used a case study, and then analyzed the main ideas based on themes used in the Creswell methods. The results of the Arabic language needs for the purposes of tourism were used for lessons content design. Student centered learning which includes problem solving, critical thinking, and self-learning were also suggested. In addition, for lesson content design, the researcher used methods from Hutinshen & Wetzler, Ahmed Rushdi To'eima and Toba, which touched on objectives, content, teaching methodology and evaluation. The research has concluded Arabic is prominent in our tourism industries.

Keywords : *Tourism, Arabic Language, Student- centered learning*

Category : Social Sciences and Humanities

1194 LEGAL DISPUTES IN DETERMINING THE RELIGION OF THE CHILD WHEN ONE PARENT CONVERTS TO ISLAM UNDER MALAYSIAN LAW#

Najibah Mohd Zin, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*
Roslina Che Soh, *Islamic Law, Ahmad Ibrahim Kulliyah of Laws*
Nora Abdul Hak, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Najibah Mohd Zin, Legal Practice, Ahmad Ibrahim Kulliyah of Laws

This work examines the child's right to determine his/her religious status when one parents converts to Islam under Malaysian law. Determination as to the religious status of a child as well as custodial right are very much in dispute between these parents as their marriage has to come to an end due to religious sanction and lack of tolerance between them to come to a settlement. As opposed to custodial right, the issue is whether the welfare principle is still relevant in determining the religious status of a child. The current practice suggests that the father is the central focus in deciding the child's religion under the Federal Constitution as well as Shariah law though lately there were arguments to allow both parents to have such power. Therefore this study will examine legal provisions pertaining to child's right to religion under Malaysian law and explore an equal position under the Shariah law.

Keywords : *Unilateral Conversion , minor , religious status, jurisdiction, conflict of law*

Category : Social Sciences and Humanities

1195 STUDENT CENTERED MODULE DEVELOPMENT AND SELF-ENHANCEMENT PROGRAMME: A CASE STUDY AT THE INSTITUTE OF EDUCATION, IIUM#

NOR AZIAN MD NOOR, *PSYCHOLOGY AND COUNSELING, Institute of Education*

Exhibitor : NOR AZIAN MD NOOR, PSYCHOLOGY AND COUNSELING, Institute of Education

This is a research on the production of training modules for self-enhancement in learning by postgraduate students at the Institute of Education (INSTED). The students are from two classes, studying for the courses, Human Cognition and Psychology of Motivation. The modules are developed under the guidance of their lecturer, as part of the requirement for their courses. The post graduate students are required to research theoretical framework on specific topics and then think and create modules consisting of practical hands on activities derived from the theories. The topic and content of the modules are related to the course outline but geared towards application in self-enhancement in learning such as increasing self-esteem, paying attention in learning, self-regulation, managing stress, learning styles, perception, problem solving, decision making and so on. Twelve postgraduate students participated in the development and production of the module. The modules are then tested on the bachelor degree students, specifically the first year, first semester students at INSTED, in a one day programme on self-enhancement and learning. The postgraduate students became the trainers or facilitators of the one day self-enhancement programme and the bachelor degree students became the participants. This is an example of a student centered learning that benefits both the trainers as service providers and the participants as the receiver of knowledge. The programme is an opportunity for the post graduate students to try out their ideas on their juniors who, being new to INSTED and to university life, needs exposure to self-enhancement in learning as they begin their first year and first semester at INSTED. The programme was evaluated based on the feedback from the participants. Simple descriptive statistic was used to analyse the effectiveness of the module content and delivery by the trainers. The results indicate a good to excellent rating for both the content and delivery of the modules.

Keywords : *Student-centered; self-enhancement programme; module development, human cognition; psychology of motivation*

Category : Social Sciences and Humanities

1203 REGULATING THE ISLAMIC CAPITAL MARKETS: THE GOVERNING LAW CLAUSE IN SUKUK TRANSACTIONS#

Umar Oseni, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
M. Kabir Hassan, *Economics and Finance, University of New Orleans, Louisiana, USA,*

Exhibitor : Umar Oseni, Civil Law, Ahmad Ibrahim Kulliyah of Laws

The crystallization of Islamic capital markets in the last decade has led to increased acceptance of Islamic finance products in the global market. However, a fundamental question that lies on the intersection of law and Islamic capital market that has far-reaching impact on market practices is the extent to which the governing law clause in a typical Sukuk prospectus protects the interest of the parties and meets the ends of justice. An analogous clause within the governing law provision is the dispute resolution clause, which either makes or mars the whole transaction depending on how it is structured. This research argues that as part of Islamic finance documentation involved in the process of structuring a Sukuk transaction, one important thing the parties must get right from the beginning is the governing law clause. With the increasing provision of English law as the governing law, a question that readily comes to one's mind is whether it is possible to have an alternative governing law while retaining the choice of jurisdiction clause. In order to create a regulatory environment that is conducive to the prevailing trends in the modern world, this study critically ploughs through the governing law clauses of 10 selected Sukuk prospectuses and makes interesting findings regarding the attitude of draftsmen and their clients. Since there are regional and international arbitral institutions set up exclusively for Islamic finance disputes, it may be more appropriate to resolve any dispute arising from a Sukuk transaction under Sharī'ah-compliant rules and supervised by experts in Islamic law. The interviews conducted for this research with 10 prominent Sharī'ah scholars who have been involved in the certification of Sukuk structures proves this hypothesis and the qualitative data are consistent with it, albeit with some dissenting views.

Keywords : *Governing law, Sukuk, dispute resolution, Islamic finance, litigation*

Category : Social Sciences and Humanities

1204 SHARĪ'AH COURT-ANNEXED ADR: DISPUTE MANAGEMENT IN ISLAMIC PROPERTY CASES IN MALAYSIA#

Umar Oseni, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Nor Razinah Mohd Zain, *Postgraduate Unit, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Umar Oseni, Civil Law, Ahmad Ibrahim Kulliyah of Laws

One of the major institutions in state governance is the administration of justice system, which generally promotes access to justice as the last hope for the less privileged. To this end, this research attempts to reconstruct the need to build on existing initiatives in the administration of justice system of the Sharī'ah judiciary in Malaysia with special reference to disputes involving waqf (charitable endowment), hibah (gift) and wasiyyah (bequest) issues. There has been much focus on matrimonial cases in the Sharī'ah Court in Malaysia while less attention has been paid to emerging trends in Islamic property law, which statutorily fall under the jurisdiction of the court. Though these cases are of special status when considering their impact on the larger society, the Sharī'ah Court is often seized with the jurisdiction to hear and determine the rights and liabilities of parties in respect of them. It is therefore argued that rather than waiting for emerging issues such as cases involving waqf survey to emerge before coming with up with sustainable mechanisms, which are fundamentally Sharī'ah-based, it is always more fitting to be proactive in a fast-growing economy such as Malaysia.

Keywords : *dispute resolution, Shariah Court, Malaysia, Islamic property cases, ADR*

Category : Social Sciences and Humanities

1205 MODEL OF EDUCATIONAL STRATEGIC MANAGEMENT FROM ISLAMIC PERSPECTIVES#

Mohamad Johdi Salleh, *Philosophy & Educational Leadership, Institute of Education*
Hairuddin Mohd Ali, *Philosophy & Educational Leadership, Institute of Education*

Exhibitor : Mohamad Johdi Salleh, Philosophy & Educational Leadership, Institute of Education

The fundamental sources of Islamic management are the Al-Quran as revelation from Allah SWT, were effectively practiced by the Prophet SAW referred as the Sunnah, and, successfully implemented by prominent Muslim scholars. These had brought to the enlightenment of the Golden Era of Islamic Civilization pioneered and generated by the sahabah, mujahid, mursyid, mujtahid, and, mujaddid with holistic and comprehensive strategic management principles. In fact, the Islamic management practice emphasizes on the appropriate niat or intention, implementation comply with the syariah, and, natijah or product beneficial to all mankind and living things in the universe. The western scholars had formulated firm principles in the role of management namely planning, leading, organizing, and, controlling. Indeed, the amalgamation of Islamic and Western discourse had great significant to the formulation of strategic management principles and practices. The merger had inspired the formulation of “Model of Educational Strategic Management from Islamic Perspectives”. The essential dimensions of this Model are ‘Strategic Planning’, ‘Strategic Leading’, ‘Strategic Organising’, and, ‘Strategic Controlling’ towards significant ‘Natijah’ or quality outcome. This holistic and balanced features are illustrated in the Figure below.

Keywords : *Model - Educational Strategic Management - Islamic Perspectives*

Category : Social Sciences and Humanities

1206 ISLAMIC MODEL OF EFFECTIVE TEACHING AND LEARNING OF HISTORY & CIVILIZATION#

Mohamad Johdi Salleh, *Philosophy & Educational Leadership, Institute of Education*

Exhibitor : Mohamad Johdi Salleh, Philosophy & Educational Leadership, Institute of Education

The study discovered that the Islamic Model of Teaching and Learning of History & Civilisation contain many usefulness such as to develop knowledge, spark or stimulate interest, motivation, initiate investigation, analyse sources, prove of evident, gain social experience, communication and socialization skills, build teacher–student relation, active teaching–learning approaches, and, achieve the objectives of Islamic philosophy of education and history curriculum. The effective used of this Model can enhance student interest skills, intelligence, and, creativity in developing the ummah and country towards the advancement of “first class mentality” of Muslim students with clear vision, high spirit of patriotism, resilient self-esteem, endurance values, and, faithful-confidence.

Keywords : *Model - Effective Teaching & Learning - History & Civilization*

Category : Social Sciences and Humanities

1211 EVALUATION OF GREEN ROOF SYSTEM FOR GREEN ROOF PROJECTS IN MALAYSIA#

Nurhayati Abdul Malek, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*

Muhammad Ashraf Fauzi, *Engineering, Center for Foundation Studies*

Jamilah Othman, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Nurhayati Abdul Malek, Landscape Architecture, Kulliyah of Architecture & Environmental Design

This research is interested to identify and review the current vegetation suitability for green roof developments in Malaysia. Current research on green roofs developments in Malaysia only look into the aspect of usefulness, effectiveness and comfort in term of thermal as well as its visual and cultural significance to a green building projects or developments, none on the suitable vegetation or plants for roof top planting with minimal soil depth. This is why this research is important as it will contribute to the current knowledge on the plants suitability and varieties that can be used by the Malaysian Landscape Architects designers in their designs that suits our very own climate and soil conditions. Today, roof top landscape design is the trend and requirement for any green building developments in Malaysia. Green roof design in a way help to reduced water runoff, improve storm water management, reduce noise and air pollution, as well as city's carbon footprint in today's busy and over-crowding city environments. However, it is an issue to the Landscape Architects or Landscape Designers to proposed plants or vegetation that suits the roof environment as well as Malaysia's climate especially above ground condition. The plants need to be able to sustain not only the climate but also minimal soil depth as well as its implication towards rain water harvesting for water runoff as well as storm water management issues at the above ground level for the needs in obtaining GBI standards. Hence, this research is vital towards the current needs to help bring economy, developments and communities together towards improving the quality of life and the environments among Malaysian as mentioned in the National Vision Policy 2020.

Keywords : *Green Roof System, Green building Index, GBI Standards*

Category : Social Sciences and Humanities

**1215 STUDENT WITH DISABILITIES IN BUILT ENVIRONMENT IN HIGHER EDUCATION
INSTITUTION#**

Izawati Tukiman, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Mohd Ramzi Mohd Hussain, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Nurbazliah Zaidin, *Kulliyah of Architecture & Environmental Design*
Fitrynadia Mohd Shahli, *Kulliyah of Architecture & Environmental Design*

Exhibitor : Izawati Tukiman, Landscape Architecture, Kulliyah of Architecture & Environmental Design

Preliminary studies identify challenges in providing an accessible built environment in educational institution. Higher education is a passport to have a better life, unfortunately many students with disabilities do not enjoy easy access to enter higher educational level. This poster analyzes the issues in higher education related to students with disabilities in three categories which include preparation, transition and during their study in higher education level. The parameters involved in the review include type of disabilities, their problems and needs. Data collection use qualitative approach which focussing on barriers faced by PwDs in higher educational level. The findings provide a platform for related organization to identify the needs of student with disabilities in educational institution for their support facilities and services in order to help them survive in higher education level.

Keywords : *education, people with disabilities, higher education institution*

Category : Social Sciences and Humanities

1216

RESIDENTIAL LANDSCAPE DESIGN FOR HOUSING AREA#

Mohd Ramzi Mohd Hussain, *Department of Landscape Architecture, Kulliyah of Architecture & Environmental Design*

Izawati Tukiman, *Department of Landscape Architecture, Kulliyah of Architecture & Environmental Design*

Fitrynadia Mohd Shahli, ,

Nurbazliah Zaidin, ,

Exhibitor : Mohd Ramzi Mohd Hussain, Department of Landscape Architecture, Kulliyah of Architecture & Environmental Design

This research is intent to evaluate the important of landscape design in residential area in Klang Valley Area. It is proved that the proper landscape planning and design with the sustainable concept and approach helps to increase the prices of the residential properties. Peoples now look towards the better environment as a package for their responsive living environment. The study employ case studies method eliciting data which includes i) a questionnaire survey; ii) a semi-structured interview; and iii) an observation. Case studies approach has been selected in order to get in depth of study required to examine the important of residential landscape design which affect the house prices and values. This empirical study will be based on the findings of case studies which will be conducted on several residential areas in Klang Valley. This research evaluates the important of landscape design elements implemented as a factor the contributes to the determintaion aspects to provide a condusive living environment, thus will attract prospects buyers.

Keywords : *residential landscape; landscape design; housing area*

Category : Social Sciences and Humanities

1217 LANDSCAPE DESIGN AS AN ADDED VALUE TO REAL ESTATE DEVELOPMENT IN KLANG VALLEY#

Izawati Tukiman, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Mohd Ramzi Mohd Hussain, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Nurbazliah Zaidin, *Kulliyah of Architecture & Environmental Design*
Fitrynadia Mohd Shahli, *Kulliyah of Architecture & Environmental Design*

Exhibitor : Izawati Tukiman, Landscape Architecture, Kulliyah of Architecture & Environmental Design

This research is intent to study the important of landscape design in the planning and designing the residential property in Klang Valley. Landscape design is the art of developing property. There are four ways in which the landscape is valuable; aesthetic, economically, functionally and environmentally. A well defined landscape space can create a quality of environment and provide a conducive living space in residential. This landscape design might be able to become a factor influencing the price and value of the property. Method of data collection used in this research includes i) a questionnaire survey; ii) a semi-structured interview; and iii) an observation. Case studies approach has been selected in order to get in depth of study required to examine the important of landscape design in residential development. Therefore, the research will examine how the landscape design elements play an important role added a value to the property and provide a conducive living environment for residential development.

Keywords : *landscape design, housing, real estate value*

Category : Social Sciences and Humanities

1218 CAMPUS LANDSCAPE ENVIRONMENT FOR STUDENT WITH DISABILITIES (SWD): A CASE OF INTERNATIONAL ISLAMIC UNIVERSITY (IIUM), GOMBAK CAMPUS#

Mohd Ramzi Mohd Hussain, *Department of Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Izawati Tukiman, *Department of Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Fitrynadia Mohd Shahli, ,
Nurbazliah Zaidin, ,

Exhibitor : Mohd Ramzi Mohd Hussain, Department of Landscape Architecture, Kulliyah of Architecture & Environmental Design

The purpose of this paper is to identify to what extent the application of universal design for people with disabilities in IIUM outdoor campus facilities. From Islamic perspective, providing good and safe living environment inside and outside for the occupants especially people with disabilities (PwDs) of the university is part of fardu kifayah. The relationship between man and the environment has been recognized as the amanah for man to carry out his duty as caliph on earth. The study provides a platform to improve the outdoor campus facilities. This in line with the Action Plan by Ministry of Higher Education (MOHE) which is accessibility and support system for teaching and learning and enhancement of quality of life. Based on findings of earlier access audit to surrounding facilities in IIUM such as academic blocks, mosque, sport complex and Mahallah, there are problems facing by PwDs in IIUM for staffs, students and visitor with disabilities in using outdoor campus facilities of IIUM. Method of data collection used in this research includes both qualitative and quantitative based on access audit, focus group discussion and observation. The expected outcome for this study contributes to design guidelines for outdoor campus facilities, thus, allowing the management of IIUM properties to upgrade outdoor facilities in IIUM as a whole.

Keywords : *campus environment; landscape design; student with disabilities (SWD), universal design; quality of life*

Category : Social Sciences and Humanities

1223 **FOREIGN DIRECT INVESTMENT, EXPORTS, EDUCATION, AND GROWTH IN MALAYSIA#**

Mohammed Yusoff, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Mohammed Yusoff, Economics, Kulliyah of Economics and Management Sciences

Malaysia is one of the developing nations that has been giving emphasis on education, FDI, and exports to promote economic growth. It was realized that the future of Malaysia's economic development depends largely on the manufacturing and services sectors. As these two sectors are more information, skilled, and knowledge based, Malaysia has developed a strategic planning in education to supply the required skilled labor force and that the labor market should be more efficient in transmitting information to reduce skill mismatches, and improve labor mobility. Malaysia is committed to improve the level of education as it recognizes that education is an important ingredient in development. The new economic growth theory postulates that the main engine of growth is the accumulation of human capital or knowledge. The development of human capital can be achieved through a strong foundation of an education system. Education brings direct benefits to the individual worker and has positive spill-over effects for society in terms of increased productivity, higher rates of innovation and invention, and adaptation of new technologies. The objectives of this study are: to determine the effects of FDI, education, and exports on the growth of Malaysian economy and to suggest policy actions to achieve sustainable economic growth. The estimated ADF and PP statistics against the corresponding critical values suggest that the null hypothesis of unit root of the variables in level is accepted at the 5% level of significance. But the ADF and PP tests using the first difference of the variables indicate that these test-statistics are individually significant at the 1% level suggesting that the variables are stationary on first difference, that is the series are integrated of order one. The VECM Granger causality test suggests that exports, FDI, and education expenditure cause real economic growth where they are significant at 1 percent level and the causality is unidirectional, except the case of FDI where feedback occurs when it is found that income, exports, and public education spending also cause FDI. The results of Toda-Yamamoto causality tests are similar to the results of Granger causality tests. Specifically, exports, FDI and education spending by the government cause real income per capita in the long-run where they are significant at 1 percent level with no feedbacks. These results imply that the export and financial liberalization and effective education planning strategy have had significantly contributed to the development of Malaysian economy.

Keywords : FDI, exports, education spending, growth, causality

Category : Social Sciences and Humanities

**1230 EXPLORING ESL LEARNERS' ATTITUDES TOWARDS PRONUNCIATION
LEARNING AND ENGLISH ACCENTS#**

Zahariah Pilus, English Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Exhibitor : Zahariah Pilus, English Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Among the issues that have been raised in relation to the teaching and learning of English pronunciation are the goals, norms, and models for pronunciation. This paper discusses these three issues based on a study on the attitudes of 34 ESL learners towards pronunciation learning and British, American and Malaysian English accents. The study found that the learners placed great emphasis on pronunciation and had the desire to improve their English pronunciation, if possible, close to native-like. The learners also seemed to show a better preference for native accents particularly British English but despite their admiration of the native accent, the learners were more comfortable to be identified by their own Malaysian accent. Considering the learners' aspiration in learning pronunciation and the lack of a standard non-native spoken English variety in Malaysia, the paper concludes that choosing a native accent as a model for pronunciation learning seems to be a more viable option at the moment. The paper, however, emphasises the need for the native accent to be regarded merely as a model; as a source of reference for the learners and not as a norm that should be rigidly adhered to. In this way, learners are provided with the opportunities to attain a native-like accent if they have the desire and ability to do so while at the same time, given the freedom to approximate accordingly.

Keywords : *Second language pronunciation* Pronunciation learning* English accents* Foreign accents* World Englishes*

Category : Social Sciences and Humanities

1234 PUBLIC PERCEPTION TOWARD AND IDENTIFICATION OF PENGKID: A CASE STUDY OF PEOPLE IN NEGERI SEMBILAN#

Mariam Adawiah Dzulkifli, *Psychology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Rohaiza Rokis, *Sociology & Antropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
Adibah Abdul Rahim, *Department of Usuluddin and Comparative Religion, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Mariam Adawiah Dzulkifli, Psychology, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Pengkid is a term used to refer to a female, whose physical and behavioural appearances resemble those of a male. Her sexual orientation is also towards other females; in other words, preferring same-sex partners. This group of people (pengkid) is becoming more visible in society and lately they have been associated with a number of social concerns such as abduction, drugs, and sexually related problems. With the awareness that the problems associated with pengkid are now becoming a serious social disease, an empirical study is needed to understand pengkid and the public's perception towards them. This study was conducted to know the perception of the public towards pengkid, and to come up with indicators for the purpose of identifying pengkid. A combination of quantitative and qualitative research methods was used. A survey involving a total of 1,298 samples represented people in three main districts in Negeri Sembilan i.e. Seremban, Port Dickson and Rembau. In addition, structured interviews were also conducted with several target groups or subject matter experts such as religious figures, academicians, lawyers, medical doctors, social workers as well as pengkid themselves. The main finding from the research indicates that the public's level of awareness of the pengkid problem is high. In addition, the research is also able to identify physical and behavioural indicators of pengkid.

Keywords : *pengkid, social problem, physical indicators, behavioral indicators,*

Category : Social Sciences and Humanities

1235 **“BEST” (BUSINESS ENTITIES SELECTION TESTKIT); DEVELOPING A SOFTWARE TO
SELECT APPROPRIATE BUSINESS ENTITIES FOR SMES#**

Zuhairah Ariff Abd Ghadas, Civil Law, Ahmad Ibrahim Kulliyah of Laws

Zarina Abd Hamid, Economics, Ahmad Ibrahim Kulliyah of Laws

Mior Nasir Mior Nazri, Information Technology, Kulliyah of Information & Communication Technology

Exhibitor : Zuhairah Ariff Abd Ghadas, Civil Law, Ahmad Ibrahim Kulliyah of Laws

Business entity is a structure which is recognized by the law as a medium to carry on trade. Common business entities which are globally practiced are sole proprietorship, partnerships and companies. In Malaysia, these three entities are the only business entities which are offered to the public and with the latest addition of a new business entity known as PLT (Perkongsian Liabiliti Terhad) which shall be available soon due to enactment of the PLT Act 2012 in February 2012. It is observed that most business owner in Malaysia, for the micro and small businesses registered their business at the Companies Commission of Malaysia (CCM) without proper consultation or advice and understanding of respective business entities which could result in them opting for a wrong structure. For example, a person with small business who opted for a Sdn.Bhd (Private Limited company) structure would face difficulties to adhere the requirements of the Companies Act 1965 such as the submission of annual audited and meetings records, the appointment of company secretary and auditor etc. Partners in a firm who intended to convert to a corporate structure may also be open to these difficulties as the existing structure of a partnership is totally different from a corporate structure. This paper proposed a software which is designed for SMEs to use in selecting the most appropriate business entities for their businesses prior to registering their businesses with the CCM. The questionnaires developed for the system are based on main characteristics of business entities and two characteristics of SMEs definition, i.e. the capital structure and no of employee and also other main aspects of business structure namely types of business, ownership structure and business literacy of the owner.

Keywords : *SMEs, Business Entity, Risk Management*

Category : Social Sciences and Humanities

**1238 A METHODOLOGICAL QUEST FOR ACCOUNTABILITY CONCEPTUAL FRAMEWORK:
'MIDDLE RANGE THINKING' APPROACH#**

Ahmad Zamri Osman, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Ahmad Zamri Osman, Accounting, Kulliyah of Economics and Management Sciences

Searching for conceptual or/and theoretical construct to explain social phenomenon can be a challenge for researcher. Generally the role of theoretical construct may range from 'completely ignored' to 'systematically adhered to' (see Laughlin, 1995) - characterising the qualitative-interpretive and quantitative-positivist approach respectively. In quantitative research, it seems that the findings generally serve to confirm or/and falsify the existing theory – in which case developed in the form of hypothesis. Meanwhile, in qualitative research paradigm, a cogent existing theoretical construct may not be available or/and insufficient to explain the findings. Middle range thinking (MRT) is an approach towards understanding social phenomenon in which there is no prior theoretical construct. MRT uses a skeletal understanding to guide an empirical study. The empirical finding is not explained according to a strict theoretical framework (as in positivism) neither is it interpreted with total freedom without any reference to some framework (as in ethnomethodology). An engagement with accountability literature presents an example towards understanding how MRT evolves from a very skeletal understanding to a conceptual framework able to make sense of the phenomenon in hand.

Keywords : *methodology, accountability*

Category : Social Sciences and Humanities

1242 THE CORRELATION BETWEEN URBAN TEMPERATURE AND GREEN SPACES IN URBAN AREA USING GIS AND REMOTE SENSING TECHNIQUES#

Norzailawati Mohd Noor, *Urban and Reagional Planning, Kulliyah of Architecture & Environmental Design*
Nurul Hidayah Yahya, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Norzailawati Mohd Noor, Urban and Reagional Planning, Kulliyah of Architecture & Environmental Design

This research attempts to study urban temperature and the urban green spaces in both area of metropolitan and suburban area located in Kuala Lumpur and Batu Pahat, Johor in determining the correlation between urban temperature and urban green space. Three sets of Landsat TM images which are Kuala Lumpur 2004 and 2009 and Batu Pahat 2010 have been processed using ENVI and ArcGIS in classifying the land cover and mapping for the study. Three types of processing were done, i.e. extraction of land surface temperature, extraction of NDVI and land cover classification. The finding shows that there was a strong correlation between urban temperature and green spaces in the different urban hierarchy. It also can be deduced that green coverage and urban heat island is inversely proportional, i.e. the greater the green coverage area, the lower is the intensity of heat island. The correlation also varies according to the urban hierarchy. The integration of remote sensing and GIS was found to be effective in monitoring and analyzing the changes in land cover and to evaluate its effect on surface temperature.

Keywords : *Urban green space, GIS, Remote Sensing, Built-up area, Urban planning*

Category : Social Sciences and Humanities

1243 DETERMINATION OF SPATIAL FACTOR IN MEASURING URBAN SPRAWL IN KUANTAN USING REMOTE SENSING AND GIS#

Norzailawati Mohd Noor, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Rosni Nur Aulia, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Khin Cho Myint Zainab, *urban and regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Norzailawati Mohd Noor, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Characterizing urban sprawl using spatial measures requires a concise definition of what constitutes sprawling urban spatial patterns. This research tends to study the measurement of defining sprawl by using spatial factors such as highway strip index, land use segregation and leapfrog development index through remote sensing and GIS approach. The IKONOS pan-sharpened and SPOT-5 with 1 and 2.5 meter resolution were used and combined with GIS database to analyze the geospatial indicators using these index. In this research, Kuantan city has been selected as a study area to examine the urban sprawl development based on land use pattern for year 2012. The findings shows Kuantan has identified as non-sprawling cities with result from characterization in highway strip, land use segregation and leapfrog development that has been tested. The result shows that the gap between sprawl and non-sprawling was very high which prove that urban sprawl measure by highway strip development is not a serious issue in Kuantan city. However, by measuring sprawl based on land use segregation and leap frog development, the result came out differently where the sprawl gap is lower than highway strip development where this matter need to be address carefully so sprawl growth can be manage efficiently by responsible authorities. It is anticipated this research will provide a new direction in sprawl nationally that address finding of sprawl at the atomic level and present a robust analytical approach for characterizing urban development in city scale at once promoting a city via GIS & Remote Sensing technology respectively.

Keywords : *Sprawl Measurement, Highway Strip Development, Land Use Segregation, Leapfrog Development, Geospatial Indices, Remote Sensing, GIS, and Urban Sprawl*

Category : Social Sciences and Humanities

1244 **LIQUIDITY, INITIAL PUBLIC OFFERING (IPO) LONG-TERM RETURN AND
GOVERNMENT OWNERSHIP: EVIDENCE FROM BURSA MALAYSIA IPO STOCKS#**

Roslily Ramlee, *Department of Finance, Kulliyah of Economics and Management Sciences*

Exhibitor : Roslily Ramlee, Department of Finance, Kulliyah of Economics and Management Sciences

Prior studies testing the relationship between Initial public offering (IPO) returns and liquidity are mostly for the developed markets. The disperse ownership in the corporation and more well informed investors in the developed markets support their findings. On the other hand, the nature and behavior of emerging stock markets such as Malaysia differ from the developed markets. The concentrated ownership in the corporations partly due to government ownership to a certain extent could provide different views on the relationship between liquidity and return. Using 283 samples of IPO stocks listed on Main Board and Second Board of Bursa Malaysia from 1998 to 2008, the study examines the relationship between liquidity and IPO long-term return and the moderating effect of government shareholdings on the relationship between the two variables. The results showed one proxy of liquidity that is average monthly turnover is able to explain the market-adjusted long-term return of IPO stocks when equally weighted returns are calculated. Further, the government shareholdings in the IPO stocks positively moderate the relation between liquidity and long-term return.

Keywords : *Initial public offering, long-term return, liquidity, government ownership*

Category : Social Sciences and Humanities

1245 SUSTAINING THE RIGHT TO PRIVACY IN E-COMMERCE ENVIRONMENT: THE LEGAL APPROACH#

Duryana Mohamed, *Legal Practice Department, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Duryana Mohamed, Legal Practice, Ahmad Ibrahim Kulliyah of Laws

The right to privacy is a fundamental human right as declared in Article 12 of the Universal Declaration of Human Rights and Article 17 of the International Covenant on Civil and Political Rights. Some countries recognise this right as constitutional right of individuals. The importance of this right is also underlined with the enactment of legislation by most countries. In Malaysia, the privacy protection is available under the Personal Data Protection Act passed in 2010. This Act seeks to regulate the processing of personal data of individuals involved in commercial transactions by data users so as to provide protection to the individual's personal data, thereby safeguarding the interests of such individual. Since this privacy right is important in e-commerce, this paper will examine the extent of privacy protection available under the existing law and whether such law and other relevant laws provide adequate protection to the personal data when dealing with online transaction. The aim of this paper is to establish justice to the online consumers and to provide information that their right is protected under the law. (178 words)

Keywords : *E-Commerce, Personal Data, Privacy Right, the Laws*

Category : Social Sciences and Humanities

1246 THE ACCEPTANCE OF ISLAMIC REALITY SHOWS BY MALAY COMMUNITY IN MALAYSIA#

Saadah Wok, *Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Rizalawati Ismail, *Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Aini Maznina Abdul Manaf, *Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Saadah Wok, *Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

This research tests multiple theories: Selective Exposure Theory (Klapper, 1960), Third-Person Effect Theory (Davison, 1983), Uses and Gratifications Theory (Blumler and Katz, 1974), Cultivation Theory (Gerbner, 1986), Hierarchy-of-Effect-Model (Rice & Atkin, 1989), Traits Leadership Theory (Stogdill, 1974), Role Theory (Mead, Linton, & Moreno, 1934), Information Processing Theory (McGuire, 1968), Social Learning Theory (Bandura, 1971), Magic Bullet Theory (DeFluer, 1958), and Theory of Media Literacy (Potter, 2004) on TV shows in general and TV Islamic Reality Shows in particular towards Malay community in Malaysia. The research uses mixed research designs, involving both quantitative and qualitative research designs. The quantitative research methods used were quasi-experimental method, content analysis, and survey method, using questionnaire as the tool for data collection. The qualitative research methods, on the other hand, used in-depth interview and focus group discussion (FGD). Depending on the methods used, different objectives were postulated. Comprehensive questionnaire were used to tap not only the Islamic Reality Shows per se but also other information such as TV viewing habits among Malay community, awareness of TV reality shows in general, and other related issues on Islamic Reality Shows, such as, knowledge, perception, attitude, reasons, satisfaction, involvement, and impact from watching Islamic Reality Shows. The findings for the quantitative and qualitative research designs are presented simultaneously as they complement each other. For general TV programmes, movies and comedy shows are the most preferred TV programmes, while sports and advertisements are the two least preferred TV programmes by the Malay community. Surprisingly, reality shows are not the most preferred TV programmes. Therefore, Selective Exposure Theory was supported in this study. In addition, Third-Person Effect Theory could be proved by this study as the findings showed that there is likelihood that TV programmes have an influence on others, specifically the Malay community, but not on themselves and their families. The powerful effect of TV influence on the Malay community was used to test the Magic Bullet Theory. For the Cultivation Theory, the study incorporated the heavy viewers of the Islamic Reality Shows on their perception, attitude and behavior. They believe that the Islamic Reality Shows are good and educational in nature. The main reason for watching the Islamic Reality Shows is the Islamic nature and the positive learning experience gained. These findings are used to test the Uses and Gratification Theory and the Learning Theory. The respondents also stated that watching TV Islamic Reality Shows improved their Islamic knowledge and practices – testing Hierarchy-of-Effect Theory and Media Literacy Theory. The Role Theory was tested using the experimental design while Traits Leadership Theory was used for content analysis on Solehah video series and the Information Processing Theory was used to tap audience perception on Imam Muda. This is an important exercise applied in a Research Methods Class to unveil the multiplicity of methodologies. Despite devoid of any grant, three papers were presented at the international conferences and one article was submitted to a journal. The significant contribution of this research is its applied nature and integrative approach.

Keywords : *Islamic Reality Shows, Malay community, mixed methods, multiple theories testing, Malaysia*

Category : Social Sciences and Humanities

1247 AN ANALYSIS ON THE EFFECT OF THE COMPETITION ACT 2010 ON MALAYSIAN SMES.#

Nasarudin Abdul Rahman, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Zuhairah Ariff Abd Ghadas, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Nasarudin Abdul Rahman, Civil Law, Ahmad Ibrahim Kulliyah of Laws

The Competition Act 2010 (CA 2010) focuses on two important aspects, namely, the prohibition on anti-competitive agreement (section 4) and abuse of dominant power (section 10). These two provisions are able to protect the process of competition, thus provide a level playing field between enterprises of large or small scale. By having a competition law in place, all market players may compete freely in the market since it prevents large enterprise from forcing the efficient small firm out of the market by using method other than normal competition. This paper adopted the statutory analysis methodology to analyze how the CA 2010 affects the Malaysian SMEs.

Keywords : *Competition law, SMEs*

Category : Social Sciences and Humanities

1248 CONSUMER PROTECTION IN MALAYSIA: AN ANALYSIS OF 10 YEARS LEGAL DEVELOPMENTS (2000-2010)#

naemah amin, *Civil law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : naemah amin, Civil Law, Ahmad Ibrahim Kulliyah of Laws

Legal protection is a major component of consumer protection and perhaps the most important compared to self-protection by consumers and self-regulation by traders. There has been major legislative reform and development in the area of consumer protection in Malaysia for the past 10 years. The Consumer Protection Act 1999 which came into being at the end of 1999 was the milestone for the development. Subsequently, the National Consumer Policy was introduced in 2002 with the aims, inter alia to strengthen the legal protection for consumers. This may be done through the introduction of new laws and amendments to the existing laws. This study surveys the major developments of consumer protection law since the introduction of the Consumer Protection Act in 1999.

Keywords : *consumer protection, legal development*

Category : Social Sciences and Humanities

1254 COMBATING THE THREATS OF CYBERCRIMES IN MALAYSIA: THE EFFORTS, THE CYBERLAWS AND THE TRADITIONAL LAWS#

Duryana Mohamed, *Legal Practice Department, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Duryana Mohamed, Legal Practice, Ahmad Ibrahim Kulliyah of Laws

Cyber-crimes are increasing in Malaysia. According to a report the crimes jumped by 88 percent in 2011 with 15,218 cases compared with 8,090 in 2010. This report has caused a lot of concern from the Government and the public. At a glance, these crimes are like ‘diseases’ spreading throughout the country and causing damage to people, the economy and the country. Although various efforts have been taken and some are still ongoing, total prevention of cybercrime is very difficult. Combating the threat is very challenging since Malaysia is still lacking in many of the tools required including manpower and technology. But the efforts will continue. This paper discusses some of the efforts taken by the Government and other organisations to deal with these problems followed by an analysis on the application of cyberlaws and how these measures work together with the traditional law in tackling cyber-crime cases. (148 words)

Keywords : *Cyber-crime, cyberlaw, cybercrime control measures, traditional law*

Category : Social Sciences and Humanities

1255

TAKING THE TRAIN - AND THE STRAIN#

Nor Diana Mohd Mahudin, *Psychology, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Nor Diana Mohd Mahudin, Psychology, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Previous studies on train overcrowding are limited to examining direct effects of passenger density rather than spillover effects. The purpose of this study is to investigate the possible effects of crowding on passengers' experience of stress and how such effects might spill-over to their overall well-being. Quantitative data gathered via a cross-sectional field survey of 525 peak time commuters were analysed using structural equation modelling. The results indicate that passengers perceived crowding in terms of three components: (1) evaluation of the psychosocial aspects of the crowded situation, (2) evaluation of the ambient environment, and (3) affective reactions to the crowded situation. These components together with passenger density can positively predict the experience of stress, which can then spill over to the work and personal lives of commuters. The implications of these findings could lend support for future crowding research and management.

Keywords : *Rail passenger crowding, stress, spillover effects*

Category : Social Sciences and Humanities

1268 HUMAN NATURE-FOCUSED LEADERSHIP COACHING: A REFLECTION FROM ISLAMIC PERSPECTIVE#

ISRAR AHMAD KHAN, *Qur'an and Sunnah Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : *ISRAR AHMAD KHAN, Qur'an and Sunnah Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

The success of organization is very much dependent upon the leadership style of those holding leadership positions. It is claimed that leadership coaching through various well-defined and widely-known methods has enhanced working capability of leaders in organizations the world over. One of the globally-acknowledged methods of leadership coaching is solution-focused coaching. Its chief purpose is to help leaders identify their inherent capabilities to positively contribute to the development of human capital. It is yet to be proved beyond any doubt the efficacy of the widely-practiced methods of leadership coaching. It is hereby proposed that leadership coaching based on a method focusing on human nature in comprehensive manner is expected to be much more effective than the conventional methods of leadership coaching. Human nature-focused coaching has its basis in Islamic sources, the Qur'an and Sunnah.

Keywords : *Human Nature, Leadership Coaching, Islamic Perspective, Rational Approach, Psychological Approach*

Category : Social Sciences and Humanities

1270 RECOVERY OF POSSESSION OF PROPERTY UNDER THE SPECIFIC RELIEF ACT 1950#

Sharifah Zubaidah Syed Abdul Kader, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Zuraidah Hj. Ali, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Nor Asiah Mohamed, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Sharifah Zubaidah Syed Abdul Kader, Civil Law, Ahmad Ibrahim Kulliyah of Laws

This research is part of a research carried out under a grant from the Law Reform Committee of the Prime Minister's Department granted in 2011 entitled : "The Specific Relief Act 1950: Proposals for Reform". The research problem was that several provisions in the Specific Relief Act 1950 are outdated and the statute requires careful review in order to enable effective and appropriate dispensation of justice by the courts in line with new substantive changes in law. Sections 7 and 8 of the Specific Relief Act 1956 provide for the remedy of recovering possession of immovable property while sections 9 and 10 deal with the same remedy in respect of movable property. The research identified two findings. Firstly, section 7 still allows the remedy of 'self-help' to a land owner, outside of the landlord-tenant relationship. Secondly, in respect of recovering movable property, section 9 does not set out the prerequisite of firstly making a demand for the item and that there must be a refusal on the part of the person detaining the item to return it. We propose that Section 7 be amended to obviate the common-law remedy of 'self-help' which is presently taken to be 'forced eviction' under international human rights law. This is in line with the intention of Parliament when it amended section 7(2) in 1992 to remove the possibility of a landlord evicting an unlawful occupier on his property except through a court order. It is also in line with section 341 of the National Land Code 1965 which mentions that adverse possession shall not bar the right of the registered proprietor or any person or body having any title or interest in the land from bringing a case to recover possession of the immovable property, thus, contemplating that recovery of the property should be by way of court proceedings and not otherwise. It is proposed that all the provisions of section 7 should be deleted with a view to replace them with the following, which would become the new section 7: "A person entitled to the possession of specific immovable property, if he chooses to recover possession thereof, shall only recover it in the manner prescribed by the law relating to civil procedure." Section 9 ought to be amended to expressly include the pre-requisite of the applicant to first make a demand for the movable property before commencing action by inserting a proviso under section 9. It is proposed that the new section 9 should read as follows: "A person entitled to the possession of specific movable property may recover the same in the manner prescribed by the law relating to civil procedure. Provided that the person entitled to the possession of specific immovable property has made a demand for the return of such property to him and the party detaining the property has refused to return the said property.

Keywords : *specific relief, recovery of possession of property*

Category : Social Sciences and Humanities

1277 INDEPENDENT NON-EXECUTIVE DIRECTORS' STRATEGIC ROLE - SOME EVIDENCE FROM MALAYSIA#

Hairul Azlan Annuar, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Hairul Azlan Annuar, Accounting, Kulliyah of Economics and Management Sciences

As attached in gthe PDF file below.

Keywords : *Corporate governance, strategic role, independent directors, interview*

Category : Social Sciences and Humanities

1291 FACTORS INFLUENCING PRIVACY DISCLOSURE AMONG ADOLESCENTS IN SOCIAL NETWORK SITES (SNSs)#

Che Noraini Hashim, *education, Institute of Education*
Sharifah Sariah Syed Hassan, *education, Institute of Education*

Exhibitor : Che Noraini Hashim, Dept of Educational Psychology & Counseling, Institute of Education

The recent phenomenon of online social network has changed the way people communicate, think, perceive and behave. Thus, these have influenced their social behavior and perceptions on life as well as personalities. Previous researches on online social network have focused on awareness, information sharing implication for workplace, business application to extending friendship. Yet the concern that educationist needs to address are the ethics or values among the adolescents and the implications towards their everyday practices, and personality development. Thus, this research seeks to investigate the influence of parental involvement, and social factors on frequency of usage, and awareness on the manner that adolescents behave in social network systems (SNSs). A survey was administered to a group of randomly selected first and second year students in three Malaysian universities to validate the hypothesized model using Structural Equation Model (SEM) analysis. The findings have proven empirically that religious values and practices; and social and peers can act as the influential factors towards adolescents behave in the SNSs whenever they want to disclose their private information or to accommodate with the cyber ethics or moral obligations in the cyber world. Parental involvement however is only prevalent in the cyber ethic practices but not to the extent of privacy disclosure. On the other hand both of the cyber ethic practice and privacy disclosure show direct influence towards life satisfaction. In detail, it can be seen that cyber ethics have shown greater strength as compared to privacy disclosure on life satisfaction. The implications of the findings are discussed based on theoretical, economic and research methodological approach.

Keywords : *Communication privacy management (CPM), Social Network Sites (SNSs), privacy disclosure, cyber ethics*

Category : Social Sciences and Humanities

1298 INJUNCTIONS UNDER THE SPECIFIC RELIEF ACT 1950: PROPOSAL FOR REFORM#

Zuraidah Haji Ali, *Department of Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Sharifah Zubaidah Syed Abdul Kader Aljunid, *Department of Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Nor Asiah Mohamed, *Department of Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Zuraidah Haji Ali, Civil Law, Ahmad Ibrahim Kulliyah of Laws

The Specific Relief Act 1950 deals with remedial aspects of law and originates from the Indian Specific Relief Act 1877. The Malaysian Specific Relief Act 1950 has never been reviewed and the research focuses on a detailed examination of the SRA where the relief and remedies under this Act are categorized into 8 parts including preventive relief (injunctions). The objectives of this research is to identify and analyse the existing remedies under the Specific Relief Act by looking at whether there is a need for changes to move in tandem with legal development and practices in Malaysia. The research methodology is through firstly, examining the Indian Specific Relief 1963 in comparison with the repealed Specific Relief Act 1877 (India) as well as the 9th Report of the Law Commission of India of 1958. Secondly, analysis is made to reported cases from Malaysia and thirdly, reference is made to books, articles, parliamentary reports, seminar papers and newspaper articles. The position in Malaysia is further benchmarked with two primary jurisdictions, namely, India and Australia. Two focused workshops were organised with experts to gather information and inputs from available stakeholders. Several outcomes were identified in this research and it can be divided to general findings and also findings on preventive relief. In the present form, we believe that the Illustrations in the Act are instructive and assist in understanding the provisions. Nonetheless there is a need for re-arrangement of particular sections and illustrations to facilitate reading and comprehension on the nature of the relief under the Act. In reviewing provisions on injunctions, a few findings were forwarded. First, there is a need to enlarge the scope of discretion under section 50 so that it does not look different from the provisions relating to discretion under specific performance. Moreover there is a need to include matters on a few basic principles that the court will look into while exercising its discretion. Secondly, the categories of temporary injunctions need to be further classified into interim and interlocutory injunction under section 51(2). There is a need to have one section that deals with matters relating to interlocutory injunction whereby provisions on principles governing the grant of interlocutory injunctions, types and circumstances where an interlocutory injunction will be granted can be explained in these sections. Moreover the chapterization of perpetual injunctions under the Specific Relief Act need to be amended since in some situations it may lead to confusion. As for mandatory injunctions, an additional situation needs to be added such as the court will not grant such injunction except in exceptional and rare cases. Lastly there should be two additional sections to be introduced, namely on prohibitory injunctions and the grant of damages in addition or in substitution to injunction. This research has been presented and submitted to the Prime Minister's Department in lieu of law reform.

Keywords : *specific relief, injunction*

Category : Social Sciences and Humanities

1299 A NIS PERSPECTIVE ON PERFORMANCE MANAGEMENT SYSTEM IN A MALAYSIAN LOCAL GOVERNMENT#

Farhana Hasbolah, ,

Norhayati Mohd Alwi, *Accounting, Kulliyah of Economics and Management Sciences*

Muslim Har Sani Mohamad, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Norhayati Mohd Alwi, Accounting, Kulliyah of Economics and Management Sciences

Purpose – The purpose of this paper is to examine the development and the implementation of Key Performance Indicators (KPIs) in a Malaysian local government. New Institutional Sociology (NIS) is used to understand the various institutional pressures faced by the organization during the process of developing and implementing KPIs. **Design/methodology/approach** – An interpretive case-study strategy was applied. A total of 22 interviews have been conducted with the top management of the particular local government. **Findings** – The findings suggest that the evolution of the Performance Management System (PMS) in the local government was a result of the directives of government through Government Transformation Programme (GTP). Although the local government has adopted the PMS which is based on the developmental administrative circular issued in 2005, the old PMS; Annual Work Target (AWT) is still the dominant PMS. The implementation of KPIs could be considered as the secondary PMS and therefore act as a complementary tools to the existing system. It is clear that the AWT has become shared values within the organization despite its limitations. **Research limitations/implications** – It was found that the implementation of KPIs has yet to be completed and still at the development stage. Therefore, the outcome from the KPIs' implementation could not be studied. **Originality/value** – Taken together this research outcome has contributed to the existing performance management literature especially in a development of PMS within Malaysian context. This research has explored the development and implementation of KPIs in a local government as well as the organizational changes within the organization. The paper also pointed out the changes in behaviors among of the organizational members through the implementation KPIs.

Keywords : *Performance Management System, Key Performance Indicators, Annual Work Target, Institutional Theory, New Institutional Sociology, Public Sector, Malaysia*

Category : Social Sciences and Humanities

1306 MOTIVATION FACTORS AND SATISFACTION LEVEL LIVING IN GATED COMMUNITIES IN KLANG VALLEY#

MANSOR IBRAHIM, *URBAN AND REGIONAL PLANNING, Kulliyah of Architecture & Environmental Design*
Zainab Abdul latiff, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : MANSOR IBRAHIM, Urban and Regional Planning, Kulliyah of Architecture & Environmental Design

Gated community is groups of residents who live in a landed property such as bungalow, semi-detached and terrace with strata title and consistent with the provisions of section 6(1A) of the Strata Titles Act 1985 (Act 318) (TCPD, 2010). In laymen terms, it is referred to a closed housing scheme with perimeter fencing or wall surrounding it with limited and access provided with common property. Gated communities are no longer offer full security to the residents since crime is also being reported in these areas. Therefore, gated house purchasers' rights have been violated where the attainment of satisfaction level has decreased indicating that security is no longer important in achieving highest psychological needs of the buyers. This study explores whether security is still the key factor towards achieving highest satisfaction level living in a gated community as compared to other factors such as prestige, lifestyle, location and investment. Self-administered questionnaires of 170 samples were conducted in 15 gated communities around Klang Valley. Using statistical analysis of univariate and multivariate, seven key hypothesises were tested. Interestingly, apart from the physical settings of the housing areas, privacy was still the ultimate factor that motivate the buyers to reside in the gated community

Keywords : *gated housing, gated community living, buyers' motivation, buyers' satisfaction level*

Category : Social Sciences and Humanities

1308 SPECIFIC PERFORMANCE UNDER THE SPECIFIC RELIEF ACT 1950:PROPOSAL FOR REFORM#

Nor Asiah Mohamad, *Civil Law Department, Ahmad Ibrahim Kulliyah of Laws*
Zuraidah Ali, *Civil Law Department, Ahmad Ibrahim Kulliyah of Laws*
Sharifah Zubaidah Syed Abdul Kadir Aljunid, *Civil Law Department, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Nor Asiah Mohamad, Civil Law, Ahmad Ibrahim Kulliyah of Laws

SPECIFIC PERFORMANCE UNDER SPECIFIC RELIEF ACT 1950: PROPOSAL FOR REFORM Abstract
The Specific Relief (SRA) 1950 deals with the remedial aspects of law and originates from the Indian Specific Relief Act 1877. Acknowledging the fact that SRA 1950 has never been reviewed since its introduction, this study aims to examine the whole provisions relating to specific performance (SP) taking into account the development of the India Specific Relief Act 1877. The main question is to see whether there is a need for changes in the SRA 1950 in order to move in tandem with development in other jurisdictions so also the other aspects of laws. The research methodology is firstly, through examination of the Indian SRA 1963 with reference to Indian SRA 1877 and the 9th Report of the Law of the Law Commission of 1958. In addition, the study will also analyse reported cases as well as textbooks, articles and other relevant materials. The position is further benchmarked with two other jurisdictions, namely, India and Australia. As part of the initiatives of the research; two focused workshops were organised to gauge views of the experts in the field. The outcomes of the research show that the relief of specific performance under the SRA 1950 works well in the Malaysian legal system but there are rooms for further improvement namely, to re-define some unclear terms such as the word “property”(s17) “trusts”(s11) “imperfect title”(s17) “deposit”(s 17(c) and to add new illustrations as well as updating the existing in order to modernise and make them more relevant to the current development. Some of the provisions seem to be scattered and thus require cross-references. It is proposed for re-arrangement of some of the provisions. Moreover, some provisions require better emphasis by providing separate provisions such as section 20(1)(b). It is also proposed that an amendment is needed for section 22(b) to allow for representative and principal with interest to sue for SP. To avoid uncertainty and redundancy with contract law, the research among others, highlights on the element of “willingness and readiness to perform contract” taking into account the development as well as proposing for a new provision for plea of defence in SRA 1950. The illustrations for each provision need to be updated, rearranged and to be placed immediately after every provision. Words such as \$, “gantang” “pikul” need to be modernised. As a conclusion, the SRA 1950 is working well in the Malaysian legal system reading with other statutes and judicial decisions. Nevertheless, some amendments are needed to make it more practical and in tandem with the development in other jurisdictions.

Keywords : *Specific relief, specific performance, contract, imperfect title, trust, illustrations*

Category : Social Sciences and Humanities

1309 A VIRTUAL LEARNING ENVIRONMENT ON SECOND LIFE: IIUM ISLAND#

NURAIHAN MAT DAUD, *ENGLISH LANGUAGE AND LITERATURE, Center for Language and Pre University Acad. Development*

MOHD AZRUL AZLEN ABDUL HAMID, *ARABIC FOR INTERNATIONAL COMMUNICATION, Kulliyah of Language and Management*

Shahrizal Idzwan Wahab Abdul Rahman, *English Language Division, Center for Language and Pre University Acad. Development*

Exhibitor : MOHD AZRUL AZLEN ABDUL HAMID, ARABIC FOR INTERNATIONAL COMMUNICATION, Kulliyah of Language and Management

To better prepare and empower learners for the world of tomorrow, there is a need for educators to rethink the pedagogical approaches to be adopted in teaching. The digital natives are greatly influenced by the arrival and rapid diffusion of digital technology. As such, formal educational institutions are faced with the challenge of addressing the needs of this generation of learners and to take into account the new and rapidly evolving educational scenario. Second Life (SL) is one of the popular emerging technologies that can be used to provide effective learning space for learners. It is designed as a cyberspace venue for commerce, communication and camaraderie. SL promises the possibility for the development of useful and meaningful learning activities in various educational environments. SL should be viewed as an adjunct to classroom teaching and also other online e-learning activities and applications. It has the potential to enrich and enhance educational activities. SL serves as a platform for collaborative learning and authentic exchanges. This poster displays one site on SL that is developed for learning and teaching with an Islamization touch. The 'IIUM Island' simulates IIUM campus with a mosque in the middle of the land. Various forms of virtual classes have been designed to cater to different learners' needs. The site allows users to explore beyond the boundaries of physical realities. Learners can interact with the international community through their avatars. The anonymity allows learners to explore and yet not feel embarrassed to communicate with other avatars. The virtual class serves to add to the number of open educational resources (OER) that are provided by IIUM.

Keywords : *second life, virtual class, OER, avatar*

Category : Social Sciences and Humanities

1310 "SMALL FISH EATING BIG FISH" LISTING PRIVATE COMPANIES VIA REVERSE TAKEOVERS (RTO).#

Mushera Ambras Khan, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Zuhairah Ariff Abd Ghadas, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Mushera Ambras Khan, Civil Law, Ahmad Ibrahim Kulliyah of Laws

A listed company refers to a company which shares are traded on any recognized stock exchange. As such, the company which intends to be listed must have the capacity to sell its shares to the public. Under the Companies Act 1965 (S.15), there is a clear restriction on private companies not to raise capital or issue shares to the public. This means private companies cannot trade its shares in the stock exchange which makes it "impossible" for them to be a listed company. However, with the innovation of REVERSE TAKE OVER, it is observe that a private company could be a listed company. This paper analyze how RTO works to enable a private company to be a listed company.

Keywords : Reverse take over, Listing Private Companies

Category : Social Sciences and Humanities

1314

FOOD SECURITY AND CITIES' SUSTAINABLE DEVELOPMENT#

Rustam Khairi Zahari, *Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*
Mohammed Amer Younus, *Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Rustam Khairi Zahari, Urban & Regional Planning, Kulliyah of Architecture & Environmental Design

Among the encounters facing the world today, the urgency of providing food security to the growing human population and slowing the rapid loss of irreplaceable biological diversity appear large. The concept of food security has been undergoing an evolutionary change during the last 50 years. In the 1950s, food security was considered essentially in terms of production. It was assumed that adequate production will assure adequate availability of food in the market as well as in the household. In the seventies, it became clear that availability alone does not lead to food security, since those who lack purchasing power were not able to have access to balanced diets. More recently, it is becoming obvious that even if availability and access are satisfactory, the biological absorption of food in the body is related to the consumption of clean drinking water as well as access to environmental hygiene, primary health care and primary education. Finally, even if physical and economic access to food is assured, ecological factors will determine the long-term sustainability of food security systems. The main impact food scarcity has, is the migration of the farmers from the rural areas to the urbanized city for better economic opportunity. Countries may face many problems including the inability of the cities to sustain development due to the rapid rural to urban migrations; and simultaneously this may lead to the abandonment of vital food-producing farms. Finally, this paper tries to show how the food security impacts the sustainable development of any particular city around the globe.

Keywords : *Food security, Sustainability, Urban Planning*

Category : Social Sciences and Humanities

1319 COMMUNITY INVOLVEMENT IN SAFEGUARDING INTANGIBLE CULTURAL HERITAGE OF BABA NYONYA CULTURE IN JALAN TUN TAN CHENG LOCK AND JALAN HANG JEBAT, MELAKA#

Syahriah Bachok, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Anis Sofia Kamal, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Mansor Ibrahim, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Syahriah Bachok, Urban and Regional Planning, Kulliyah of Architecture & Environmental Design

The lack of community involvement in safeguarding intangible cultural heritage of Baba Nyonya culture in Jalan Tun Tan Cheng Lock and Jalan Hang Jebat poses a threat to the viability of intangible cultural heritage. This may be due to the rapid changing of socio-demographic pattern of the community which is aggravated by rapid urbanization. The unclear representation of elements of intangible cultural heritage of Baba Nyonya Culture in the community has also poses a threat to the viability of intangible cultural heritage. This research is an attempt to assess the current community involvement in safeguarding their intangible cultural heritage, as well as tracing the existing elements of intangible heritage of Baba Nyonya Culture in Jalan Tun Tan Cheng Lock and Jalan Hang Jebat. The questionnaires survey are distributed and conducted in Jalan Tun Tan Cheng Lock and Jalan Hang Jebat-areas widely known for its heritage of Baba Nyonya culture. The purpose is to identify the existing elements of intangible heritage in all five domains and assess their participation and practice. The data analysis is facilitated by using SPSS software. Hypotheses are analyzed using Pearson chi-squared and Spearman's rho. The findings reveal that there are numbers of elements of tangible heritage existed in Jalan Tun Tan Cheng Lock and Jalan Hang Jebat. However, some of them were facing extinction. The overall community involvement in their cultural activities was relatively low. It is also revealed that the community involvement was influenced by their socio-demographic status such as gender, age, level of education, commitment towards cultural community and also level of awareness.

Keywords : Intangible cultural heritage, Baba and Nyonya heritage, community safeguarding cultural heritage

Category : Social Sciences and Humanities

1321 REFORMING LAWS RELATING TO THE PROTECTION OF THE MARINE ENVIRONMENT IN MALAYSIA#

Abdul Ghafur Hamid @ Khin Maung Sein Abdul Ghafur Hamid @ Khin Maung Sein, *Civil Law Department, Ahmad Ibrahim Kulliyah of Laws*

Maizatun Mustafa Maizatun Mustafa, *Legal Practice Department, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Abdul Ghafur Hamid @ Khin Maung Sein Abdul Ghafur Hamid @ Khin Maung Sein, Civil Law, Ahmad Ibrahim Kulliyah of Laws

As a maritime nation with resource-rich seas, the pollution-free seas are a matter of life and death for Malaysia. The issue is whether Malaysia has a sound, efficient, and effective legal framework to cope with challenges of the multifaceted marine pollution issues. The research focused on ascertaining the inconsistencies among the local marine environmental laws, identifying the provisions which may need reforms and drafting new provisions where necessary.

Keywords : *marine environmental law reform; maritime conventions; protection of marine environment*

Category : Social Sciences and Humanities

1323 PEDESTRIAN NETWORKS IN MERDEKA SQUARE HERITAGE TRAIL, KUALA LUMPUR, MALAYSIA#

Lukman Hakim Mahamod, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*
Mohd Khairul Fizreey Ariffin, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*
Mansor Ibrahim, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Lukman Hakim Mahamod, Urban and Regional Planning, Kulliyah of Architecture & Environmental Design

This study looks at the connectivity of pedestrian networks in Merdeka Square Heritage Trail, Kuala Lumpur, Malaysia. The objectives of this study are: to study the existing pedestrian network system and its relation to the existing heritage buildings; to study the activity along the pedestrian trail; and lastly to propose improvements of pedestrian network system and connectivity of the Heritage Trail. The methodology developed and applied in this study is based on data collection from literature review, observation and field survey. After an evaluation of collected data and site analysis, design guidelines are recommended and illustrated with conceptual designs of key elements along the trail. It has been identified that the Merdeka Square Heritage Trail is physically connected, but discontinuous in terms of activities offered. Besides, the provision of pedestrian facilities is neglecting the users' level of safety and comfort. New concept and themes have been proposed in order to improve the existing trail. Various engaging yet enlightening activities are proposed to address the discontinuity of activities along the trails. In order to support the sustainability of the proposals while addressing the identified issues, guidelines were proposed to promote walkable, livelier and more vibrant heritage trail.

Keywords : *heritage trail, pedestrian network, tourist facilities.*

Category : Social Sciences and Humanities

1332 ESTABLISHING LINKAGES BETWEEN RELIGIOSITY AND SPIRITUALITY ON EMPLOYEE PERFORMANCE: AN EMPIRICAL INVESTIGATION IN MALAYSIA#

AAhad OsmanGani, *Business Administration, Kulliyah of Economics and Management Sciences*

Junaidah Hashim, *Business Administration, Kulliyah of Economics and Management Sciences*

Yusof Ismail, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : AAhad OsmanGani, Business Administration, Kulliyah of Economics and Management Sciences

This paper examines the impact of religiosity and spirituality on employee performance in multi-cultural and multi-religious organisations operating in Malaysia. The data about the performance was collected from employees, peers, and supervisors. The research findings are based on 435 completed sets of responses. This study adopted Religiosity Personality Index (MRPI) by Azimi et al. (2006), Spirituality Involvement and Beliefs Scale (SIBS) by Hatch et al. (1998), and Performance Measures by Sarmiento et al. (2007). The SEM analysis showed that religiosity and spirituality have a significant positive relationship with employees' performance. Better spiritual condition influences better performance. Religion was founded as a moderating variable in employees' job performance. This study has extended the knowledge of spirituality at workplace by confirming spirituality to be more significant than religiosity in influencing employees' performance. Religion played the role of a moderating variable in spirituality-performance relationship. Managers who attempt to bring about changes in employee behaviours in multicultural organisations through the integration of spirituality at work, need to accommodate requests for spiritual practices of their employees irrespective of their different beliefs. Given the fact that the workforce in Malaysia is operating in a multicultural and multi religious environment, it has become crucial to acknowledge diversity in the workplace and respect individual differences, including those professed to be religion-free (atheists). It should be mentioned that this is the only study that measured the impact of religiosity and spirituality on employees' performance using three different sources of data: employees, peers, and supervisors. Findings from this study would have significant contributions to the development of new knowledge in this area, and expected to trigger more research interests in the relevant fields of studies.

Keywords : *Religiosity, Spirituality, Employee performance, Multicultural Malaysia*

Category : Social Sciences and Humanities

1341 **TECHNOLOGICAL FACTORS AFFECTING KNOWLEDGE SHARING AMONG ACADEMIC STAFF IN SELECTED MALAYSIAN HIGHER EDUCATIONAL INSTITUTIONS AND THE EFFECT ON PERFORMANCE#**

Norizah Supar, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Norizah Supar, Business Administration, Kulliyah of Economics and Management Sciences

The effective management of knowledge is crucial for ensuring competitive advantage. One major aspect in the effective management of this resource deals with the sharing of knowledge between individuals and departments in the organization. Through sharing, new knowledge is created, and this, in turn, acts as a catalyst for innovation. The objective of the study is to expand understanding of technological factors affecting knowledge sharing behaviour and contribute towards successful implementation of knowledge sharing as part of organizational knowledge management initiatives. Based on non-random, criterion, purposive sampling, three higher academic institutions from the Klang Valley area were selected to be included in the study. A questionnaire was constructed to assess dimensions on technology, knowledge sharing and performance. The dimensions on technology are based on a review of earlier work done by other researchers [Knowledge Centric Organization (KCO) Assessment (2001)]. SEM was employed to test the propositions and further test the reliability of the items as well as the model. Findings from 194 respondents indicated that the technological factors of distributed model and presence of IT for knowledge sharing (collaborative technology) are positively related to knowledge sharing and that knowledge sharing is positively related to performance. By integrating the technological factors affecting knowledge sharing, knowledge sharing and performance in one model and investigating the factors simultaneously enables a deeper understanding to be obtained regarding the technological factors affecting knowledge sharing, knowledge sharing as a mediating factor and the effect of knowledge sharing on performance. The results of the study underscore the significance of technological factors in affecting knowledge sharing.

Keywords : *technology, knowledge sharing, performance*

Category : Social Sciences and Humanities

1343 SUSTAINING FAMILY INSTITUTION: AN ISLAMIC PERSPECTIVE.#

Normi Abdul Malek, *Islamic Law Department, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Normi Abdul Malek, Islamic Law, Ahmad Ibrahim Kulliyah of Laws

Islam views the family as a very important institution that should be protected from any element that may weaken it. If the institution cracks or is not stable, it will have a direct impact on society at large. The increase in social problems and criminal activities are among the direct results of unstable marriages. On the other hand, the trend to remain unmarried, avoiding family commitments, will also give a direct impact on the sustainability of the family institution. This paper highlights various safeguards that have been provided by Islamic law in order to ensure that the family institution is protected. The fact that Islam encourages marriage, prohibits celibacy and discourages divorce is highlighted. The roles of parties to the marriage as the key players, as well as the role of their family members in order to keep the marriage intact are examined. The paper also studies the three steps that should be taken by a husband as the leader of the family before resorting to divorce, as provided by the Quran. The role of the authorities in ensuring the sustainability of the family institution is analyzed. Finally, the current trends which give impact to the sustainability of the family institution are also highlighted.

Keywords : family, sustainability, husband, wife, court, marriage, divorce

Category : Social Sciences and Humanities

1348 ##مقارنة تحليلية دراسة: والإمكان المفهوم سؤالي بين الأديان مقارنة علم

Abdurezak Abdulahi Hashi, *Biotechnology, Kulliyyah of Science*

Exhibitor : Abdurezak Abdulahi Hashi, Biotechnology, Kulliyyah of Science

محورين؛ البحث وتضمن. عليه الحصول وإمكانية الأديان مقارنة علم مفهوم، مقارن تحليلي بمنهج الدراسة هذه تتناول منهج على الحصول إمكانية مسألة، الثاني المحور ويتناول. وتعريفه الأديان مقارنة علم مفهوم يتناول الأول فالمحور الذين لدراسة فكرية اتجاهات من ذلك عن تمخض وما، حوله أثير الذي والجدل موضوعية، بطريقة الذين لدراسة محايد موضوعي بين عليه الحصول وإمكانية العلم هذا أهمية في مبدئي إقرار وجود أولاً، هي السني، البحث نتائج أهم الخاتمة وتضمنت الكلمات. العلماء بين خلاف محل زالت وما كانت المعرفية، وأسس العلم هذا بمفهوم المتعلقة المسائل إن ثانياً، العلماء العلماء مقاربات، عليه الحصول إمكانية الموضوعية، المفهوم، الأديان مقارنة علم: المفتاحية

Keywords: ،عليه حصول ال إمكانية ،الموضوعية ،المفهوم ،الأديان مقارنة : العلماء مقاربات

Category : Social Sciences and Humanities

1350 MANAGEMENT ACCOUNTING DEVELOPMENT: THE CASE OF HEALTHCARE SECTOR IN ABU DHABI#

Muslim Har Sani Mohamad, *Accounting, Kulliyah of Economics and Management Sciences*
Ibrahim Musa, , *Kulliyah of Economics and Management Sciences*

Exhibitor : Muslim Har Sani Mohamad, Accounting, Kulliyah of Economics and Management Sciences

Following the scant literature of management accounting in the service industry, this study aims to examine the management accounting development (MAD) in the healthcare sector. The study proposed that there is a direct relationship between management accounting development and board involvement in both internal and external stakeholders, size and ownership; and a direct relationship between management accounting development and financial performance of the hospitals. Healthcare sector of Abu Dhabi is selected for the study as the industry has gone through tremendous growth in recent times with more both public and private hospitals were established to meet the demand of quality healthcare in the region. With intense competition, advanced management accounting techniques are expected to be adopted in the hospitals. Questionnaire surveys were sent to all thirty six (36) hospitals existed in Abu Dhabi in the year 2010. Thirty one (31) questionnaires were returned, which equals to 86.1% of the total targeted hospitals. The respondents were financial managers and the accountants. Interestingly, the study found that size and ownership have inverse significant relationships with the management accounting development(MAD). Also the study found that negative relationship between the MAD and financial performance of the hospitals. These findings reflect the possibility of advanced management accounting techniques were adopted and developed for reasons other than its direct impact in improving economic performance of the hospitals. Board involvement in stakeholders management is found to be insignificant in explaining development of management accounting. As it is recognized in the literature that advanced MA adoption can be linked to managerial exercise of gaining stakeholder' legitimacy, the findings of the study demand further investigations by examining this pertinent issue via other theoretical perspectives.

Keywords : *management accounting development, healthcare sector, Abu Dhabi, Corporate Governance*

Category : Social Sciences and Humanities

1351 FACTORS INFLUENCING THE RETENTION OF INTERNATIONAL IT TALENT: AN EMPIRICAL INVESTIGATION IN ASIA#

AAhad OsmanGani, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : AAhad OsmanGani, Business Administration, Kulliyah of Economics and Management Sciences

In today's global war for corporate business talent, organizations have emphasized attraction methods. But retention of talent—particularly in the competitive IT sector—has not received much attention. The high turnover of talent is increasingly becoming a challenging issue for organizational management, especially for HR professionals. In this regard HRD strategies can play significant roles in helping organizations to win the talent war. Research in this area is scarce. This paper presents the results of an empirical study on the identification of major factors contributing to the retention of international IT talents in Singapore. Among the top five factors, opportunities for training and skills development and career development issues were identified. Implications of the findings are discussed for organizational policy decisions and for future research.

Keywords : *Talent retention, HRD/training, IT training and skills development, career developmen*

Category : Social Sciences and Humanities

1360 MEDICAL TOURISTS' PERCEPTION IN SELECTING THEIR DESTINATION: A GLOBAL PERSPECTIVE#

Noor Hazilah Abd Manaf, *Business Administration, Kulliyah of Economics and Management Sciences*
Abdullah Al Mamun Sarwar, *Business Administration, Kulliyah of Economics and Management Sciences*
Azura Omar, *Business Administration, Kulliyah of Engineering*

Exhibitor : Noor Hazilah Abd Manaf, Business Administration, Kulliyah of Economics and Management Sciences

Tourism is considered as one of the world's largest industries. It is also of vital importance as it has been acknowledged as having a high potential for growth in the world economy (Naude & Saayman, 2005). While leisure and vacation has been the norm within the tourism industry, however, medical tourism is a relatively new phenomenon. It has taken form in recent years due to the exorbitant costs of healthcare services in countries such as US and the long waiting list for health treatment in many European countries. Malaysia is positioning itself as a major player in the industry and medical tourism has been identified as one of the drivers of the National Key Economic Areas (NKEA). Thus, it is imperative to study the selection criteria of the health traveller in selecting their destination. From secondary data analysed, it was found that cost, service quality, treatment types and availability, lack of access to particular treatment, and impact of marketing; influence significantly the medical tourists' perceptions in selecting their destination.

Keywords : *medical tourism, healthcare, hospitality.*

Category : Social Sciences and Humanities

1367 ASSESSMENT OF AWARENESS ON THE PROGRAMMES IMPLEMENTED UNDER LOCAL AGENDA 21 (LA21) AMONG THE PUBLIC AND RESIDENT ASSOCIATION COMMITTEE MEMBERS: CASE STUDY ON SHAH ALAM, SELANGOR DARUL EHSAN, MALAYSIA#

Mariana Mohamed Osman, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*
Nur Nabila Ahmad Azam, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Mariana Mohamed Osman, Urban and Regional Planning, Kulliyah of Architecture & Environmental Design

Local Agenda 21 (LA21) is a global action plan or blueprint for sustainable development, which was adopted at the Earth Summit in Rio de Janeiro in 1992. It is a reflection of a global consensus and political commitment of countries globally on sustaining development and environment cooperation. Although LA21 has been implemented in Malaysia for 20 years, the awareness level on LA21 among the community was found to be low. Several literatures have shown that the awareness level of stakeholders does have influence on their participation in development programme. Thus, this paper examined the relationship between awareness and participation through evaluating the stakeholders' awareness on the programmes implemented under LA21. The evaluation of the stakeholders' awareness was tested at around Shah Alam City Council (SACC) jurisdiction. The research was based on a structured questionnaire survey of a sample of 65 respondents selected from Shah Alam Resident Association committee member (33 respondents) and public in general (32 respondents). Analysis from the data collected establishes that the awareness level of both RA committee members and public in Shah Alam towards LA21 was low. This situation has also contributed to the low number of participation in LA21 programmes. Therefore, this paper attempts to identify the influencing factors in the participation of LA21 programmes and highlight the constraints hindering LA21 programmes from being implemented successfully in Shah Alam.

Keywords : *Local Agenda 21, awareness, participation, sustainable development, Shah Alam*

Category : Social Sciences and Humanities

1370 **AN INVARIANCE ANALYSIS OF THE PERCEIVED PREPAREDNESS OF IIUM, UM, AND UNIMAS MEDICAL INTERNS FOR INDEPENDENT PRACTICE.#**

NoorHazilah Abd Manaf, *Business Administration, Kulliyah of Economics and Management Sciences*

Abideen Adewale Adeyami, *Finance, Kulliyah of Economics and Management Sciences*

Azura Omar, *Business Administration, Kulliyah of Economics and Management Sciences*

Mohammed Fauzi Abdul Rani, *Medicine, Kulliyah of Medicine*

Dinon Mohd, *IIUM Health Centre, Reseach Institute*

Izhairi Ismail, *Business Administration, Kulliyah of Economics and Management Sciences*

Zabeda Abd Hamid, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : NoorHazilah Abd Manaf, Business Administration, Kulliyah of Economics and Management Sciences

The frequency and magnitude of medical error by physicians in the country is a course of concern for both medical educators and policy-makers. As stated in Cruetz (2004), the Consumers' Association of Penang (CAP) estimates that more than 4000 deaths per year are attributable to medical negligence or errors. Thus, the relative influence of medical curricular undergone by medical interns cannot be overemphasised. The literature indicated that medical graduates' competence and preparedness in different domain of medical training is contingent on the medical curricular undergone. This study examined the moderating effect of curricular undergone by medical graduates in the country on variables such as satisfaction, motivation, computerisation and communication; and perceived preparedness for independent practice. An invariance analysis based on curricular was carried out using SEM. The finding indicates that IIUM medical graduates are relatively better as far as preparedness for independent studies are concerned, followed by UKM, UNIMAS, UPM, UM, and USM in that order. Although the model indicated no variance across curricula divides, the statistically significant variance paths especially among the schools suggest that each need to focus on its weak indicators. In this case, IIUM should focus on the motivation and satisfaction of its interns, while UKM and UNIMAS on computerisation and communication capabilities of its interns.

Keywords : *medical education, medical internship, structural equation modelling*

Category : Social Sciences and Humanities

1374 INTEGRATING 5E'S MODEL IN SCIENCE TEACHING: INNOVATIVE TEACHING AND ITS EFFECT ON INTRINSIC MOTIVATION#

sharifah sariah syed hassan shahabudin, *Institute of Education, Institute of Education*

Exhibitor : *sharifah sariah syed hassan shahabudin, Dept of Educational Psychology & Counseling, Institute of Education*

This present study seeks to investigate the teaching styles adopted by science teachers and their student intrinsic motivation in order to be persistence in learning the subject. The intrinsic motivation serves as fitrah of human mankind to connect knowledge of science to the Creator. Without supporting innovative teaching, students are not able to be critical in relating empirical knowledge to the real world examples and solving real world problems. Using the response from student experience, the 5Es instructional model by Bybee (1996) has been adopted for the theoretical framework in the study. The purpose of the study was to validate the instrument and estimate the 5E's model and its relationship with intrinsic motivation. 500 samples from selected secondary school students in Kuala Lumpur, Malaysia have been collected to provide the responses for self constructed questionnaires in the structural equation modeling analysis. A structural equation modeling has been utilized to provide the analyses for detecting valid items in the self constructed questionnaire and estimate the relationships. The findings indicate a strong relationship between innovative teaching (which was explained by the 5E's) and intrinsic motivation. However, exploration has been dropped from the 5E's model as it was not able to be related to intrinsic motivation. Thus, the explanation of the model indicates that more effort need to be carried out to include testing hypotheses in experiment activities and the exploration of real world examples. This will ensure high critical thinking that serves the cognitive ability to be contemplating towards Allah the Creator. The findings provide the implications toward empirical evidence of theory, teaching practice and appropriate interventions that can be addressed and analysis procedure for future research.

Keywords : *science teaching style, structural equation modelling, innovation in teaching*

Category : Social Sciences and Humanities

1375 PROTECTION OF EMPLOYEES IN TAKEOVERS, MERGERS AND TRANSFER OF BUSINESS#

Mushera Ambaras Khan, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Farheen Baig Sardar Baig, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Mushera Ambaras Khan, Civil Law, Ahmad Ibrahim Kulliyah of Laws

Employees play a vital role in the life of a company. They are however in a vulnerable position where the company undergoes the big change process caused by change of control from one hand to another following a takeover, merger of a company or business and assets transfer. Employees have commonly been viewed as outsiders to the company. Notwithstanding the important role they play in the success of a company, the position of employees is rarely discussed in corporate law texts. It is a common fact that where companies go through takeovers or mergers process, employees are considerably affected. Employees are retrenched due to various reasons after a company is taken over or merged. The above research seeks to balance between the rights of shareholders and employees in a company.

Keywords : *employees, takeovers and mergers, business transfer*

Category : Social Sciences and Humanities

1376 GLOBALIZATION: AN ANALYSIS OF ITS CHALLENGES TO ISLAMIC VALUES#

MOHAMMED ABULLAIS, *Department of Qur'an and Sunnah Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

ISRAR AHMAD KHAN, *Department of Qur'an and Sunnah Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : MOHAMMED ABULLAIS, Department of Qur'an and Sunnah Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences

The west considers itself the ruler of the entire world. In order to further strengthen its rule over the world including Muslim nations it came up with the idea of globalization, which apparently seems to be advantageous but keeping its so far impact in view it can be said that it is going to cause catastrophe in the world in general and Muslim nations in particular. The changes it has introduced in the world are seriously dangerous from Islamic standpoint. It is in total contrast with Islamic values enshrined in the Qur'an and Sunnah. It seeks to alienate Muslims from Allah; it has stripped women naked in the name of art and culture; it has encouraged in the name human rights individuals to choose his/her own sexual mode; it has made both men and women bold to freely satisfy their sexual lust; it has brought economic growth to an alarmingly shattering point; it is inviting man to be secular and hedonistic in his/her attitude and behavior. All these changes and programs of globalization constitute serious challenges to Islam world. Muslim scholars and Muslim governments are duty-bound to counter the menace of globalization

Keywords : *Globalization, Challenges, Islamic Values, Qur'an, Sunnah*

Category : Social Sciences and Humanities

1378 AN INVESTIGATION INTO EXPERIENTIAL FACTORS THAT INFLUENCE VISITORS' PARTICIPATION AND IMMERSION IN SCIENCE CENTRE CONTEXT#

Md. Mizanur Rashid, *Architecture, Kulliyah of Architecture & Environmental Design*

Nurhaya Baniyamin, *Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Md. Mizanur Rashid, Architecture, Kulliyah of Architecture & Environmental Design

The meaning a science centre exhibit gallery has are determined by the interaction of several elements: the relationship of exhibit forms used in the design of the display, the tendency and goals visitors bring to the experience, and the physical and socio-cultural contexts in which the interpretive activity takes place. This study explores this dynamic process of interpretation in a science centre, showing how exhibits and visitors act upon each other in a process of mutual influence. Demonstrating the principle that successful scenography may overcome the gap between the interpretive and experiential aspects of learning science, the effectiveness of 'themed stories' and 'sensory stimuli' of the science centre context is studied through visitors' emotional and physical value of science centre experience. The deliverable in this research suggests that success in scenography or articulation of staging spaces determined visitors' participation and immersion in science centre context.

Keywords : *experiential factors, immersion, scenography, themed stories, sensory stimuli, science centre*

Category : Social Sciences and Humanities

1379

MALAYSIA'S TIME VARYING CAPITAL MOBILITY#

Turkhan Ali Abdul manap, *Economics, Kulliyah of Economics and Management Sciences*
Gairuzazmi M. Ghani, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Turkhan Ali Abdul manap, Economics, Kulliyah of Economics and Management Sciences

This paper examines the dynamics of the degree of capital mobility for Malaysia for the period 1991Q1-2009Q4. Generally Malaysia has been an open economy for trade, however periodic episodes of capital control such as those in 1994 and 1998 means that the level of capital mobility in Malaysia might be time varying. In order to measure the degree of capital mobility, this paper uses the Shibata and Shintani (1998) model that examines the relationship between consumption and output. The results show that for the period investigated, the degree of capital mobility relatively low, especially after the 1997/98 East Asia financial crisis. Meanwhile the periods of capital control show a reduction in the degree of capital mobility.

Keywords : *capital mobility, intertemporal current account model, Kalman Filter*

Category : Social Sciences and Humanities

1380 DETECTING SPECULATIVE RATIONAL BUBBLES IN THE GCC (GULF COOPERATION COUNCIL COUNTRIES) STOCK MARKETS#

Turkhan Ali Abdul Manap, *Economics, Kulliyah of Economics and Management Sciences*
Mohd Azmi Omar, *Finance, Kulliyah of Economics and Management Sciences*

Exhibitor : Turkhan Ali Abdul Manap, Economics, Kulliyah of Economics and Management Sciences

A speculative bubble driven by rumors and not supported by fundamentals will result in misallocation of resources into non-optimal uses. Identifying and dating speculative explosive bubbles has been a major concern in the economic literature. Rational bubble gives rise to an explosive component in stock price; a change from random walk to an explosive regime in the stock price indicates the emergence of a speculative bubbles. Considering traditional unit roots has less power in detecting periodically collapsing bubbles as point out by Evans (1991), this study use newly developed modified forward sequential Dickey-Fuller test of Phillips, Wu and Yu (2011) and backward sequential Dickey-Fuller test of Homm and Breitung (2012) to investigates the evidences and timing of rational speculative bubbles in GCC stock markets including Saudi Arabia, Qatar, United Arab Emirates, Oman and Bahrain over 2000 to 2012. Our empirical results indicate the existence of rational bubbles in GCC stock market in the early 2000s. Our results are contradicted to that of Yu and Hassan (2009). The estimation of the starting date of the bubbles indicates that explosive regime emerges in the early 2000s.

Keywords : *speculative bubbles, unit root tests, structural break, GCC, Stock market*

Category : Social Sciences and Humanities

1386 ASSESSING STUDENT LEARNING IN DESIGNING INSTRUCTIONAL VIDEO: A CASE STUDY#

sharifah sariah syed hassan shahabudin, *Institute of Education, Institute of Education*

Exhibitor : *sharifah sariah syed hassan shahabudin, Dept of Educational Psychology & Counseling, Institute of Education*

The study of student learning in ICT learning environment has always obtained the centre stage for cooperative learning, self-reflection, and creative thinking that enhance higher order thinking skills. Student learning will be improved if a teacher adopted strategies of learning theories and effective student assessment. A survey and qualitative approach have been used to provide information for a case study. The purpose of the study was to investigate the relationships of student-centred approach (strategies of instructions) that helps to stimulate self-regulation among students, metacognitive process towards student engagement. A survey of 64 students was carried out at the end of the semester using a self-constructed questionnaire based on the previous related literatures. Qualitative data was based on discussion with other lecturer, blog entries from the students and personal journal entries. The triangulation method was used to provide in depth understanding of the teaching process and their reflections on learning. The active participation and discovering their own learning (Vygotsky,1978; Piaget, 1950), aware their own knowledge and thinking (Baylor,2002), and; students are autonomous and responsible for their own learning (Lea,et.,al.,2003) reveals the characteristics of the student-centred approach. However, the issues of the extent where students are responsible and autonomous remain vague especially when dealing with different learning styles and computer technical learning. Not only students have to struggle with the technical problems, they at the same time need to apply the theories and design at short time given. Thus, future teaching requires more assistance and notes to help students to learn more effectively. The research provides information for further intervention in improving teaching strategies.

Keywords : *instructional video, meta cognitive, autonomous learning*

Category : Social Sciences and Humanities

1387 **PUBLIC AWARENESS ON THE ENVIRONMENTAL TOXICOLOGY AMONG
KUANTAN COMMUNITY IN RELATION TO ISLAMIC PERSPECTIVE#**

ROSLIZA MOHD SALIM, *CHEMISTRY, Kulliyah of Science*
ABDUREZAK ABDULAHI HASHI, *BIOTECHNOLOGY, Kulliyah of Science*
NUR SYAHIDAH MOHAMED SUJARI, *BIOMEDICAL SCIENCE, Kulliyah of Science*

Exhibitor : ROSLIZA MOHD SALIM, CHEMISTRY, Kulliyah of Science

The environmental awareness and environmental behavior among citizens in Malaysia has not achieved satisfaction level yet. As a result, there are increasing in number of environmental pollution and give impacts on health. Islam comes as a savor for all aspects throughout the world. Islam is the only way to settle down all human's problems in their life. Islam as "Rahmatanlila'alamin". Same goes to environmental issues which need guidance to preserve the good and healthy environment. Thus, this study was carried out to investigate the public awareness in various residential areas which are urban, industrial and rural area about the environmental toxicology in regards to human health. At the same time, to study the Islamic moral guidance related to environmental toxicology. A cross-sectional descriptive study was conducted which involved 145 respondents. Primary data using conveniently sampling through questionnaire method and secondary data from wide range of literature through journals have been utilized. Information was obtained through questionnaire including demographic profile, public awareness, practices towards environmental conservation, level of concern about specific environmental awareness, factors that contribute to the environmental pollution and the methods should be used to instill environmental awareness among citizens, health related and Islamic perspectives. The statistical technique of percentage, descriptive analysis and ANOVA were used to determine the variables, thus to evaluate their level of awareness towards environmental toxicology. The results indicate that there is no significance difference on public awareness among residents in rural, town and industrial area. Most of the respondents have good environmental awareness. The findings are important because it may help government or private sector to enhance the environmental education as well as to health care providers to provide some guidance for public about health related environmental issues.

Keywords : public awareness, environmental toxicology

Category : Social Sciences and Humanities

1391 MINDING THE MONIES: INTERNAL CONTROL OF QARYAH MOSQUES IN KUALA TERENGGANU#

Maliah Sulaiman, *Accounting, Kulliyah of Economics and Management Sciences*
Shahida Shahrudin, ,

Exhibitor : Maliah Sulaiman, Accounting, Kulliyah of Economics and Management Sciences

Minding the monies: Internal control of Qaryah Mosques in Kuala Terengganu Fraud and embezzlement of funds in Western church organizations have raised concerns on the internal control systems of these organizations. Prior studies examining internal control systems of such organizations have concluded that the lack of controls may be attributed to accounting being regarded as secular support activities (Laughlin, 1988). Given that there is no dichotomy between the secular and the profane in Islam, it is indeed interesting to examine if mosques experience the same deficiencies as other religious institutions. With this in mind, our study examines the internal control procedures relating to the receipt of income of Qaryah mosques in Kuala Terengganu. Data was collected through a questionnaire survey and complemented with interviews of relevant personnel of the mosques. Of the 76 qaryah mosques in Kuala Terengganu, only 39 responded, thus giving a response rate of 51.3%. The results revealed that qaryah mosques in Kuala Terengganu have strong internal control on the receipt of income. While the overall internal control system of qaryah mosques in Kuala Terengganu is strong, there is still room for improvement. More importantly, the Terengganu Islamic Religious Council should follow the example set by the Islamic Religious Council of Singapore in publishing financial guidelines on its website so that every mosque can refer to the same source.

Keywords : *mosques, internal control, Kuala Terengganu*

Category : Social Sciences and Humanities

1395 DEVELOPING METACOGNITIVE STRATEGIES IN LEARNING TECHNOLOGIES AMONG PRE-SERVICE TEACHER TRAINEES THROUGH AN E-SPACE COMMUNITY FRAMEWORK#

Mohd Shukri Nordin, *Curriculum and Instruction, Institute of Education*

Exhibitor : Mohd Shukri Nordin, Curriculum and Instruction, Institute of Education

The purpose of this research is to observe the development of pre-service teacher trainees' metacognitive strategies towards learning technologies competency via their participation within an e-space community. Evidence has shown that contemporary learning technologies are making teaching and learning more engaging and effective. However, research shows that teacher competency in learning technology is largely limited to the basics of functional use of the technology rather than its application for teaching-learning purposes. There is considerable evidence to support the notion that Flavell's work on metacognition can lead to a solution in addressing the pre-service teacher trainees' lack of competency in learning technologies. It is argued that being metacognitive will make an individual a better learner and more able to handle new knowledge or skills without consistently being guided. The research proposes the use of an e-space community as the mediator to develop metacognitive strategies towards increasing learning technologies' competency. The concept of e-space community is congruent with Wenger's concept of Communities of Practice, where people of the same interest do and learn better via regular interaction. The research uses a mixed-method approach, where a pre-test and a post-test with a treatment intervention are supported by interviews and observations. The theoretical framework developed in this research is used to facilitate the design of studies which investigates the use of digital space like the e-space community to mediate the development of metacognitive strategies in order to increase competency in contemporary learning technologies for educational purposes.

Keywords : *e-space community, metacognitive strategies, learning technologies, competency, pre-service teacher trainees*

Category : Social Sciences and Humanities

1396 THE ACADEMIC GENDER GAP INTAKE PHENOMENON: THE APPLICATION OF THE TRA TO THE BEHAVIORAL BELIEFS OF FEMALE STUDENTS TOWARD ACCOUNTING DISCIPLINE IN THE IIUM AND TARC#

GholamReza Zandi, *Accounting, Kulliyah of Economics and Management Sciences*
Mohamed Sulaiman, *Business Administration, Kulliyah of Economics and Management Sciences*
Babak Naysary, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : GholamReza Zandi, Accounting, Kulliyah of Economics and Management Sciences

According to the information released by the Ministry of higher education in Malaysia, a considerable proportion of accounting program's admission in undergraduate level per year is assigned to female students who have already overtaken their male counterparts in almost every program through public universities in Malaysia. This issue may not be a cause of concern in short term but the huge gender gap among students in universities as well as the graduates performing in accounting profession in the long run could bring about damages to the integrity of this discipline with respect to gender. The motivation behind the present study was to dig into this problem and try to highlight the root causes of current gender gap and hopefully come up with some solutions to shrink this gap before it too late. The population of this research was students already enrolled in accounting program in IIUM (as a representative of public universities with majority of Malay students) and TAR college (as a representative of private universities with majority Chinese students) to somewhat cover the main ethnicities in Malaysia in order to make a fair conclusion. We found out that during that last 4 years, females constitute 70 percent of enrolments in IIUM and 65 percent of enrolments in TARC. We applied the Theory of Reasoned Action as our conceptual framework. Running various statistical techniques to analyze the data and test the research hypotheses we came up with the conclusion that among the three dimensions of behavioral intention (according to TRA) to enroll in accounting program (i.e. attitudes toward choosing accounting program, subjective norm and amount of information on accounting), the amount of information about accounting program (AIA) is a significant factor beside other dimensions for male students. But for female students this is not true which means AIA does not influence females' decision to choose accounting. Taking into account that AIA is a significant contributor to males' decisions to choose accounting program, authorities in the Malaysian Education Ministry and also administrators in high schools should consider more informative programs to enhance the awareness among students. This may help students choose their future profession more consciously.

Keywords : *Accounting discipline, Gender Imbalance, TRA, Subjective norm, Behavioral intention, IIUM, TARC*

Category : Social Sciences and Humanities

1398 THE RELATIONSHIP BETWEEN ORGANIZATIONAL LEARNING AND ORGANIZATIONAL PERFORMANCE: AN EMPIRICAL STUDY OF SMALL AND MEDIUM SIZED FIRMS IN THE ICT INDUSTRY IN MALAYSIA#

GholamReza Zandi, *Accounting, Kulliyah of Economics and Management Sciences*

Mohamed Sulaiman, *Business Administration, Kulliyah of Economics and Management Sciences*

Babak Naysary, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : GholamReza Zandi, Accounting, Kulliyah of Economics and Management Sciences

Organizations are in a continuous process of searching for strategies that would provide them with a competitive advantage. However, recent changes in the business environment have compelled firms to search for new strategies for competitive edge as the conventional strategies have become obsolete. According to De Geus (1988:70), “the only competitive advantage the company of the future will have is the ability of its managers to learn faster than the competitors”. This increasing competition creates a difficult competitive environment for enterprises that do not comply with the changing rule of business. The challenges faced by SMEs while competing in domestic or even global markets are compounded by their size and limited resources as opposed to the well-established corporations which enjoy advantages of economics of scale (Audretsch, 2009). In the Malaysian context, SMEs are faced with challenges such as limited adoption of technology, lack of skilled expertise, and competition from large corporations and globalization. The aim of this research is to empirically test the relationship between organizational learning and innovation in SMEs in the ICT industry in Malaysia. According to the literature, organizational learning and innovation are crucial factors in organizational performance but the focus of this study is to determine whether organizational learning lead to better organizational performance. This study was conducted in a sample of 278 SMEs in Malaysia. The hypotheses in this study were developed to examine the relationship between organizational learning (OL) and organizational performance (OP). To conduct the analysis we made use of Analysis of Moment Structure (AMOS 18.0) to conducts the factor analysis as a tool of data reduction and Statistical Package for Social Sciences (SPSS 17.0) to run the multiple regression analysis in order to test the hypotheses. The obtained results support the hypotheses implying a positive relationship between OL and OP. The findings of this research provide useful insights for managers and entrepreneurs who seek to improve their bottom-line performance by leveraging the benefits of information-based economy. The implication is especially essential for SMEs which operate in a highly competitive and technology-driven industry such as ICT industry.

Keywords : *Organizational Performance, Organizational Learning, Small and Medium sized Enterprises, and ICT industry*

Category : Social Sciences and Humanities

1402 A GENRE ANALYSIS OF ISLAMIC ACADEMIC RESEARCH ARTICLE INTRODUCTIONS#

Mohamed Ismail Ahamad Shah, *English Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Amira Mohd Yusuf, *English Language Department,*

Exhibitor : Mohamed Ismail Ahamad Shah, English Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Many students or novice writers are unaware of the importance of rhetorical organization in the research article writing. The lack of generic knowledge and skills can create difficulty for them in research article writing, particularly in the introduction section. This difficulty also occurs in the writing of Islamic academic research article (RA) introductions. This study explores the rhetorical organization of Islamic RA introductions based on Swales' (1990) CARS (Create a Research Space) model. It aims to identify whether the Islamic RA introductions follow or differ from the rhetorical moves of Swales' (1990) CARS model and to identify the differences or variations in the steps used in Islamic RA introductions. Sixty Islamic RA introductions were analyzed in terms of the move structure and linguistic features that signal the use of the move. The findings of the study show that most of the article introductions in the study contain all the moves prescribed by the CARS model. However, the number of introductions that strictly follow the CARS Move 1-2-3 structure is relatively small. This suggests that most of the authors of Islamic RA introductions make use of the rhetorical moves proposed by the CARS model, but deviate in terms of their organization.

Keywords : *Genre analysis, English for Academic Purposes, Create a Research Space (CARS) model, Islamic Research Article Introductions*

Category : Social Sciences and Humanities

1407 ##العربية اللغة تعليم مجال في الآلي الحاسب من الاستفادة معالم

Fouad Rawash, Languages, Institute of Education

Exhibitor : Fouad Rawash, Philosophy & Educational Leadership, Institute of Education

وأشكال، متعددة بـصور الإسلامية والثقافة العربية اللغة تعليم مجال في الآلي الحاسب من الاستفادة تمت تلك وثالث، بغيرها للناطقين العربية اللغة تعليم مجال و، النظامي التعليم نحو الاهتمام بعض توجه، مختلفة ومن المعلومات شبكة أبرزها من منافذ؛ عدة عبر ذلك وتم. العربية اللغة فروع لبعض الآلية المعالجة مجال المجالات مادة توفير على الهائلة وقدرتها، المدمجة الأقراص الثنائي والمنفذ، اللغة تعليم ومواقع، بعد عن ظهر التعليم خلالها عدة الآلي الحاسب اعتبار المنافذ تلك وثالث، الافتراضي بالتعليم يعرف فيما ذلك ويتمثل، واحد أن في معلم وجود على السابقة الوسائل استخدام عن تغذية أن ويمكن، إفادة أيما منها يستفيد أن للمعلم يمكن تعليمية وسائل الدراسة توصلت والتوصيات النتائج. التدريبات بعض مع الإبداع من قدر المعلم إليه يحتاج ما وكل، الآلي الحاسب التوصيات أبرز ومن، الآلي الحاسب استخدام من الفائدة تحقيق في دور فاعل له المعلم إبداع أن أبرزها من نتائج لعدة برنامج وضع و، الآلي الحاسب عبر وتقديمها تعليمية لأغراض الدراسية المواد لكتابة مواصفات لوضع آلية استحداث التعليم في كأداة لاستخدامه الحاسوب على المعلمين لتدريب خاص.

Keywords : التعليم - الاستفادة - التحديات - العربية اللغة - الآلي الحاسب

Category : Social Sciences and Humanities

1417 BEYOND SPORTS: A STUDY ON MINORITY STUDENTS' PARTICIPATION IN SEKOLAH BERWATAK SUKAN PROGRAMME#

NURAZZURA MOHAMAD DIAH, *SOCIOLOGY AND ANTHROPOLOGY, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

BAIDRUEL HAIRIEL ABD RAHIM, *SOCIOLOGY AND ANTHROPOLOGY, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : NURAZZURA MOHAMAD DIAH, Sociology and Anthropology, Kulliyah of Islamic Revealed Knowledge and Human Sciences

The number of minority students who attend mainstream school in Malaysia is substantial. Like the majority students, minority students are required to embrace the agenda of the Malaysian educational system through various programme in order to foster cooperation and unity among students and the school authority. Previous studies have revealed that the experience of minority students in Malaysian schools towards Malaysian educational programme continues to evolve through the years, marking a need for researchers and academicians alike to continuously update their knowledge in this particular field. The objective of this study is to describe the experiences of minority students' who participate in the Sekolah Berwatak Sukan (sports-based character school) programme in selected schools of Pekan, Pahang. To obtain meaningful data for this research, focus group interview (FGI) is employed with a sample of 27 students from the ethnicities of Orang Asli, Cambodian, Rohingya and Chinese. Data analysis was performed using the qualitative process. Our findings have indicated that the sports-based character school programme is seen as a tool for integration and social control in a multicultural environment; elements considered essential by both schools and students. This study provides evidence that students from different ethnic groups are able to work harmoniously with one another during their training sessions and sports competitions. In short, this study is also indispensable to the existing educational researchers who have interest in ethnic relations among minority group in Malaysian schools.

Keywords : *sports, minority students, character school, integration*

Category : Social Sciences and Humanities

1420 SEAWEED AND MANGROVE ISSUES FROM THE ENVIRONMENTAL LAW PERSPECTIVE#

Maizatun Mustafa, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*
Khairil Azmin Mokhtar, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Maizatun Mustafa, Legal Practice, Ahmad Ibrahim Kulliyah of Laws

From an economic perspective, seaweed farming and mangrove forest have various values including that of food, medicine and marine/forest products. However, from the perspective of environmental protection and natural resources conservation, their economic exploitation can cause adverse impact to the environment. The impact of seaweed farming and mangrove forest utilization on the environment, and effects of environment on their production have become important issues in Malaysia in recent years. There is evidence that environmental deterioration is a major threat to their product quality. There is also evidence that activities from seaweed farming and mangrove forest can cause environmental change or result in serious conflicts with other users in the aquatic or forest ecosystems. Malaysia needs to approach these two conflicting issues delicately considering that the country is one of the top biodiversity-rich nations that concerns with environmental protection, while at the same time strives for economic growth through the utilization of natural resources for economic purposes. One way of dealing with these conflicting issues is to consider seaweed farming and mangrove forest as conservation components from environmental legal perspective in a way which balance their protection and efficient use of resources. It is proposed that improvement within existing laws and their enforcement, and the adoption of policies for seaweed and mangrove conservation and development to be advocated as approaches to a more balanced protection and utilisation of these resources.

Keywords : *environmental law, marine pollution, seaweed farming, mangrove forest*

Category : Social Sciences and Humanities

1422 RATIONALIZATION OF EXPECTATIONS IN MULTI-NATIONAL JOINT VENTURES FOR CONSTRUCTION WORKS#

Sharina Farihah Hasan, *Quantity Surveying, Kulliyah of Architecture & Environmental Design*
Khairuddin Abdul Rashid, *Quantity Surveying, Kulliyah of Architecture & Environmental Design*
Kiyoshi Kobayashi, *Graduate School of Engineering, Kyoto University, Japan,*
Masamitsu Onishi, *Graduate School of Engineering, Kyoto University, Japan,*

Exhibitor : Sharina Farihah Hasan, Quantity Surveying, Kulliyah of Architecture & Environmental Design

Debates on the subject of international multi-national joint ventures for construction works is on going. Academics, researchers, practitioners and policy-makers argued and counter-argued, proposed and counter-proposed theories and view-points in their endeavor to make project coalitions in international multi-national joint ventures for construction works more effective and efficient. Such debates are to be expected. This is due to reasons including the various and continuous changes taking place in the world's economy and politics, in technology, in the way in which construction businesses are being conducted, projects implemented and in the way the public, key stakeholders and the governments, initiate, manage and satisfy or otherwise of their respective expectations arising from the projects they were involved. Through the presentation, the authors aim to discuss the idea of rationalization of expectation in multi-national joint venture for construction works. The authors' idea on the concept of rationalization of expectations of stakeholders in international multi-national joint ventures for construction works is still at the embryonic stage but they make no claim that the idea is having a pioneer in status. They acknowledge further and in-depth research and consultation are required before the idea could be moved to the next level. To this end the authors invite interested parties to provide ideas and constructive criticisms.

Keywords : *joint venture, rationalization, expectation, multi-national, stakeholders*

Category : Social Sciences and Humanities

1427 **THE CONCEPT OF NEW ECONOMIC GEOGRAPHY (NEG) AND ITS RELEVANCE IN ASEAN: A CASE STUDY ON ISKANDAR MALAYSIA#**

Sharina Fariyah Hasan, *Quantity Surveying, Kulliyah of Architecture & Environmental Design*
Khairuddin Abdul Rashid, *Quantity Surveying, Kulliyah of Architecture & Environmental Design*
Norhaibati Hashim, *Quantity Surveying, Kulliyah of Architecture & Environmental Design*

Exhibitor : Sharina Fariyah Hasan, *Quantity Surveying, Kulliyah of Architecture & Environmental Design*

The authors review, initially the concept of new economic geography (NEG) focusing on economic agglomeration and thereafter specifically on interaction among increasing returns at the plant level, transport costs and production factor mobility. These aspects of the concept of NEG are then examined in some details basing on available literature on the economies of ASEAN and thereafter at micro level by way of a case study on Iskandar Malaysia (IM). The outcome from the examination on ASEAN suggests that the current and intensive 'push' by the governments therein towards economic integration and the subsequent results in terms of narrowing of gaps in development among the member countries are among the key factors leading to the emergence of NEG. The outcome from the examination on IM further demonstrates the notion on the emergence of NEG i.e. IM does submit to the NEG agglomeration forces where currently available literature points out that economies of scale, lower transport cost and production labor mobility are among the factors underpinning the rapid rate of growth of the region, in this instant due to the ability of IM to attract key factors of production: labor, raw materials and funding and excellent and cheaper transportation costs within IM, Malaysia and ASEAN thus attracting labor and businesses from other parts of ASEAN and the world to move into and setting up manufacturing and other concerns in IM. In addition, the movements of these factors of production are also due to the economic congestion and high costs of production that are rapidly taking place in other ASEAN countries. Consequently, the authors are able to make an initial conclusion that NEG is happening in IM and in ASEAN and that it is possible that IM would be among the key economic hubs in ASEAN and East Asia. Methodology for the study reported in this presentation is through desk study of relevant literatures on NEG, ASEAN and Iskandar Malaysia. The initial conclusion was presented in a Seminar on Research Collaboration at the Graduate School of Engineering, Kyoto University, Japan, January 2012. Valuable comments and inputs from the Seminar have been incorporated in this presentation. In addition, further research on the topic is currently on-going.

Keywords : *ASEAN, factor of production, Iskandar Malaysia, new economic geography*

Category : Social Sciences and Humanities

1428

ISLAMIC BIOETHICS OF PAIN MEDICATION#

Mohammad Manzoor Malik, *General Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : *Mohammad Manzoor Malik, General Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

The Islamic discourse on pain medication is between denial and acceptance of pain medication. Some statements of Muslim scholars prohibit it and some allow it. The resolution on the issue is sought by synthesizing the views and legal maxims on the issue, which provide justification for pain medication. Islamic jurisprudence limits pain medication in terms of dosage and proportion, prohibiting overdosing the patient with medication that may directly cause the death. Opinions which go against pain medication seem to have ignored the levels of pain and its intensity that passes into the categories of “necessity” and “pressing need”. “Necessity makes the unlawful lawful. And “pressing needs are regarded as necessities ”. However, the permission on the basis of necessity should not exceed the due proportion and limits of permissibility. The necessity in case of pain medication has to be understood well and it should be applied to the legitimate and limited proportion. This insight is covered by the maxim: “Necessity is measured in accordance with its true proportions” . The principle of necessity that implies the permission of unlawful in necessary conditions is based on the Qur’anic statement: “He hath only forbidden you dead meat, and blood, and the flesh of swine, and that on which any other name hath been invoked besides that of Allah. But if one is forced by necessity, without willful disobedience, nor transgressing due limits, then is he guiltless. For Allah is Oft-Forgiving Most Merciful” (2:173). In this verse, the necessity is conditioned with two conditions: the permissibility should not transgress due limits and it should not be a willful disobedience.

Keywords : *pain medication, euthanasia, mercy argument, palliative Care*

Category : Social Sciences and Humanities

1429

SCIENCE AND THE SELJUKS#

Arshad Islam, Dept. History & Civilization, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Exhibitor : Arshad Islam, Dept. History & Civilization, Kulliyah of Islamic Revealed Knowledge and Human Sciences

The Seljuks arose in the 11th century CE in Central Asia, and created one of the largest Muslim Empires in the Middle East, unifying the Muslim lands of the Abbasid east and giving a new impetus to the course of Muslim history. They were the most prominent Turkic Muslim dynasty prior to the Ottomans, with dominion throughout central Asia, Iran, Iraq, Kirman, Syria and Anatolia. The present study traces the Seljuks' rise from a minor branch of a Turkic tribe through their incorporation into Muslim civilization. The paper argues that the reign of Sultan Jalaluddin Malikshah (1072-1092), in particular, was known for its patronage of the development of science and astronomy. It was Sultan Jalaluddin Malikshah, who was able to identify the mathematical genius in Omar Khayyam (1044-1123), invited him to his court and provided him with patronage and necessary intellectual environment for achieving un-paralleled feats in the field of mathematics and astronomy. The Omar Khayyam's work on astronomy commenced a new epoch starting from 10 Ramadan 471/17 March 1079 in astronomy. The paper in the main highlights those aspects of Omar al-Khayyam's contribution to scientific body of knowledge that were vital for the later developments in the field of mathematics and astronomy.

Keywords : *Science, Astronomy, Mathematics, Omar Khayyam, Islamic Calendar*

Category : Social Sciences and Humanities

1432 EFFECT OF FEDERAL CONSTITUTIONAL FRAMEWORK TO MARINE ENVIRONMENTAL LAW, POLICY AND ADMINISTRATION IN MALAYSIA#

Khairil Azmin Mokhtar, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Maizatun Mustafa, *Legal Practice, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Khairil Azmin Mokhtar, Civil Law, Ahmad Ibrahim Kulliyah of Laws

One main obstacle to provide effective law and administrative mechanism on the marine environment is the nature of the Federal system of government which divides legislative and executive powers between federal and state governments. Environment becomes a contentious subject matter because the division of power in the constitution neither put environment in federal nor state exclusive sphere. As a result there is uncertainty of jurisdiction on duties and responsibilities over environmental matter. Uncertainty and conflict of jurisdiction weaken the policy and administration and enforcement of law relating to environment. This research proposes several measures to overcome such problems so that we could improve and enhance the governance of matters regarding environment in Malaysia.

Keywords : *Constitution, Marine Pollution, Marine Environment, Environmental Law*

Category : Social Sciences and Humanities

1433 THE IMPLEMENTATION OF LOCAL PLAN AMONG STAKEHOLDERS IN DEVELOPMENT PLANNING : A STUDY OF KAJANG LOCAL PLAN#

MOHD ZIN MOHAMED, *URBAN AND REGIONAL PLANNING, Kulliyah of Architecture & Environmental Design*
NUR AULIA ROSNI, *MASTER OF SCIENCE AND BUILT ENVIRONMENT (MSBE), Kulliyah of Architecture & Environmental Design*

AZILA AHMAD SARKAWI, *URBAN AND REGIONAL PLANNING, Kulliyah of Architecture & Environmental Design*

Exhibitor : MOHD ZIN MOHAMED, Urban and Regional Planning, Kulliyah of Architecture & Environmental Design

Town and Country Planning Act 1976 (Act 172) defined local plan as a document that consist of detailed map and written statement which of the proposals for the use and development of land in an area under the local authorities. It explains the physical development such as land use, natural environment, infrastructure and utilities, landscape, transportation and other related matters vital to sustainable development at a macro level in a way that will directly affect the community. This study evaluates the level of Kajang Local Plan implementation in the local plan by the planning stakeholders. The planning stakeholders consist of Kajang Municipal Council, government agencies, private planning firms and the Economic Planning Unit officers as well as the public. The process includes the preliminary study on the Kajang Local Plan preparation process and its implementation in development planning. The method used for data collection are interview surveys, document analysis and semi-structured questionnaire surveys. The result of the survey will be analyzed based on the data collected. The analysis of the data will provide information on the implementation level of Kajang Local Plan by planning stakeholders in Kajang district and the recommendation arisen after the analysis will be use for enhancement not only for Kajang but for all state in Malaysia later on.

Keywords : *Development Plan Implementation, Planning stakeholders, development planning, Kajang Local Plan*

Category : Social Sciences and Humanities

1436 **PROPOSED METHODOLOGY TO ASSESS ISLAMICISATION OF HUMAN KNOWLEDGE (IoHK) AT INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA (IIUM) WITH SPECIFIC REFERENCE TO KULLIYAH OF ARCHITECTURE & ENVIRONMENTAL DESIGN#**

AZILA AHMAD SARKAWI, *URBAN AND REGIONAL PLANNING, Kulliyah of Architecture & Environmental Design*
KHAIRUDDIN ABDUL RASHID, *QUANTITY SURVEYING, Kulliyah of Architecture & Environmental Design*
MUHAMMAD KAMAL HASSAN, *Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : AZILA AHMAD SARKAWI, Urban and Regional Planning, Kulliyah of Architecture & Environmental Design

Much has been said about Islamicisation in any branches of human knowledge. It becomes a critical agenda nowadays due to 'dualism educational system' that we practiced. Being an Islamic University, the agenda was already in place since the establishment of IIUM in 1983. According to M. Kamal Hassan (2009), it is his personal preference to use the term 'islamicisation' instead of 'islamization' in discussing the human knowledge; the former generally connoted a process of conforming to Islam or being in harmony with Islam, while the latter was normally used in the sense of conversion to Islam. For that purpose, all courses offered in academic session 2010/2011 are being studied looking at its level and type of Islamic inputs based on fifteen modes of Islamicisation agenda practiced in IIUM. A study delved into the lecturers' perspectives of Islamic input in the course outline for fourteen weeks of teaching. Suffice to say that, some integrations between secular and Islamic form of knowledge is hoped to happen in our educational system without compromising the sacredness of Islam. However, the outcome of effort remaining unknown due to lack of methodology to assess the current achievement of Islamicisation of Human Knowledge (IoHK) in IIUM. Hence, a methodology to assess IoHK is urgently required so that the present status of IoHK in IIUM can be measured effectively. Therefore, it is the aim of the paper to present the proposed methodology towards assessing the IoHK in IIUM and it is hoped to be extended to elsewhere for the Islamicisation agenda.

Keywords : *IoHK, IIUM, methodology, modes of Islamicisation*

Category : Social Sciences and Humanities

1438 **PROTECTION OF ENVIRONMENTAL RIGHTS FOR SUSTAINABLE DEVELOPMENT: AN APPRAISAL OF INTERNATIONAL AND NATIONAL LAWS#**

Abdul Haseeb Ansari, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Zuhairah Ariff Abdul Ghadas, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Abdulkadir B. Abdulkadir, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Abdul Haseeb Ansari, Civil Law, Ahmad Ibrahim Kulliyah of Laws

There is a close nexus between sustainable management, use and utilization of the environment and safeguard of environmental rights. Both are equally important for the wellbeing of the human kind, but this warrants striking a balance between them. It is for this reason that law has to provide for abatement and control of degradation of the environment and protection of environmental rights. At international level, early human rights instruments made no direct mention of protection of environmental rights, but they, in effect, safeguard them. The later ones have direct mention about protecting these rights. The Aarhus Convention is notable among them. It specifies environmental rights as: rights to access to relevant environmental information, right to participate in environmental-related decision-making, and right to access to justice. This paper attempts to critically examine the provisions of these conventions. At national level, some states grant environmental rights under right to life enshrined in their constitutions with specific provision for protection of these rights. Some other states have imposed duties, through their constitutions, as not to pollute the environment. The authors are of the opinion that the effect of all is the same. The courts both internationally and nationally have played a proactive role in ensuring environmental rights are provided in various legal instruments. In some countries, judicial activism has demonstrated a mark distinction by relaxing the requirement of locus standi for facilitating public interest litigations, which has, in effect, brought justice to the doorsteps of the poor and least resourceful people, because availability of such rights will have no value unless procedural impediments are not eased. The authors are of the opinion that the requirement of locus standi should be relaxed in all countries in the interest of general public.

Keywords : *Environmental rights, sustainable development, international laws, national laws*

Category : Social Sciences and Humanities

1439 RIGHT TO SELF-DETERMINATION, DEMOCRACY AND THE SHARI'AH: AN EXPOSITORY STUDY#

Abdul Haeab Ansari, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Abdulfattai O. Sambo, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*

Exhibitor : Abdul Haeab Ansari, Civil Law, Ahmad Ibrahim Kulliyah of Laws

The self-determination right, which is a so-called third generation right, and which gained prominence in international law as *jus cogens* and *erga omnes* - as it has been recognized by a large number of international legal instruments and a good number of courts - was broadly used for decolonization and establishment of a number of sovereign states. In the contemporary world also, it is of great importance for establishing and working of democratic regimes and guaranteeing the practice of constitutionalism. But this right cannot be invoked to support secessionist movements, except for genuine cases like Palestine and Kashmir. The Shari'ah principles pertaining to establishment and governance of states based on a constitution made in line with it, i.e. the sovereignty has to be with Allah (s.w.t.), citizens, including non-Muslim citizens, will command various rights and duties, as determined in light of the Qur'an and Sunnah and commanded from time to time by the Khalifa in conformity with them, and there has to be a participatory democracy based on the concept of a Khalifa and a Majlis al-Mushawarah. According to Islam, a regime must uphold the law of Allah (s.w.t.) and must work for the interest of general public (*maslahah mursalah*). On the contrary, it will not have right to remain in power against the will of Allah. If the government is arbitrary, working against the Islamic tenets, or obliterating the interests of its people, people have the right to revolt against the regime and establish a government of their own choice. In fact, the basic principles pertaining to the right of self-determination in international law and the Shari'ah are co-extensive. But its *modus operandi* may differ under the two paradigms. It is for this reason that a democratic set up in Muslim states may be different from that of their Western counterparts.

Keywords : *Right to self-determination, democracy, the Shari'ah*

Category : Social Sciences and Humanities

1443 RESIDENTIAL LOCATION CHOICE OF INFORMATION COMMUNICATION AND TECHNOLOGY (ICT) EMPLOYEES IN KUALA LUMPUR, MALAYSIA#

Mohammad Mohit, *Department of Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*
Muaz Adnan, *Department of Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Mohammad Mohit, Department of Urban & Regional Planning, Kulliyah of Architecture & Environmental Design

This research attempts to study and analyse the residential location of 'Information Technology and Communication' (ICT) employees in Kuala Lumpur. Although there are certain truths that rent and commute cost determine households' residential location, other factors also influence the decision making. Therefore, this research analyses various factors and the extent to which these factors influence the residential location choice. It explores a different dimension, which is currently lacking in the existing studies by narrowing the subject to only ICT employees in Kuala Lumpur. For an end product, the research provides an essential understanding of residential location of ICT employees in Kuala Lumpur and a substantial step for further empirical research. Findings from this research are expected to assist in land use planning, housing and infrastructure policy formulation and also provide a general idea of future housing location for the private developers and other relevant agencies.

Keywords : Residential location, ICT employee, Commute cost, House rent.

Category : Social Sciences and Humanities

1445 MENTALLY DISORDERED CRIMINALS IN MALAYSIA: ISSUES AND CHALLENGES#

MAZLENA MOHAMAD HUSSAIN, *CIVIL LAW, Ahmad Ibrahim Kulliyah of Laws*
SAODAH WOK, *COMMUNICATION, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
ANISAH CHE NGAH, ,

Exhibitor : MAZLENA MOHAMAD HUSSAIN, Civil Law, Ahmad Ibrahim Kulliyah of Laws

The common belief among members of the society is that mentally disordered persons are dangerous and prone to be violent and commit crimes. The fact is that mental disorder is a treatable disease, and majority of the persons suffering from mental disorder do not commit crime. Nevertheless, in the event that they commit crime, the law provides special provisions to deal with mentally disordered criminals. This research is on the legal position of mentally disordered criminals in Malaysia, the criminal procedures governing them, the extent to which the law is implemented, and whether the law in Malaysia is consistent with the guidelines set by the World Health Organization or not. Even though this research is a pure legal research, the data is collected by interviewing the medical officers working at the psychiatric hospitals and observing the healthcare services provided to the mentally disordered criminals detained at the hospitals. The objective is to find out the opinion of the medical experts handling mentally disordered criminals on the adequacy of the existing law. The objective of the observation is to find out whether or not the law on the mentally disordered criminals is properly implemented. The findings revealed that the law provides special provisions for mentally disordered criminals. It is the duty of the Court to determine the state of mind of the accused both at the time of the commission of the crime and at the time of the trial. Mentally disordered criminals are excused from any criminal liability if they are unsound at the time of the commission of the crime. If they are unsound at the time of the trial, they are not fit to stand for trial. Consequently, they will be admitted to the psychiatric hospital for treatment. There are various protections and rights awarded to mentally disordered criminals. The medical experts are of the opinion that the law in Malaysia is adequate to address the needs of the mentally disordered criminals. The legal protections are consistent with the guidelines set by the World Health Organization. The objective is to ensure that the mentally disordered persons are not discriminated and treated as fairly as possible even if they have committed crime. The law aims to provide proper care and treatment to them so that they will be able to return to the society and lead a normal life within the society.

Keywords : *mentally disordered criminals, forensic patients, insane criminals, psychiatric services*

Category : Social Sciences and Humanities

1448 SOCIAL AND CULTURAL IMPACTS OF GRAND MOSQUE DURRES ON THE DEVELOPMENT OF MUSLIM COMMUNITY, ALBANIA.#

Ali Raza Soomro, *Architecture, Kulliyah of Architecture & Environmental Design*
Brunilda Basha, *Architecture, Kulliyah of Architecture & Environmental Design*
Srazali Aripin, *Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Ali Raza Soomro, Architecture, Kulliyah of Architecture & Environmental Design

The first contacts of Albanians to Islam are proven to be relatively early in the medieval centuries. The Islamization of Albanian Community went all the way through progressive growth as it is reflected from the customs of the community as well as from their architecture. The mosques remained the focal points for teachings of Islam and were considered as the core of the Muslim society as the mosques played the role not only for growing peoples religious needs but also had significant impact on the overall development of the community. Unfortunately the role of the mosques at the present time has been minimized only in performing daily prayers and few other religious activities. This paper attempts to analyze the social and cultural role of the Great Mosque Duress, Albania and how far it has the impact on the development of the Muslim Community living in Durres, Albania

Keywords : *Mosque, Social and Culture development, Muslim Community, Islamic Architecture*

Category : Social Sciences and Humanities

1450 COMMUNITY BASED SLUM UPGRADING APPROACH IN MALAYSIA#

Mohammad Mohit, *Department of Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*
Izzati M Bakri, *Department of Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Mohammad Mohit, Department of Urban & Regional Planning, Kulliyah of Architecture & Environmental Design

Being one of the developing countries in Asia, slum/squatters and housing are two main subjects that government focuses in each development programme in Malaysia. Nonetheless, undoubtedly Malaysia is facing a crisis of urban squatters which has become a challenge for the local authorities as well as the federal government. Thus, the existence of slums and squatters is due to rapid development such as urbanization. This is also due to the fact that the provision of housing and related services can not keep pace with the demand. Throughout the twentieth century, different housing policies and approaches have been developed all over the world and they have changed in time in response to the changing housing problems. Therefore, slum/ squatters upgrading approach is one of the approaches available on how the Malaysian government can strengthen the responsibilities of local authorities, planning authorities and other related government agencies can collaborate towards providing a quality and affordable housing to its citizens. Hence, this research demonstrates how slum/squatters upgrading can be the most cost effective approach towards providing housing to the urban poor people and it can serve as a community based approach in response to the improvement of living environment for affordable housing and provision of sustainable settlement for slums and squatter dwellers in Malaysia

Keywords : *Slum upgrading, Squatters, Slums, Housing policies, Community-based approach*

Category : Social Sciences and Humanities

1452 **MICROCREDIT AS A STRATEGY FOR POVERTY REDUCTION: A CASE STUDY OF THE
SUDAN#**

Garoot Suleiman Eissa, *Political Science, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Garoot Suleiman Eissa, Political Science, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Microcredit as a Strategy for Poverty Reduction: a case study of the Sudan-A Abstract Sudan is a low income country characterized by high incidence of poverty which currently stands at about 46%. This situation is paradoxical in view of its substantial resource endowments. Sudan government has continued to introduce programmes aimed at alleviation of poverty which were generally characterized by lack of effectiveness. Shortage of investible funds was an important cause of perpetuation of poverty. The traditional approach towards poverty reduction centered on national development programmes designed to enhance economic growth and improve the standards of living. In addition the Islamic institution of Zakat was utilized to assist poor families start income generating projects. However, recently a more ambitious poverty focused microcredit programme has been launched. Thus, billions of dollars were earmarked for microcredit to help the poor obtain investible resources which can be directed towards starting income generating projects or upgrading and modernizing present undertakings. Several institutions were entrusted with implementation with commercial banks as the main lending institutions. This paper argues that today there is no shortage of funds earmarked for microfinance in the Sudan. But the prevailing institutional inadequacies would not allow such substantial outlays to have much impact on poverty reduction. The paper reviews the history of microcredit and microfinance in the country; highlights the role of different institutions in provision of microcredit. Present banking arrangements are deemed unsuitable for microcredit or microfinance. Other public sector institutions lacked capacity to engage in microcredit. Zakat Chambers and NGOs have capacity and experience in dealing with the poor but lack resources. An attempt is made in this paper to figure out the possible policy outputs. Recommendations center on institution building and enhancement of administrative capacity for all institutions so that microcredit programmes can bear fruit to benefit the poor and contribute to the country's economic growth. Keywords: Sudan government, microcredit, microfinance, poverty reduction, Zakat, Microfinance institutions, institutional capacity. Dr. Garoot Suleiman Eissa, Assoc. Professor Department of political science, International Islamic University, Malaysia

Keywords : *Sudan government, microcredit, microfinance, poverty reduction, Zakat, Microfinance institutions, institutional capacity.*

Category : Social Sciences and Humanities

1455

USE PATTERN ANALYSIS IN GREEN OPEN SPACES OF MALAYSIA#

Nurhayati Abdul Malek, *Landscape Architecture, Kulliyah of Architecture & Environmental Design*

Exhibitor : Nurhayati Abdul Malek, Landscape Architecture, Kulliyah of Architecture & Environmental Design

Housing development in Malaysia is bounded to obey several acts and legislation which among them is the Planning Guidelines and Standards set out by the Town and Country Planning Department of Malaysia. This guideline serves as a written statement that contains guides that become reference in advancing any development. It is used by local planning authorities in controlling activities in land development for uniform, comfortable and safe execution. Among the most important guidelines closest to the policy in providing recreational area to a community is the Guideline on Recreation and Open Spaces, under Act A933 (Garispanduan Tanah Lapang dan Rekreasi, Pindaan 1995, Akta (A933), Seksyen 2(f), Bil No. 21/97 and The Town and Country Act, 172 (Akta Perancangan Bandar dan Desa, 1976 (Akta 172.)). The policy also calls for recreational areas to be gazetted and for their development to be monitored, for environmentally sensitive areas to be protected and for green areas to be established as buffer zones to limit urban development. However, the specific guidelines in developing Neighbourhood Parks are hardly stated. Merely an indication of a general and very broad guideline which stipulates a 10% of open spaces and recreation must be provided in any residential development, commercial development as well as in industrial developments. This is what Malaysia is experiencing now. Housing development especially in Malaysia has now grown to a stage where location relative to the nearest park or green area contributes to the most highly regarded property. This research has concluded that in order to explore the current Malaysian policy on green open spaces an analysis of use pattern of the users who uses the green open spaces is needed. This research is important as it helps to verify how green open spaces could complement the existing planning guidelines into developing a more user specific needs in all outdoor recreational venues.

Keywords : *Green Open Spaces, Neighbourhood Parks, Use Patterns, Policy.*

Category : Social Sciences and Humanities

1460 THE IMPACT OF MENTAL HEALTH ACT 2001 AND REGULATIONS TO MENTALLY DISORDERED PERSONS IN MALAYSIA#

MAZLENA MOHAMAD HUSSAIN, *CIVIL LAW, Ahmad Ibrahim Kulliyah of Laws*
SAODAH WOK, *COMMUNICATION, Kulliyah of Islamic Revealed Knowledge and Human Sciences*
ANISAH CHE NGAH, ,

Exhibitor : MAZLENA MOHAMAD HUSSAIN, Civil Law, Ahmad Ibrahim Kulliyah of Laws

Prior to 2001, there were three Ordinances governing mentally disordered persons in Peninsular Malaysia, Sabah and Sarawak. The Mental Health Act 2001 and Regulations (2001) repealed the three Ordinances and provide a standard mental health law to be implemented to all mentally disordered persons in Malaysia. The MHA 2001 is considered as more humane as it provides various rights and protection to the mentally disordered persons. These rights and protections help to reduce the stigma that is usually associated with the mentally disordered persons. Hence, it is very important to study the impact of MHA 2001 to mentally disordered persons in Malaysia. This research is a pure legal research, employing mix-method data collection. Interviews are conducted at the Legal Department of the Ministry of Health and psychiatric hospitals to get the views of the relevant parties who are involved in the implementation of the MHA 2001. Meanwhile, observations are to verify the extent to which MHA 2001 is implemented to the mentally disordered persons. The research reveals that the MHA 2001 has provided many advantages to the mentally disordered persons in Malaysia. First, the MHA 2001 does not only provide the admission and detention of mentally disordered persons but also their care, treatment, rehabilitation, control and protection. Second, since the responsibility to provide mental healthcare is now given to the public and private hospitals, the society has more option to seek mental health treatment. In addition, there are various types of mental healthcare and treatments that the mentally disordered persons can opt for. Third, the various rights and protections conferred by MHA 2001 to the mentally disordered persons have improved their status. They are now viewed as people with special needs instead of people who are dangerous and must be kept in mental institutes. This helps to reduce the stigma that is usually associated with mentally disordered persons. Lastly, the regular assessment of the mental state of patients ensures that mental patients will not be detained longer than necessary.

Keywords : *Mental disorder, psychiatric treatments, mental healthcare, rights of psychiatric patients.*

Category : Social Sciences and Humanities

1462 MORAL CHARACTER OF AN INTELLECTUAL MUSLIM PERSONALITY: SCALE VALIDATION#

Fawziah K. al-Ammar, *Psychology, Institute of Education*
Ismaiel Hassanein Ahmed, *Language and Literacy, Institute of Education*
Nordin Mohamad Sahari, *Psychology, Institute of Education*

Exhibitor : Ismaiel Hassanein Ahmed, Philosophy & Educational Leadership, Institute of Education

The study investigate what constitute indicators of the Moral Character of the Intellectual Muslim (MCIM) as given in the Qur'an, and found nine character traits that can be grouped under the rubrics of Interpersonal Characteristics, Self-Purification Characteristics and Endurance Characteristics. The results of Confirmatory Factor Analyses on data collected from 312 Yemeni secondary school teachers confirm the threefold dimensionality of MCIM. There are several implications from the study that call for further research.

Keywords : *Moral Character, intellectual, Muslim personality.*

Category : Social Sciences and Humanities

1463 PARENTAL INVOLVEMENT IN CHILDREN'S SCHOOLING : A CASE STUDY IN AUSTRALIAN SCHOOLS#

Che Noraini Hashim Hashim, *Education, Institute of Education*
Sharifah Sariah Syed Hassan Syed Hassan, *education, Institute of Education*
Marj Horne Horne, *Education, Institute of Education*

Exhibitor : Che Noraini Hashim Hashim, Dept of Educational Psychology & Counseling, Institute of Education

This study examines the primary and secondary school students' responses towards their parental involvement in their school related activities namely; volunteering, learning at home, communication, parenting and monitoring. Underpinning the Epstein framework of parental involvement, this study seeks to investigate the levels of parental involvement based on mother, father, both parents or siblings (others). A total of 800 questionnaires were distributed to primary students and 500 were distributed to secondary school students in Melbourne, Australia. However, 401 primary students and 376 secondary school students responded and 8 teachers and 4 head teachers were selected for the interviews to triangulate the quantitative research. Descriptive and inferential statistics were used to answer the research questions. This research has formulated five hypotheses with qualitative data to support the findings. Implications and future research are discussed.

Keywords : *parental involvement , volunteering, monitoring, communication, parenting*

Category : Social Sciences and Humanities

1464 DESIGN, FORMULATION AND IMPLEMENTATION OF AN ENGLISH LANGUAGE CURRICULUM FROM AN ISLAMIC PERSPECTIVE#

Mohamed Ismail Ahamad Shah, *English Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Ainon Jariah Muhamad, *English Language Division, Center for Language and Pre University Acad. Development*
Shahar Mohamed Ismail, *Organization Renewal Inc,*

Exhibitor : Mohamed Ismail Ahamad Shah, English Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Curriculum development plays an important role in any educational enterprise and it is an integral aspect of an educational institution. It spells out the crucial components which make up the curriculum and the detailed process in attaining the ultimate objectives of the curriculum. This paper focuses on the development of an English language curriculum, from an Islamic perspective. This paper will look at the philosophy, vision and mission of the International Islamic University Malaysia (IIUM) and in what way these objectives can be achieved through a language curriculum. It is crucial that the English language curriculum reflects the aims, educational purpose and Islamic ethos of the university. This paper will also offer suggestions relating to the key components or critical elements that will constitute the foundation of a language curriculum from an Islamic perspective, with a focus on the role of the educator in facilitating language education as well as content factors that are necessary for the development of a language curriculum from an Islamic perspective.

Keywords : *language curriculum, Islamization of knowledge, educators, materials development*

Category : Social Sciences and Humanities

**1465 THE ACTION PLAN OF FULL EMPLOYMENT FOR PERAK - ACTION, STRATEGIES,
PROGRAMME & PROJECTS#**

Mariana Mohamed Osman, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*
Noor Suzilawati Rabe, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : Mariana Mohamed Osman, Urban and Regional Planning, Kulliyah of Architecture & Environmental Design

The pace of economy growth in Malaysia is increasing. The progress of its economic, social and government transformation brings Malaysia closer to achieve the Vision 2020. However, one of the main socio-economic problems facing the nation at present is unemployment. Unemployment in Malaysia is becoming increasingly serious. From the perspective of macro-economic, employment policy and its implementation are the main economics tools that can help the country policies and strategies making. This research intends to form an action plan as one of the efforts to alleviate poverty in Perak. The findings from this action plan are believed to be very useful towards contributing the enhancement policy and strategies undertaking of functions and others. Besides, it also contributing the enhancement of several important groups; ranging from the government and Perak state. The findings indicate that the competition with foreign workers and never had opportunity to attend job interviews as the main causes of unemployment among respondents in Perak. In addition, background of education influence respondents' decision making to choose work sector. Nevertheless, result of survey on stakeholders indicates the literacy and university enrichment programme as the most suitable enhancement programme for unemployed in Perak.

Keywords : *Unemployment, economics, social development, regional economic development; policies, strategies*

Category : Social Sciences and Humanities

1466 MELBOURNE HALAL MAP: A CITY GUIDE FOR MUSLIM TOURISTS#

Khalilah Zakariya, *Dept. of Landscape Architecture, Kulliyah of Architecture & Environmental Design*
Shahrul Radzi Mohd. Yusof, *Hijaureka Landscape Architects,*

Exhibitor : Khalilah Zakariya, Dept. of Landscape Architecture, Kulliyah of Architecture & Environmental Design

Tourist map is an important product in the tourism industry. It communicates the locations of specific attractions and facilities to tourists. Over the years, more Muslims travel, whether for tourism, education, business or migration. However, not many cities in the world accommodate the needs of Muslim tourists, particularly in non-Muslim cities. Existing tourism guides and websites for Muslim tourists currently focus on halal eateries. Thus, this work develops a city guide for Muslim tourists by mapping prayer facilities, tourist landmarks and supermarkets, in addition to the locations of halal eateries. Through a case study in Melbourne, Australia, this research employed mapping as a method to record and reveal information, and to construct a way of seeing. The “halal map” becomes an end product to guide Muslim tourists in Melbourne. Muslim tourists can travel more conveniently with the map, as they can plan where to eat, pray and buy goods that they may need during their visit to the city. The “4-in-1” map for Muslim tourists in Melbourne is portable and can guide tourists to plan their activities and traveling routes. The concept of the halal map can be adopted for niche tourism in Malaysia and other Muslim/non-Muslim countries.

Keywords : *halal; map; Muslim; tourism*

Category : Social Sciences and Humanities

1474 SHARIAH COMPLIANT WELLNESS CENTRE: ISLAMIC SPA PRACTICE (ISP)#

Noriah Ramli, *International Institute for Halal Research and Training (INHART), Reseach Institute*
Faqihah Salleh, *International Institute for Halal Research and Training (INHART), Reseach Institute*
Saiful Mohammad Nizam Azmi, *International Institute for Halal Research and Training (INHART), Reseach Institute*

Exhibitor : Noriah Ramli, International Institute for Halal Research and Training (INHART), Reseach Institute

In advent of Malaysia's development in making the country as one of the high achievers in business area all around the world, the spa practice industry has taken its place in the very main stream of money-making world. The need of spa industry has increased proportional with the increasing of stress among employees yielded while conducting laborious work demands. Years ago, this industry revolved around women but today the fact has changed. Men with the awareness of possessing beauty and healthy lifestyle have joined the ship along with women. With respect to Muslim consumers, the awareness and concerns on practicing halal lifestyle and living in an Islamic environment within the domestic boundaries is no longer true. The demand is now extended to various services including beauty spa and health and wellness centre. And with this, the necessity of Islamic Spa Practice (ISP) occurred as to meet the demand made by Muslim consumers who seeks beauty and healthcare treatment abides to shariah principles. INHART and Ainaa-Ailaa Group Sdn. Bhd., owning a franchise of Nu'della Malaysian Holistic Spa have mutually collaborated to uphold and enhance the concept of shariah compliant wellness centre, in general and ISP, in specific.

Keywords : *Islamic Spa Practice (ISP), shariah compliant wellness centre, beauty and health treatment, Islamic and halal lifestyle*

Category : Social Sciences and Humanities

1477 IT GOVERNANCE AT HIGHER EDUCATIONAL INSTITUTIONS IN MALAYSIA: A CASE STUDY OF IIUM#

Husnayati Hussin, *Information Systems, Kulliyah of Information & Communication Technology*
Binyamin Adeninyi, *Information Systems, Kulliyah of Information & Communication Technology*

Exhibitor : Husnayati Hussin, Information Systems, Kulliyah of Information & Communication Technology

Information systems have become a global phenomenon to all organisations and as investment into it increases, so the need to govern its use. Thus, the study investigates how IIUM, as a public and international higher educational institution in Malaysia, practices IT governance in its bid to align IT resources with the overall business mission and vision of the organisation. In this study, interviews were conducted with several key staff who are involved with IT governance, and reviews were done on the websites and relevant documents as methods of data collection. Data were analysed using content analysis digging underlining themes. The findings indicate that IIUM perceived IT governance as important and has established a formal unit for IT governance and certain mechanisms are already in place. Nevertheless there are areas that IIUM needs to improve such as redefine the role of CIO and to implement more effective IT strategic planning and implementation. The findings are useful to other higher education institutions in Malaysia in their efforts to improve IT governance.

Keywords : *IT governance, higher education, IIUM, Case Study*

Category : Social Sciences and Humanities

1482 PUBLIC RELATIONS (PR) AND CORPORATE SOCIAL RESPONSIBILITY (CSR) : A CRITICAL PERSPECTIVE#

Zeti Azreen Ahmad, *Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Zeti Azreen Ahmad, Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences

ABSTRACT Public Relations (PR) and Corporate Social Responsibility (CSR) in Malaysia: A Critical Perspective Zeti Azreen Ahmad, Ph.D. Department of Communication, KIRKHS International Islamic University Malaysia azreen@iium.edu.my This paper presents an empirical inquiry that explicitly exposes the relationships between corporate social responsibility (CSR) practice in Malaysia and the scope of public relations (PR). The study embraced a critical approach which offers alternate readings in Malaysian PR literature which are dominantly quantitative in nature. The focus is on how history, socio-political, economic, cultural and organizational contexts shape the practice of CSR and affect the scope and function of PR in pursuing the practice. This empirical work has employed semi-structured interviews among PR managers and CSR managers working in renowned CSR organizations in Malaysia. In addition, the study analyses executives' messages in CSR reports and later triangulated with interview findings that helped to achieve a rich description of the topic under study. The literature revealed CSR practice is a recent phenomenon in Malaysia whereby the government has been a major driver in its development. Drawing from Malaysian experience, economic growth is fundamental to ensure a fair distribution of wealth among multi-races in Malaysia that perceived imperative to preserve national unity. In this respect, CSR initiatives have been largely undertaken to achieve the long term survival of businesses that consequently drive the nation's economy in a long term. CSR has been primarily constructed as a means to create business competitiveness and a symbol for success. This has been widely accepted among business firms in Malaysia thus become ideological. At the same time, PR role was found dominant in promoting the practice of CSR. More often than not, such role appears to be working at the advantage of the dominant groups i.e., business and government. Nevertheless, how PR promotes mutual interests of business and society through CSR remain obscure. In this paper, I argue that the motivation to promote business interests serves as the key stumbling block for PR in creating sustainable impact and value to other than it paymaster and financial stakeholders. This study suggests that it is time for PR to reflect on this common practice particularly in terms of its ethical implications to client organizations and PR profession as a whole. The finding of this study was a clear example that CSR development is parallel to the history, socio-cultural and values hold by a specific nation thus challenged the idea that CSR in developing countries is purely a Western influence. Malaysia has a distinctive practice of CSR that could be largely viewed as a state project that promotes government's aspiration to develop the nation. This study has contributed to the literature by providing empirical evidence of the underlying motives behind the pursuit of CSR among businesses in the country. It also offers empirical data on PR roles in pursuing CSR in Malaysia – something that has received very little attention in the literature despite PR's perceived potentials in spearheading the function.

Keywords : *Public relations (PR), Corporate social responsibility (CSR), nation building, competitiveness*

Category : Social Sciences and Humanities

1487 ISLAMIC FOOT PRINT IN NON- ISLAMIC LANDT;THE ARCHITECTURE OF HYBRIDITY,ASSIMILLATION AND RESILIENCE#

Md Mizanur Rashid, *Architecture, Kulliyyah of Architecture & Environmental Design*

Exhibitor : Md Mizanur Rashid, Architecture, Kulliyyah of Architecture & Environmental Design

The Adelaide Mosque (1888-1889), the first urban mosque built in Australia, was founded by Afghan cameleers whose contribution to the exploration of Australia's vast desert interior is largely untold. The cultural significance of the mosque is recognised locally and it is identified as "one of the few relics of Afghan immigration to South Australia and embodies in built form Afghan and Mohammedan culture which is otherwise not significantly represented" (City of Adelaide Heritage Study Item No. 159, Adelaide Mosque file, Heritage South Australia). However, despite this recognition, this unadorned bluestone structure has failed to draw the attention of architectural historians in surveys of 'Islamic' architecture. The scope of recent surveys in this field is increasingly inclusive. However, very few studies focus on the architecture of Muslim communities in regions where Islam is not the predominant faith, especially in the southern hemisphere. The Adelaide mosque, and many others, is excluded from the historical record despite the instrumental role it played in the life of Muslim settlers. This absence raises questions about gaps, or histories untold, as well as myths received, in histories of 'Islamic' architecture that raise questions about the truth-value of the past. There is a need to examine hybridised forms and shared architectural narratives to counter the myopic but persistent representation—or fabulation—of supposedly authentic, largely Arab-centric, forms of 'Islamic' architecture. This paper argues, then, that new theoretical frameworks are required to interpret this architectural hybrid that is, we argue, typical rather than exceptional. Through a case study of the Adelaide Mosque, this study critically re-examines the reductive but pervasive conceptions of 'Islamic' Architecture that obscure the historical processes of hybridization and its diverse morphological outcomes to comprehend the process of resilience and assimilation through which architecture is shaped in a particular context.

Keywords : *Islamic Architecture, Hybridization, Early Muslim Community in Australia*

Category : Social Sciences and Humanities

1493 MUSLIM FRIENDLY HOSPITALITY SERVICES: SHARIAH COMPLIANT TOURISM#

Noriah Ramli, *International Institute for Halal Research and Training (INHART), Reseach Institute*
Saiful Mohammad Nizam Azmi, *International Institute for Halal Research and Training (INHART), Reseach Institute*
Faqihah Salleh, *International Institute for Halal Research and Training (INHART), Reseach Institute*

Exhibitor : *Noriah Ramli, International Institute for Halal Research and Training (INHART), Reseach Institute*

Shariah compliant tourism is a newly developing area in the “halal business”. Muslim travelers prefer Muslim destinations where variety of clearly labeled halal food at affordable prices are available; safe, clean and convenient means of transport as well as conveniently accessible prayer lounge during travel and at the final destination, including at shopping areas; and Muslim friendly hotel facilities such as a copy of the Holy Qur’an, Makkah-prayer direction or Qiblah pointing signage in each room, dedicated family dining area, dedicated non-smoking area, swimming pool for ladies or certain dedicated hours for male and female to use the swimming pool. This is an area of which very few or little attention is given whether by the administration, companies, NGOs as well as the general public in Malaysia. Although Malaysian is known as one of the countries that is serious about halal food, halal certification and halal standards but these alone are not enough to ensure the success of making Malaysia as centre for halal tourism. In order to be successful, it is necessary to ensure adequate infrastructure (legally and administratively) in preparing Malaysia as the destination of choice. It is no doubt that Malaysia has a lot of good and excellent tourism destination but not all places are equipped with infrastructure that encourages shariah-compliant tourism. Despite the growing number of standards and initiatives that support sustainable tourism, none addresses the needs of Muslim friendly hospitality services in the hotel industry. Thus, the development of Muslim Friendly Hospitality Services training modules, training programmes, Malaysian Standards, shariah compliant ideal rating are needed to boost Malaysia’s position as a true global halal hub. In addition, this will help to increase the number of Muslim tourists from all over the world to Malaysia as a prominent destination for shariah compliant and halal tourism.

Keywords : *Muslim Friendly Hospitality Services, shariah compliant tourism, halal tourism, Muslim tourist destination guidelines, Islamic and halal lifestyle.*

Category : Social Sciences and Humanities

1495 CONCEPTUALIZING TRUST-BASED ONLINE BEHAVIOR MODEL FOR MUSLIM CONSUMERS#

Mohd Adam Suhaimi, *Information Systems, Kulliyah of Information & Communication Technology*
Dr Husnayati Hussin, *Information Systems, Kulliyah of Information & Communication Technology*
Muhd Rosydi Muhammad, *Information Systems, Kulliyah of Information & Communication Technology*
Marjan Muhammad, *Reseach Institute*
Kalthom Abdullah, *Business Administration, Kulliyah of Economics and Management Sciences*
Mohamed Razi Jalaldeen, *Information Systems, Kulliyah of Information & Communication Technology*

Exhibitor : Mohd Adam Suhaimi, Information Systems, Kulliyah of Information & Communication Technology

Muslim consumers are beginning to be more concerned whether the current e-commerce processes are mixed with un-Islamic elements such as, riba (interest), gharar (uncertainty), and Maisir (gambling). To clarify the misconception, it is suggested that an assurance be given by a reputable Islamic religious authority to the effect that Internet seller complies with an Islamic law (Shariah) -compliant e-commerce model. However, Muslim consumers' perception in this regard is yet to be measured. To fill this gap, the present work presents a comprehensive testable research framework that can be used to investigate the Muslim consumers' perceived behavior in e-commerce environment. In addition to third party assurance from an Islamic religious authority, the other factors such as trustworthiness of Internet sellers, perceived risk of online transaction and quality of the websites also have been included in the framework.

Keywords : E-commerce, Online Trust, model, Online Purchase, Muslims

Category : Social Sciences and Humanities

1496 TOURIST PERCEPTION ON CONNECTIVITY OF MARKET SQUARE HERITAGE TRAIL, KUALA LUMPUR, MALAYSIA#

MANSOR IBRAHIM, *URBAN AND REGIONAL PLANNING, Kulliyah of Architecture & Environmental Design*
Siti Nur 'Alia Ahmad Thani, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*
Lukman Hakim Mahamod, *Urban and Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : MANSOR IBRAHIM, Urban and Regional Planning, Kulliyah of Architecture & Environmental Design

This study looks at the connectivity of pedestrian networks in urban design context of the Market Square Heritage Trail, Kuala Lumpur, Malaysia. The objectives of this are: (1) to identify the importance of heritage trail connectivity in urban design context; (2) to identify issues and problems regarding the Market Square heritage trail; (3) to analyze the tourist perceptions regarding the heritage trail connectivity; and (4) to recommend the improvement for the heritage trail in the study area. The methodology adopted in the study is based on literature review, field observation and survey questionnaire on the tourists. It has been identified from the study that the Market Square has a poor connectivity. Besides, from the urban design viewpoint the study area is still lacking in some of the important character and needing further improvement. In order to enhance and increase the connectivity of the Market Square Heritage Trail, a proper pedestrian linkage in terms of design treatment, continuity, and signage placing as well façade improvement of the selected buildings are suggested.

Keywords : *Heritage trail, pedestrianization, tourist perception, pedestrian connectivity.*

Category : Social Sciences and Humanities

1499 MEASUREMENT INVARIANCE ANALYSIS OF SECOND ORDER FACTOR MODELS OF FINANCIAL EXCLUSION AMONG MUSLIM MICRO-ENTREPRENEURS IN ILORIN, NIGERIA.#

Abideen Adeyemi Adewale, *Finance, Kulliyah of Economics and Management Sciences*

Ahamed Kameel Mydin Meera, *Finance, IIUM Institute of Islamic Banking & Finance*

Pramanik Ataul Huq, *Economics, Kulliyah of Economics and Management Sciences*

Fatima Salami, *Finance, Kulliyah of Economics and Management Sciences*

Exhibitor : Abideen Adeyemi Adewale, Finance, Kulliyah of Economics and Management Sciences

Following an exploratory and confirmatory factor analyses, this study examines a measurement invariance of a second-order factor models of financial exclusion among selected respondent Muslim micro-entrepreneurs in the inner city of a densely Muslim populated area. Specifically, Ilorin, Kwara State, North Central geo-political zone of Nigeria was the study area in this regard. Data elicited via a survey questionnaire was analysed using both the SPSS 19.0 and Amos 19.0 software. The study revealed that financial exclusion as a second order factor is indicated by debt phobia, religion, financial complacency, affordability and eligibility factors. Measurement invariance was tested based on gender via a set of hierarchically structured levels: (a) configural invariance, (b) metric invariance of both the first-order and second-order models, (c) structural covariance of both the first-order and second-order models, (d) residuals of both the first-order and second-order models. The groups were found to be invariant across the models. However, based on Wald z-test at alpha of 0.0001, the latent mean difference tests of the second order model indicates that the female are more excluded compared to the males. This provides a further justification for the focus on women of financial inclusion programmes.

Keywords : *Financial Citizenship, Cultural Capital, Eligibility, Affordability, Factorial Invariance*

Category : Social Sciences and Humanities

1502 CONSUMER LEGAL LITERACY IN MALAYSIA: AN EXPLORATORY STUDY AMONG UNIVERSITY STUDENTS#

naemah amin, *Civil law, Ahmad Ibrahim Kulliyah of Laws*

Azimon Abdul Aziz, *Department of Business management, Kulliyah of Economics and Management Sciences*

Elistina Abu Bakar, *Department of Consumer Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : naemah amin, Civil Law, Ahmad Ibrahim Kulliyah of Laws

This study aims to identify the level of knowledge, perceptions and attitudes of consumer protection law among students of public universities in Klang Valley. A total of 1000 respondents were selected through multi-stage random sampling and the data were collected using a self-administered questionnaire. The respondents' knowledge is measured by the accuracy of their answers to basic questions on consumer protection laws. These include knowledge on consumer basic rights and responsibilities, the legal framework, protection in supply of goods and services, unfair trade practices and redress mechanisms. The findings of the study reveal that only 31.5% of respondents have a high level of knowledge whereas the rest are just average (38.0%) and low (26.3%). Study results also indicate that there are significant differences between courses, school background and taking consumerism related subjects to respondent's level of legal literacy. The findings of this study are important for universities, NGOs and the government especially the Ministry of Domestic Trade, Cooperatives and Consumerism in developing literacy awareness programs to empower students to become smart consumers in the market.

Keywords : *consumer, legal literacy, consumer protection law*

Category : Social Sciences and Humanities

1503 METACOGNITIVE LISTENING STRATEGY USE OF IIUM PRE-SESSIONAL STUDENTS#

Faridah Abdul Malik, *English Language, Center for Language and Pre University Acad. Development*

Exhibitor : *Faridah Abdul Malik, English Language, Center for Language and Pre University Acad. Development*

A survey was conducted on 179 ESL learners undergoing the pre-sessional English programme at the IIUM to investigate if they employed metacognitive strategies when listening to English in the classrooms and to determine if patterns of metacognitive strategy use differ between those categorised as skilled and less-skilled listeners. The metacognitive strategies were identified from the responses that they made on the Metacognitive Listening Strategy Questionnaire administered to them. Results show that these learners reported using all of the metacognitive strategies listed in the questionnaire. Additionally, the results also show that skilled listeners generally adopted more metacognitive strategies of planning, monitoring and evaluation than less-skilled listeners. This concurs with findings from previous research.

Keywords : *metacognitive strategies, listening comprehension, skilled and less-skilled listeners.*

Category : Social Sciences and Humanities

1510 FIRE RISK ASSESSMENT OF HERITAGE BUILDING – PERSPECTIVES OF BUILDING STAKEHOLDERS#

Md Najib Ibrahim, *Department of Applied Arts and Design, Kulliyah of Architecture & Environmental Design*
Mohamad Ridzuan Yahya, *Applied Arts and Design, Kulliyah of Architecture & Environmental Design*
Azrin Azrin Mohd. Din, *Department of Quantity Surveying, Kulliyah of Architecture & Environmental Design*
Rodzyah Rodzyah Mohd. Yunus, *Applied Arts and Design, Kulliyah of Architecture & Environmental Design*
Mohd. Sharifuddin Ibrahim, *Department of Quantity Surveying, Kulliyah of Architecture & Environmental Design*
Maisarah Ali, *Manufacturing and Materials Engineering Department, Kulliyah of Engineering*

Exhibitor : Mohamad Ridzuan Yahya, Applied Art and Design, Kulliyah of Architecture & Environmental Design

Heritage building is very important in preserving the culture and to the tourism potential. Hence, the proper budget allocation to the prevention of fire loss is critical. Budget allocation is normally based on fire risk assessment. The assessment is interpreted based on the perception of stakeholders. Using structured interview and analytic hierarchy process (AHP) this study identifies and explains the diversity of fire risk perception of stakeholders

Keywords : *heritage, fire risk assesment*

Category : Social Sciences and Humanities

1514 ETHICAL AND LEGAL IMPLICATIONS OF SEX ROBOT: AN ISLAMIC PERSPECTIVE#

YUSUFF AMUDA JELILI, *FINANCE, Kulliyah of Economics and Management Sciences*
Ismaila B. Tijani, *Mechatronics Engineering, Kulliyah of Engineering*

Exhibitor : YUSUFF AMUDA JELILI, FINANCE, Kulliyah of Economics and Management Sciences

Technologically, robots have been identified as useful resources in all aspect of human endeavor due to the numerous advantages associated with such system. They reduce labor hardship in several manufacturing processes, help in dirty operation and dangerous mission to human life, ease several domestic activities and generally improve efficiency in many engineering processes. However, several ethical and legal issues have been identified in the literature with respect to applications of such system in various aspects of human activities. One of such area that is less attended to in the literature is in the application of robot in sex activities. The birth of sex robot has introduced several dimensions into the concept of sex which implicitly has several ethical and legal implications. This study first review the state of the art in sex robot and its associated ethical and legal issues. Secondly the issue is evaluated from Islamic perspective together with position of Islamic law (Shariah) towards the deployment of robot in sexual activities. The social effect of robot sex to the institution of marriage in particular is examined. The study will apply qualitative and quantitative methods throughout the discussion and analysis. The test samples and data were taken from selected countries in Africa, the Middle East and Asia including in Malaysia. In the end, useful suggestion would be suggested in the finding in order to discover undocumented facts and experts' view towards the robot sex. Also, the outcome of this study is expected to unravel the mystery of sex robot and provides solution to the robot sex.

Keywords : *Sex Robot, Shariah, Code of ethics, United Nations*

Category : Social Sciences and Humanities

1516 ANALYZING SECULARISM AND ITS EFFECTS ON A MUSLIMS' THOUGHTS AND PRACTICES: A CONTEMPORARY CONTEXT#

Md Yousuf Ali, *General Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Md Yousuf Ali, *General Studies, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Secularism has become a perilous ideology in the contemporary Muslim world. While it has been practiced by some Muslim politicians as well intellectuals as a means for the worldly progress, it has been largely rejected by the Muslim community for its severe debilitating effects. Instances of negative effects of secularism can be found in the contexts of the Turkish-secular state established by Mustafa Kamal Ataturk in 1929, the constitutional secular-state of Bangladesh led by then president Shaikh Mujibur Rahman in 1972 who banned all religious based institutions and organizations. This ideology aims to liberate man from the religious and metaphysical values and expel religion from the practical aspect of man's life to be materialists. (Sayyed Hossein Nasr, *Traditional Islam in the Modern World*, London: Kagen Paul International, 1994. p.98). The paper therefore, examines the meaning, brief history, and effects of secularism on the very tenets of religious traditional Muslim thoughts and practices, and analyzes these within the purview of contemporary Islamic thought which is based on the textual arguments of the Qur'an and Sunnah. The paper concludes that though a tiny fraction of some Muslim politicians and intellectuals tries to justify the secularism as a means of the progress, the majority of the Muslim scholars has viewed it as a contentious ideology and therefore vehemently rejects this practice in any form.

Keywords : *secularism, Islam, ideology, Muslims, religious worldview*

Category : Social Sciences and Humanities

1519 #الخلقية الصفات لمقياس سيكومترية دراسة: الإسلام أخلاق من

Institute of Education ،العمار قاسم العمار فوزية
Institute of Education ،العربية اللغة ،أحمد حسنانين إسماعيل

Exhibitor : العربية اللغة ،أحمد حسنانين إسماعيل Institute of Education

إسلامية أخلاق عشرة في (MCMP) Moral Character of Muslim Personality المسلمة للشخصية الخلقية الصفات حددت ،والنفس بالمال والجهاد ،بالوعد والوفاء ،التعاون) المتقين شخصية لنموذج القرآني المحتوى تحليل لنتائج وفقاً من التأكد وبعد .(والعدل ،والصدق ،والأمانة ،الناس بين والصلح ،والعفو ،والإنفاق ،والضراء البأساء في الصبر الجامعة طالبة من الجنسيات متعددة (472) عينة استجابات ،الأولية صورته في المقياس لبيانات المحتوى صدق المشار الإسلام بأخلاق ذات ومواقف سلوكيات لقياس صيغت تقريرية جملة 50 على ماليزيا العلمية الإسلامية المعدل نموذج أن النتائج أشارت ،(CFA) Confirmatory Factor Analysis التوكيدي العامل تحليل وباستخدام سلفاً إليها ويؤيد جيدة (goodness of fit) المطابقة حسن بمؤشرات يتمتع ،المسلمة للشخصية الخلقية الصفات لمقياس بالمال والجهاد ،والضراء البأساء في الصبر ،بالوعد والوفاء ،التعاون: وهي الإسلام أخلاق من المكونات الثمانية تراوحت كرونباخ الفس معامل باستخدام الثبات مؤشرات حسبت كما .والعفو والإنفاق ،والأمانة ،الصلح ،والنفس ذو قياس أداة تشكل MCMP فإن وعليه ،العام المقياس لثبات مؤشراً (920).و ،الثمانية للأبعاد (86-70) بين قيمتها المعرفة أسلمة مجال في علمية إضافة المقياس ويمثل هذا .الإسلامية الأخلاق لنظرية وفقاً جيدة مترية سيكو خصائص بالموضوع العلاقة ذات التوصيات من مجموعة البحث اقترح وقد .النفسية والقياس

Keywords : ،والنفس بالمال الجهاد ،الصبر ،العفو ،التقوى ،الخلقية الصفات :
العدل ،الصدق ،الأمانة

Category : Social Sciences and Humanities

1521 DATA MANAGEMENT FOR DISASTER MANAGEMENT (DM4DM)#

Mira Kartiwi, *Information Systems, Kulliyah of Information & Communication Technology*
Teddy Surya Gunawan, ,

Exhibitor : Mira Kartiwi, Information Systems, Kulliyah of Information & Communication Technology

Hundreds to thousands of people have been killed in the many calamities across Asian region, such as tsunami, floods, earthquake and so on. These natural disasters have become great challenges, particularly to those developing countries as many are lacking of an efficient disaster management strategies that will help in times of need. In the time of disaster, an efficient logistics supply-chain management is critical. The demand for food and relief supplies is huge, unpredictable and immediate. With the threat of death and disease adding a sense of urgency, the proper management of the logistics of a disaster response supply chain becomes particularly necessary. In this study, a data management framework for disaster management is proposed. The framework is developed to assist the humanitarian agencies and governments in formulating strategies to best distribute the logistics, thus avoid waste of supplies during and after the event.

Keywords : *Data Management, Disaster Management, Framework*

Category : Social Sciences and Humanities

1524 COMMUNICATION IN ACADEMIC WORKGROUPS: DOES ETHNIC DIVERSITY MATTER?#

Aini Maznina A.Manaf, *Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Aini Maznina A.Manaf, Communication, Kulliyah of Islamic Revealed Knowledge and Human Sciences

As organisations are becoming more ethnically diverse, ethnicity is one of the significant factors that influence communication in workgroup settings. This study investigates the experiences and perceptions of individual group members regarding how ethnic diversity influences the ways members of ethnically diverse groups in Malaysian academic institutions communicate and how it affects the effective functioning of the group. Much is known about the effects of ethnic diversity on communication in groups from previous studies using experiments; however, the present study differs from those studies as it looks at groups in real life. The findings of the study suggest that ethnic diversity is neither a challenge to task communication nor a threat to group effectiveness among academics in Malaysia. However, it creates a challenge for relational communication, particularly in an informal context.

Keywords : *ethnic diversity, academician, workgroup, communication*

Category : Social Sciences and Humanities

1529 APPLICATION OF THE HUDAYBIYAH TREATY IN THE CONTEMPORARY ISSUES: CASE STUDY OF MULTIRACIAL SOCIETY IN MALAYSIA.#

YUSUFF AMUDA JELILI, *FINANCE, Kulliyah of Economics and Management Sciences*
AHMAD SOHAIMI LAZIM, *MALAYSIA STUDIES, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : YUSUFF AMUDA JELILI, *FINANCE, Kulliyah of Economics and Management Sciences*

Abstract Regarding to the current situation, there is need for possibility of interactive dialogue between Muslim and non-Muslim in the interest of peace and love. The idea of inter-religious dialogue is not new because early Muslim and Christian encountered this type of inter-religious dialogue as a mechanism and a crucial instrument for developing better understanding of other religion positively. It is obvious that Prophet Muhammad (s.a.w.) made efforts to spare violence and conflict during the battle and consulted all his companions before taking any action as a means of co-existence with other faiths. This is apparent in the case when Prophet asked his companions whether to proceed and fight Quraysh in order to enter the Ka'bah but Caliph Abu Bakr advised him to proceed peacefully because his initial intention was to visit Ka'bah and if there is any obstruction from anybody, then, they would retaliate. Based on this, the Prophet commanded all his companions to proceed peacefully in the name of Allah. Whatever the Quraysh requested from him that will elevate sanctity and which is permissible in the sight of Allah will be granted in order to avoid violence and fracas. This is because Prophet wanted to keep Quraysh alive in the hope that they might become Muslims. Therefore, it is better to apply peaceful and harmonious approach rather than violent method. The study examines the spirits of hudaybiyah treaty as an example for multiracial society such as Malaysia. It aims to examine an approach and policy applied by Prophet Muhammad (s.a.w.) during hudaybiyah battle so as to apply it to overcome all contemporary issue between Malaysian Muslims and non-Muslims in order to achieve concept of one (1) Malaysia in the interest of all and nation at large. The study also discusses Prophetic dialogue method during the battle and how such dialogue can be utilized to address all religious misconception across the nation. The finding sees dialogue and reconciliation during the hudaybiyah as an instruments and methods to be applied in Malaysia in order to achieve good legacies which present and future generation should follow and emulate. Qualitative and quantitative methods are exploited throughout the discussion. Finally, useful solution to outstanding problem and suggestions would be suggested in the findings.

Keywords : *Hudaybiyah, Muslim, non-Muslim, tolerance, and dialogue.*

Category : Social Sciences and Humanities

1534 PREVENTING GLOBAL WARMING IN THE LIGHT OF THE QUR'AN IS A FARD KIFAYAH#

Ghassan Taha Yaseen, *History and Civilization, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Ghassan Taha Yaseen, History and Civilization, Kulliyah of Islamic Revealed Knowledge and Human Sciences

The mischief in the earth began in the industrial revolution in Europe, in the beginning of the eighteen century, and it was the result of the waste and emissions of factories, that led to the damage of the ozone layer, that surrounds the earth's has already been mentioned above. Allah says: "And we made the heavens as a canopy well guarded; yet do they turn away from the signs which these things (pointed to)." (Al-Anbiya 32). The damage of the Zone layer allows cosmic gases and alien particles to enter the Earth's atmosphere, and make significant changes, particularly high temperatures, to increase in recent years.

Keywords : Global Warming, Qur'an, Fard Kifayah

Category : Social Sciences and Humanities

1535 THE STATUS, SCOPE AND APPLICATION OF ISLAMIC LAW IN THE FEDERAL FRAMEWORK AND LEGAL SYSTEMS OF MALAYSIA AND NIGERIA#

Khairil Azmin Mokhtar, *Civil Law, Ahmad Ibrahim Kulliyah of Laws*
Abdul Mumini A Oba, *Law*,

Exhibitor : Khairil Azmin Mokhtar, Civil Law, Ahmad Ibrahim Kulliyah of Laws

The experiences of Malaysia and Nigeria of British colonialism and its impact on Islamic law are parallel in many respects. Malaysia and Nigeria present the pictures of two Muslim communities that had been colonised by the same colonial masters. Although prior to colonisation, Islamic law was well entrenched both communities, colonialism adversely affected Islamic law and its administration in these communities. Muslims in Malaysia and Nigeria resisted these adverse changes to Islamic law in their territories but in many instances, the British eventually had their way. In the post-colonial era, Muslims in both countries made attempts to revert the adverse changes made to Islamic law. Some of these attempts were successfully but others were not. There is a need in both countries to expand the scope of Islamic law to cover all aspects of Islamic civil law (muamalat) between Muslims. There is equally the need for both countries to reflect deeply on the scope of Islamic criminal law in its jurisdictions. And more crucially, there is the need to exclude English courts from adjudicating on Islamic law matters in both countries.

Keywords : *Constitution, Federalism, Legal System, Islamic Law*

Category : Social Sciences and Humanities

1536 ENVIRONMENTAL IMPACT ASSESSMENT AS A POLICY INSTRUMENT FOR SUSTAINABLE DEVELOPMENT IN MALAYSIA#

garoot Eissa, *Political science, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : garoot Eissa, Political science, Kulliyah of Islamic Revealed Knowledge and Human Sciences

Abstract Paper I (EIA) This paper sought to evaluate the influence of Environmental impact assessment (EIA), as a policy instrument geared towards minimization of environmental degradation, in helping to improve chances of future sustainable development in Malaysia. Environmental degradation is caused by developmental activities. Thus, speeding up the rate of economic growth and environmental preservation, both being top priorities of public policy, are inherently incompatible goals. The basic contention of the paper is that EIA, as a preemptive procedure accompanying the planning stage of development activities to ensure their conformity with environmental standards, should help ensure the compatibility of the two goals. Opinions vary over which goal is more emphasized by the Department of the environment (DOE) in the Malaysian case. The paper first provides a review of EIA practices in Malaysia. About 19 development activities are targeted for detailed evaluation by the headquarters of DOE while other activities, comprising nearly 80% of activities, are subject to preliminary assessment by officials of the DOE deconcentrated at local offices in states and local areas. The two types of decisions are held as independent variables. Whereas, water and air pollution indicators as well as economic growth rates were designated as dependent variables and hypotheses about relationships were tested. In the case of water pollution a correlated time series methodology was adopted. Detailed scrutiny decisions did not correlate significantly with pollution but correlated positively with economic growth and showed insignificant relationship with foreign capital inflows. Meanwhile, preliminary assessment decisions correlated positively with pollution and development. The conclusion was that the outcome confirmed suspicions that more emphasis was placed on economic growth to the detriment of environmental considerations. But there is evidence that this attitude is beginning to change in favour of environmental concerns. In the case of air pollution the method of comparison of targeted with actual performance was used. It appears that air pollution indicators were constantly kept under the minimum level of tolerable pollution with few exceptions particularly at the more industrialized and urbanized areas. It is recommended that in future more emphasis should be placed on environmental preservation.

Keywords : *EIA., environmental policy, economic growth, pollution*

Category : Social Sciences and Humanities

1540 THE PERCEPTION OF COMMUNITY ON COASTAL EROSION ISSUE IN SELANGOR#

M.Zainora Asmawi, *Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*
Ainaa Nawwarah Ibrahim, *Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : M.Zainora Asmawi, *Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*

Malaysia is a maritime nation blessed with invaluable coastlines. Hence it is important to preserve its precious coastal areas in a sustainable manner. However, coastal areas are continuously facing tremendous development pressures both from natural and anthropogenic factors. These include tsunami event, rapid urbanization process, aquaculture sector, oil and others. Consequently these situations create problems to coastal areas. For instance, the issues of erosion and loss of habitats are significant in many maritime nations. Thus, this research was initiated by the global phenomenon on coastal areas, particularly erosion problem. The research addresses the issue of coastal erosion as one of the key coastal problems in Selangor. The coastlines of Selangor were selected as it experienced erosion problem relatively significant due to continuous development growth. The objectives of the research were: to comprehend the perception of the coastal community in relation to the issue of coastal erosion in Selangor; to analyze the causal factors contributing to coastal erosion in Selangor; and to analyze the severity of coastal erosion issues in Selangor. Research methods applied were mainly by conducting questionnaire survey to a total of 377 coastal residents and site-observation. This analysis demonstrates that Selangor is currently experiencing severe erosion problems at some stretches of its coastlines, which were considered as Rank 1 (extremely dangerous). These areas involved 33 km of coastal areas. Among the areas are Bagan Beting, Sungai Besar, Bagan Sekinchan, Jeram and Sungai Sembilang. Results from questionnaire survey also indicated that coastal erosion was significant in Selangor with 77% of respondents agreed to that statement. In addition, 75% of them felt that their coastlines were considered as 'seriously affected'. Overall, this research managed to achieve its outlined objectives.

Keywords : *coastal erosion, community, severity, Selangor*

Category : Social Sciences and Humanities

1543 DEVELOPING A COSTING IMPACT FACTOR FOR COASTAL MANAGEMENT (CIFCOM)#

M.Zainora Asmawi, *Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*
Tuminah Paiman, *Urban & Regional Planning, Kulliyah of Architecture & Environmental Design*

Exhibitor : M.Zainora Asmawi, Urban & Regional Planning, Kulliyah of Architecture & Environmental Design

Coastal management programmes have been acknowledged as an essential approach in delivering the coastal strategies and objectives towards achieving a sustainable coastal development. It has many positive implications to the environmental, social and economic sectors. Its universal framework is applicable to any desired country to fulfil the nation aspiration to moving ahead in physical and socio-economic development and growth. In this regards, the costing impact factor has become a significant attribute in implementing coastal management initiatives. Many literatures demonstrate the influence and importance of costing in the practice of coastal management (refer Milne and Christie (2005); Salamanca (2003); Pomeroy, Oracion, Pollnac and Caballes (2005); and Chua (2001)). Thus, the underlying objectives of this research are to examine and analyse the relationship between the implementation of coastal management initiatives and costing aspect. The study was undertaken based on data collection from interviews, consisting of government officials at various levels and coastal management practitioners. In addition, secondary data was obtained from various government agencies, such as the Town and Country Planning Department (Selangor) and Klang Municipal Council. The results and analysis indicate the level of success of implementation of coastal management programme based on its approved budgeting/costing. The outcomes can be used by the planning authority as part of their tools in controlling and regulating development and budgeting annually

Keywords : *costing impact factor, coastal management, planning tool, Klang*

Category : Social Sciences and Humanities

1545 RELATING REPAYMENT PATTERN AND FINANCIAL DISCIPLINE: AN EMPIRICAL INVESTIGATION AMONG CREDIT CARD USERS IN MALAYSIA#

Salina Hj. Kassim, *Economics, Kulliyah of Economics and Management Sciences*
Siti Rahayu Hussin, *Faculty of Economics and Management, Univesiti Putra Malaysia,*
NurAien Jamal, *Faculty of Economics and Management, Universiti Putra Malaysia,*

Exhibitor : Salina Hj. Kassim, Economics, Kulliyah of Economics and Management Sciences

This study examined the extent of financial discipline being observed by the credit card users based on a sample of 350 users in the Klang Valley, Malaysia. To measure financial discipline, the study focuses on repayment preference of the card users, as to whether they would pay in the full amount of the outstanding balance, pay according to ability, or pay the minimum required amount. Further analysis is being done to understand the relationship between the repayment preferences and credit card users' profile using correlation analysis and further substantiated by the chi-square analysis. The results of this study provide information on the segments of the credit card users that are susceptible to financial difficulties, which are of particular interests to the policymakers amid the increasing concerns of consumer indebtedness in this country.

Keywords : *credit cards, profiling, repayment preferences, financial discipline, consumer indebtedness*

Category : Social Sciences and Humanities

1546 PLANNING FRAMEWORK & INFRASTRUCTURE FOR NIGHT MARKETS IN KUALA LUMPUR#

Khalilah Zakariya, Dept. of Landscape Architecture, Kulliyah of Architecture & Environmental Design

Exhibitor : Khalilah Zakariya, Dept. of Landscape Architecture, Kulliyah of Architecture & Environmental Design

The Malaysian night market is commonly regarded as an informal and temporary place where people can buy goods and food at affordable prices. Recent studies acknowledge the contributions of night market to the informal economy, as well as towards keeping local culture alive. Night market works in multiple ways: it serves as an ephemeral public space where food and street life enliven the city, it supports vendors to start and expand their businesses, and collectively it contributes to the sustainability of local culture. However, the current planning for night markets is not done comprehensively as a systematic process. Due to this, they are often perceived as haphazard to the urban environment, although they are rich in local culture. This research proposes planning framework and infrastructure for night markets in Kuala Lumpur. A planning and design framework for night markets can promote a better night market operation, and contribute to the sustainability of tourism, cultural and economic development of cities.

Keywords : *night market, marketplace, urban, culture*

Category : Social Sciences and Humanities

1548 KNOWLEDGE SHARING AMONG MUSLIM UNDERGRADUATES: AN EXPLORATORY STUDY#

Shahrul Fhaizal Shabu, , *Institute of Education*

Zabeda Abdul Hamid, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Zabeda Abdul Hamid, Business Administration, Kulliyah of Economics and Management Sciences

The objective of this study is to explore knowledge sharing among Muslim undergraduates in an Islamic higher education institution. Data was collected using semi-structured interviews with three final year undergraduate students. The interviews were later transcribed and analysed for themes. The findings suggest that Muslim undergraduate students generally are motivated to share their knowledge. Furthermore, the participants expressed that their belief regarding seeking knowledge as an act of worship or ibadah is also another motivating factor to share knowledge. These are two areas that have not been widely discussed in other studies on knowledge sharing.

Keywords : *Knowledge Sharing, Muslim Undergraduates*

Category : Social Sciences and Humanities

1556 VALUES AND RELIGIOSITY: CONVENTIONAL VERSUS INTEGRATED HIGHER EDUCATION CURRICULUM IN MALAYSIA#

Ruzita Mohd Amin, *Economics, Kulliyah of Economics and Management Sciences*
Selamah Abdullah Yusof, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Ruzita Mohd Amin, Economics, Kulliyah of Economics and Management Sciences

This paper discusses the importance of higher education in creating the human resources needed to achieve comprehensive development. It presents the case of the International Islamic University Malaysia (IIUM) as a model of a university with an integrated curriculum that seeks to produce well-rounded professionals imbued with Islamic values and ethics that are much needed for comprehensive development. The effectiveness of such an integrated curriculum is investigated by examining the values and religiosity of economics students at the IIUM vis-à-vis those at the University Putra Malaysia. The results show that the integrated curriculum has managed to produce graduates and manpower with the right values and qualities without compromising their job skills and marketability. This makes a case for a review of the content of higher education throughout the Muslim world to ensure that its objective of enhancing the development of the intellectual, spiritual and skills capacity of man is achieved.

Keywords : *Values, Religiosity, Integrated Curriculum, Higher Education*

Category : Social Sciences and Humanities

1558 LAND FOR FOOD CULTIVATION: IS PRICE A BARRIER TO EXPANSION?#

Haniza Khalid, *Economics, Kulliyah of Economics and Management Sciences*

Exhibitor : Haniza Khalid, Economics, Kulliyah of Economics and Management Sciences

Objective : With increasing development speculation involving farmland, total area devoted to food cultivation continues to fall, or is expected to be sold at a higher price per hectare than before. This paper compares price of land cultivated with paddy relative to other land categories (oil palm, rubber, vacant land and developable farmland). The paper proceeds to examine some unique market and institutional features of the paddy land market. **Methodology** : A hedonic price function is estimated using land sales data (n= 2222) of five types of farmland covering four states in the Central West coast of Peninsular Malaysia in a period of 7 years. **Results** : Results show that the marginal values of land attributes included in the model (road frontage, proximity to urban centres, population growth, land restrictions and year of sale) vary considerable across different categories of farmland. Mean predicted price paddy land is lowest amongst the five groups, at RM **Conclusions**: The relatively cheap price and various forms of government support does not appear to promote greater expansion of hectareage cultivated. Paddy farming continues to be characterized by low profit margins and consequently, low potential for surplus accumulation which can be used for future productivity improvements.

Keywords : land market, hedonic price model, food production

Category : Social Sciences and Humanities

1564 **DEALING WITH CHALLENGES AT THE COUNSELING SITE: THE USE OF CREATIVE ARTS AND PLAY THERAPY IN SUPERVISION WITH INTERNS & PRACTICUM COUNSELORS#**

Haniza Rais, *Dept of Educational Psychology & Counseling, Institute of Education*
Siti Kholijah Kassim, *Dept of Educational Psychology & Counseling, Institute of Education*

Exhibitor : Haniza Rais, Dept of Educational Psychology & Counseling, Institute of Education

DEALING WITH CHALLENGES AT THE COUNSELING SITE: THE USE OF CREATIVE ARTS AND PLAY THERAPY IN SUPERVISION WITH INTERNS & PRACTICUM COUNSELORS HANIZA RAIS, PHD, KB, PA SITI KHOLIJA, KB, PA International Islamic University Malaysia (IIUM) hanrais@iium.edu.my sitikhelijahkassim@yahoo.com Doing practicum and internships can be one of the most intense experience in counseling training. Interns and practicum counselors must be prepared to endure the mental and physical demands as counselors before embarking on the practice in the real world of counseling. This is a phenomenological qualitative study with the purpose to explore the challenges faced during the counseling practicum and internship. The exploration of challenges went through three different stages from pre, while and post practicum and internship experiences. The session, however, will highlight the use of variety creative arts and play therapy activities with the interns in the process of identifying the challenges and assessing the coping reactions of counselling interns to the demand of tasks during the practical experience at their counselling sites. Activities such as drawings, play dough, clay, sand tray, etc. were the methods used in the activities throughout the counselling supervision. Series of guided reflective journals were also used to process their experiences. In-depth interviews were conducted at post internship stage to triangulate the data collected earlier. Interns expressed their challenges during internship and practicum through the use of creative arts. In dealing with those challenges, their coping responses include having a good relationship with colleagues, consulting the university supervisors for guidance, searching for the information related to their cases and being prepared before going to the counseling site.

Keywords : *PLAY THERAPY, CREATIVE ARTS, COUNSELING SUPERVISION, INTERNSHIP, PRACTICUM*

Category : Social Sciences and Humanities

1565 COMPARATIVE ANALYSIS ON CONVERSATIONAL STYLE OF JAPANESE AND MALAY: BACKCHANNELS#

Zalika Adam, *QLD, CELPAD, Center for Language and Pre University Acad. Development*

Junko Katsuda, *CELPAD, Center for Language and Pre University Acad. Development*

Faridah Kassim, *BM CELPAD, Center for Language and Pre University Acad. Development*

Exhibitor : Zalika Adam, QLD, CELPAD, Center for Language and Pre University Acad. Development

Many researchers conducted about the differences of conversational style (CS) between Japan and English. Recently CS analyses between Japan and the other languages such Korean and Chinese have increased number. Some according to Tannin (1984) everybody has a certain CS and the style varies according to individuals, sex and cultures. This study aims to investigate the conversational style between Malaysia and Japanese (backchannels). The study used conversational method; 5 groups of females was participated for every Malaysian and Japanese. The result showed some similarities and differences in usage of backchannels between Malaysian and Japanese. We also can apply the result in our teaching and learning.

Keywords : *Backchannels, conversational style, similarities*

Category : Social Sciences and Humanities

1567 FEMINISM AS ISLAMOPHOBIA: A REVIEW OF MISOGYNY CHARGES AGAINST ISLAM#

Md. Mahmudul Hasan, *English Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : Md. Mahmudul Hasan, English Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences

One important feature of Islamophobia is to caricature Islam as misogynistic and oppressive to women and thus to advance imperialist hegemony. This “gendered Islamophobia” stigmatizes Islam even though, compared to other world religions, its treatment of women is arguably preferable and more enlightened. Historically, one treasonous use of feminism has been to misappropriate it in order to serve colonial interests and support imperialist wars of occupation that repress subjugated people including women and children. This article argues that ignorance about, and prejudice against, Islam contribute to portraying it as a misogynistic creed. Wrong notions of Islam lead many feminists in Muslim societies to denigrate Islamic teachings and borrow Western ideas to advance women’s causes. Lampooning Islam and replicating Western feminist ideas in Muslim lands have served neither women nor feminism. Such feminist tendencies rather give a bad name to the women’s rights movement and fuel controversy, anger and resentment among Muslims.

Keywords : *Islamophobia, feminism, feminists in Muslim societies, gender justice, women’s rights movement*

Category : Social Sciences and Humanities

1570 CRITICAL SUCCESS FACTOR OF ISO 9001 QUALITY MANAGEMENT CERTIFICATION IMPLEMENTATION AMONG SMALL AND MEDIUM ENTERPRISE IN MALAYSIA#

Dolhadi Zainudin, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Dolhadi Zainudin, Business Administration, Kulliyah of Economics and Management Sciences

The study attempts to predict the relationship between critical success factors (CSFs) and adoption of ISO 9000 and to identify which CSFs play the main role in achieving ISO 9000 standard. A survey using structured questionnaire was employed. A total of 390 respondents from 1550 small and medium enterprises participated in this study. With regards to critical success factors, a discriminant analysis was conducted and the results showed that three out of nine critical success factors is statistically significant between ISO 9000 which are communication for quality, information and analysis and organizational culture.

Keywords : *ISO 9000, Quality Management, Small and Medium Enterprise, Critical Success Factors*

Category : Social Sciences and Humanities

1572 STRATEGIC MANAGEMENT PRACTICES AMONG LOCAL AUTHORITIES IN MALAYSIA#

Dolhadi Zainudin, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Dolhadi Zainudin, Business Administration, Kulliyah of Economics and Management Sciences

The study investigates on the strategic management practices in Malaysia local authorities. In this context, the research adopts Wheelen and Hunger's notion of strategic management which constitute of environmental scanning, strategy formulation, strategy implementation and also, evaluation control. Organizational performance is conceptualized by the efficiency of services that local authorities delivered to the public services. This research involves 150 authorities in Malaysia which categories in four, which are City Council, Municipal Council, District Council and also organizations that exercise local authorities' function. Based on the study, there are three major findings which are; (a) environmental scanning, strategy implementation and evaluation and control are found to be significant towards the performance of local authorities; (b) no independent variables are related to building approval ; (c) regardless of their categories, local authorities practice strategic management in improving performance of the organization. In general, the study proved that not all strategic management practices contribute to the organizational (local authority) performance especially in terms of building approval, In short, strategic management practices have yet to be make a full impact in enhancing performance of local authorities in Malaysia.

Keywords : *Strategic management, performance, local authorities, strategic planning*

Category : Social Sciences and Humanities

1573 MARGINALISATION OF MUSLIM WRITERS IN SOUTH ASIAN LITERATURE: ROKEYA SAKHAWAT HOSSAIN'S ENGLISH WORKS#

Md. Mahmudul Hasan, *English Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

Exhibitor : *Md. Mahmudul Hasan, English Language and Literature, Kulliyah of Islamic Revealed Knowledge and Human Sciences*

This article argues that there appears to be a pattern of disregarding the literary contributions of South Asian Muslim writers who produced English texts on a variety of topics. It then mainly contextualises Rokeya Sakhawat Hossain's English works in the tradition of South Asian writing in English to identify a continuous trend of undervaluing Muslim literary contributions in English in the region. The article thus argues for a re-assessment of the evaluation of this literary tradition, so that the many forgotten South Asian Muslim writers in English, including Rokeya, regain their long overdue recognition.

Keywords : *Anglicists, Islamic feminism, South Asian Muslim writers, Orientalists, postcolonial literature, Rokeya Sakhawat Hossain, South Asian Literature in English*

Category : Social Sciences and Humanities

1576 ASSESSING THE CURRENT CONTRACT PRACTICE FOR CONSTRUCTION WHETHER IN COMPLIANCE WITH THE SHARI'AH OR OTHERWISE WITH SPECIFIC REFERENCE TO THE OFFER AND ACCEPTANCE#

Siti Nora Haryati Abdullah Habib, *Quantity Surveying, Kulliyah of Architecture & Environmental Design*
Khairuddin Abdul Rashid, *Quantity Surveying, Kulliyah of Architecture & Environmental Design*

Exhibitor : Siti Nora Haryati Abdullah Habib, Quantity Surveying, Kulliyah of Architecture & Environmental Design

This study examines the current practice in construction procurement with specific reference to contract formation and appraises the practice in terms of its compliance with the Sharī'ah. The scope of the study is to identify and describe the key processes, procedures, requirements, conditions and activities related to the formation of construction contracts – specifically on offer and acceptance – through the conventional way and assess whether the identified activities are Sharī'ah compliant or otherwise. The methodology employed comprises: literature review, focus group discussion and semi-structured interviews. Experts, in the areas of construction procurement, construction contract, Sharī'ah law, Fiqh and Usul Fiqh and Fiqh mu'āmalah, are the key resource persons for the study. The findings of this study suggest that most of the aspects in the practice of offer and acceptance in the formation of conventional construction contract are considered to be Sharī'ah compliant. There are only two aspects which are considered to be non-Sharī'ah compliant, therefore need to be improved i.e. the way site investigation is carried out and taking conventional insurance. The outcome of the study is considered significant in terms of enhancing understanding of the Islamic commercial transactions in the area of construction procurement in relation to contract formation.

Keywords : *Contract, construction procurement, Shari'ah compliant, contract formation*

Category : Social Sciences and Humanities

1588 HISTORICAL ANALYSIS ON THE TRADITIONAL RECIPES OF MALAY INK#

Mandana Barkhesli, *Applied Arts and Design, Kulliyah of Architecture & Environmental Design*

Raihan Othman, *Department of Science, Kulliyah of Engineering*

Rajabi Abdul Razak, *Applied Arts and Design Department, Kulliyah of Architecture & Environmental Design*

Exhibitor : Mandana Barkhesli, Applied Art and Design, Kulliyah of Architecture & Environmental Design

The indigenous Malays in the production of their traditional ink, particularly from Malay Peninsula region bring special attention to be discussed in this poster. Even though the use of inks originated from European, Indian and Arabian was reported in Malay Manuscripts but the Malays also had a strong tradition of making their homemade ink. This strong tradition has been passed from one generation of pupil to another in the traditional Islamic religious school or also known as sekolah pondok. Yet, the information was mostly passed over the generation by oral means rather than properly documented. Historical analysis was carried out to identify the type of primary sources and mixture ingredient used in making this traditional ink by investigating the recipes mentioned in historical treatises and printed documents dated from early to late 19th century. The only Malay writer who recorded in written the used of ink made from burnt rice is Abdullah Munsyi who mentioned in his manuscript 'Hikayat Abdullah'. Other printed documents written by the Malay scholars recorded from verbal conversation with the Malay folk and religious teacher. However, the ingredients mentioned by all scholars are almost similar which, primary and secondary ingredients are from natural sources and readily available either from their surrounding or their neighbourhood. Lampblack, charcoal, soot, paper ash, cobweb and burnt rice are the primary sources, while the secondary sources are from fruit rinds and other ingredients such as mangosteen sap, flower of the senduduk herbs, immature rambutan, coconut oil, salt, latex from sap of cashew nut, black pepper, black glutinous rice (pulut hitam) and palm vinegar. Two methods in preparing these traditional inks had been identified; firstly, all ingredients from primary and secondary sources were boiled together. Secondly, the method is slightly complicated as compared to the first method which those primary and secondary sources were prepared separately but boiled together at the final stage until reach required viscosity. Fruit rinds were used to improve lustre and adhesive quality, while the other ingredients such as sap cashew nut gum play roles as a binding medium, coconut oil to improve the flowing quality of the inks and salt to neutralize the odour. The capability of Malays in making traditional ink although without formal education and sophisticated tools should be delighted. Therefore, it is vital this intellectual legacy to be preserved and made available for the present and future generation.

Keywords : *Historical Analysis, legacy, primary sources, recipes, secondary source, Traditional*

Category : Social Sciences and Humanities

**1590 CRITICAL SUCCESS FACTORS OF PUBLIC PRIVATE PARTNERSHIP (PPP)
IMPLEMENTATION IN MALAYSIA#**

Suhaiza Ismail, *Accounting, Kulliyah of Economics and Management Sciences*

Exhibitor : Suhaiza Ismail, Accounting, Kulliyah of Economics and Management Sciences

There are two objectives of this study. First, it aims to examine the importance of the success factors as perceived by the overall respondents. Second, the study intends to identify the differences concerning the importance of the success factors between the public and private sectors. A questionnaire survey was used to elicit the perceptions of public and private sectors on the key success factors of PPP project in Malaysia. The overall results show that good governance, commitment of the public and private sectors, favourable legal framework, sound economic policy and availability of finance market are the top five success factors of PPP implementation in Malaysia. There were no significant differences in the perception of the public and private sectors concerning the importance of the success factors except for a few factors.

Keywords : *Public Private Partnerships, critical success factors, Malaysia, government*

Category : Social Sciences and Humanities

1591

EVERYONE SHOULD KNOW BASIC TECHNICAL TERMS IN MARKETING#

Yusof Ismail, *Business Administration, Kulliyah of Economics and Management Sciences*

Mohamed Ismail Ahamad Shah, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Yusof Ismail, Business Administration, Kulliyah of Economics and Management Sciences

Introduction: Technical terms are an integral part of a discipline. They enrich and help distinguish among disciplines. The irony is that even among specialists some technical terms are incomprehensible; the terms impede, instead of expedite, the communication process. Some technical terms fail to satisfy the basic needs of communication such as message clarity. Research Objective: The present study aims to identify and verify a select list of twenty two technical terms which may be considered fundamental or basic in the discipline of Marketing. Research Method: The study creates an instrument to help collect input from prospective specialists and non-specialists of Marketing towards their perception of, and decision on, the need to have common understanding of technical Marketing terms. A questionnaire was administered on 82 non-specialists and 26 specialist undergraduate students of a public university whose medium of instruction is English. Results: Results show that the respondents moderately agree that they will lose if they lack knowledge of the marketing technical terms with means ranging from 3.81 to 4.29 in five-point scale. They also believed that using correct terms expedites the communication process. A statistical analysis called Cronbach alpa (.863) confirms the significantly high degree of inter-relatedness among the twenty two Marketing terms tested in the study. Another statistical technique called exploratory factor analysis procedure was used to statistically group the specified list of technical terms. Implications: English teachers may be able to help the learner with technical vocabulary as the general service words and academic words are used as technical words. Knowing the technical terms is not a privilege, rather a necessity for everyone. Logically, producers and wholesalers also need to know the technical terms ($\alpha = .298, p=0.01$) due to their inter-dependence in the exchange process. Conclusion: The factor analysis procedure produced five categories of technical terms that were labelled as providers of products, distributors, sales, pricing, and product. The last four categories represent the universally recognized four P's of marketing: place, promotion, pricing, and product. The study confirmed at least twenty two technical terms that help producers, marketers and consumers communicate effectively.

Keywords : *Consumer, English for specific purposes, Marketing, Specialist, Technical terms*

Category : Social Sciences and Humanities

**1593 CONSUMER PERCEPTIONS ON SERVICE QUALITY IN NEW ZEALAND AND MALAYSIAN
RETAIL BANKING: AN SEM APPROACH#**

Moha Asri Abdullah, *Economics, Kulliyah of Economics and Management Sciences*
Noor Hazilah Abd Manaf, *Business Administration, Kulliyah of Economics and Management Sciences*
Kamrul Ahsan, *Victoria University of Melbourne, Australia,*
S.M. Ferdous Azam, *Business Administration, Kulliyah of Economics and Management Sciences*

Exhibitor : Moha Asri Abdullah, Economics, Kulliyah of Economics and Management Sciences

Customer perception and service quality are the issues being focused solicitously by the business community today. With the expansion of banking sector and extensive market formation, scopes of different acuity and satisfaction level for consumers seem a mingle game of their perception on service quality especially in retail banking. However, this study focuses on consumer perceptions of service quality in New Zealand and Malaysian retail banking sector. For this purpose, a total of 293 respondents participated in this study. Factor analysis performed to figure out the influencing dimensions of service quality reveals two such factors: banking facilities and employee etiquette and performance. In order to test the hypotheses vis-à-vis the effect of these two attributes of service quality on consumer satisfaction, structural equation modeling is then employed. The study finds that while banking facilities exert a significant positive influence on consumer satisfaction, employee etiquette and performance does not. The findings of the study are expected to hold significant implications for the managers in the retail banking sectors in enhancing the service quality and customer satisfaction. The findings also expectantly reveal the most obvious implication considering banking service providers to further improve their services quality with greater efficiency and as a way to better compete in the current marketplace. However, few limitations and suggestions for possible future studies are put forward in this regard.

Keywords : *Consumer perception, Service quality, Retail banking*