MYHIMS SOLUTIONS PLT

UTM UNIVERSITI TEKNOLOGI MALAYSIA

MALAYSIA INSTITUTE OF STATISTICS

MYHIMS-C 2021

Colocated Events

ISMI 2021 International Seminar on Mathematics in Industry

ISM-V 2021 The 5th ISM International Statistical Conference

PROGRAMME BOOK

Emerging Trends in Mathematics and Statistics: Empowering Industrial Innovation

myhims.my/myhims-c

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Foreword
UTM Vice-Chancellor

I would like to congratulate the organisers, MYHIMS Solutions PLT, UTM Centre for Industrial and Applied Mathematics, Department of Mathematical Sciences, Faculty of Science, UTM and Institut Statistik Malaysia for hosting this significant event MYHIMS-C 2021 Virtual Conference and Forum with two colocated events: the International Seminar on Mathematics in Industry 2021, and the Fifth ISM International Statistical Conference.

The theme of the conference: "Emerging Trends in Mathematics and Statistics: Empowering Industrial Innovation", is indeed timely as we prepare the nation for a Post COVID-19 recovery and the urgent need to be innovative, especially in this challenging time.

With the involvement of various industry players, government agencies, community, and academics from home and abroad, this event is certainly an excellent example of the Quadruple Helix model of collaboration in discussing the problem solutions and advance pioneering innovations to respond to challenges faced by the nation.

It is my hope that the interaction between academia and industry in this conference will lead to stimulating deliberations that would lead to explorative ventures and inspiring innovations. It is also hoped that the plenaries and forum sessions will inspire the audience to acquire the traits of insightful leadership, resilience, agility, and courage needed for the nation to emerge from this COVID-19 crisis faster, better, and stronger.

I wish everyone a fruitful and rewarding conference ahead.

Thank you.
Kerana Tuhan Untuk Manusia.

PROF. DATUK TS. DR. AHMAD FAUZI ISMAIL
Vice Chancellor
Universiti Teknologi Malaysia

Welcoming Remarks Chair MYHIMS-C 2021

Alhamdulillah, praise be to Allah Subhanahu Wata'ala for giving MYHIMS Solutions PLT the opportunity to organise the brand-new conference MYHIMS-C 2021, a virtual conference and forum with the theme "Emerging trends in Mathematics and Statistics: Empowering Industrial Innovation". In conjunction with this conference are co-located two main events: UTM-CIAM International Seminar on Mathematics in Industry 2021 (ISMI 2021) and Fifth ISM International Statistical Conference (ISM-V). On behalf of MYHIMS-C 2021, I would like to extend my heartiest welcome to the plenary and invited speakers, forum panelists, presenters, participants and guests to our conference.

MYHIMS-C 2021 is a cooperative effort between MYHIMS Solutions PLT, UTM Centre for Industrial and Applied Mathematics (UTM-CIAM), UTM Department of Mathematical Sciences and Institut Statistik Malaysia (ISMy). It is a platform for academia, technology providers and industrial practitioners to gather and share their experiences in coping with post pandemic challenges through innovative solutions and research output. This event includes plenary sessions and research paper presentations in broad areas of research and development in Industrial Mathematics and Statistics that empower industrial innovation. In addition, there are also plenary sessions and forums that are unique and tailor-made to include special talk and discussion by industrial players on current and important industry linked problem and engagement. MYHIMS-C 2021 aims to enhance collaborations between academia, technology providers and industry players so as to develop talents and maximize resources in science, technology, engineering, and mathematics (STEM) and to innovate new technology and solutions using mathematical and statistical tools.

Since its establishment in 2018, MYHIMS Solutions PLT has targeted its activities towards empowering industrial mathematics and statistics as a tool for problem solving, innovation and commercialisation in line with our national aspiration to boost the interest in STEM and accelerate Industrial Innovation. Currently, MYHIMS Solutions PLT provides consultancy and assistance to business owners on ways to simplify processes, strengthen their positions and resilience and expand their productivity and profitability in the marketplace. Our activities also include industry-related research, capacity building and industrial customised software development programmes. As such, we look forward to acquiring and applying new techniques and innovations to solve industrial problems and commercialise products.

Lastly, I would like to express my heartfelt appreciation to everyone for their hard work, teamwork, and dedication to ensure the success of this conference. The excellent efforts engaged by various organising committee in orchestrating MYHIMS-C 2021 and its co-located events are laudable. I wish all the participants an enriching conference. Thank you.

PROFESSOR DR. ZAINAL ABD. AZIZ
Chair MYHIMS-C 2021
Director MYHIMS Solutions PLT

Welcoming Message
President Institut Statistik Malaysia

Institut Statistik Malaysia (ISMy) would like to welcome participants to the 5th ISM International Statistical Conference (ISM-V). This conference is our flagship biennial international statistical conference, where participants from Malaysia and across the globe meet to exchange ideas and to network.

This conference began in 2012, where the first ISM International Statistical conference was organized by Universiti Teknologi Malaysia. This is followed by other ISM conferences hosted by other universities: Universiti Malaysia Pahang, Universiti Malaya and Sunway University for the second, third and fourth series respectively. This year, the fifth instalment of this statistical conference makes its way once more to Johor Bahru, where Universiti Teknologi Malaysia (UTM) play host to this important event with the theme, "Statistics in the Spotlight: Navigating the New Norm".

This three-day conference signifies several marks on ISMy historical timeline since our establishment in 1984 and a departure from the format of previous ISM conferences. For the first time an ISM conference is carried out on a virtual platform, primarily due to the Covid-19 pandemic. We especially welcome ISM-V Plenary speaker, Prof. Christian Hennig from University of Bologna who will be streaming live from Italy for this conference. In addition, another first for ISM conference is to be part of a collocated event under MYHIMS-C which features sessions with academicians and industrialists, giving ample opportunity for ISM-V participants to attend discussions and strengthen their connections. Additionally, the opening day of ISM-V, commemorates ISMy's 37th anniversary. Truly a reason to celebrate!

This conference is the result of dedicated work especially from the local organizing team, Universiti Teknologi Malaysia and collaborators. I would like to acknowledge and to express my utmost appreciation and gratitude for their significant contribution to this conference. Thank you also to the authors for their contributions and their participation at ISM-V 2021! It is hoped that you enjoy the intellectual stimulation of the conference and take the chance to connect with other participants in this new norm.

PROFESSOR DR. IBRAHIM MOHAMED
President
Institut Statistik Malaysia

Welcoming Message Conference Chair ISMI 2021

On behalf of UTM-Centre for Industrial and Applied Mathematics (UTM-CIAM), I warmly welcome all of you to The International Seminar on Mathematics in Industry 2021 (ISMI 2021). This year marks another exciting milestone where ISMI 2021 is held virtually and colocated with MYHIMS-C 2021 and ISM-V 2021.

UTM-CIAM's niche area is mathematical and statistical modelling, optimisation and simulation for physical and industrial. With the theme Mathematical Thinking in Industrial Innovation, ISMI 2021 is a multidisciplinary platform that brings Quadruple Helix model of collaboration and synergy among academia, government agencies, industry, and community. Since ISMI 2013, closer ties between mathematical scientists and industry partners in Malaysia have been forged through various successful project collaborations.

Together with MYHIMS-C 2021, this conference includes plenary lectures from academia and industry, research paper presentations, and industrial forums. Among the delegates at ISMI 2021 are some of the world's leading experts in the field. We are delighted to welcome our Plenary speaker: from the Auckland University of Technology, New Zealand, Professor Dr. Graeme Wake, the Adjunct Professor at Department of Mathematical Sciences. It is also a pleasure to welcome our Special Invited Speakers: Professor Dr. Osamu Saeki, from Kyushu University, Japan; Dr. Hilary Ockendon from Universiti of Oxford, United Kingdom; and Dr. Busayamas Pimpunchat from King Mongkut's Institute of Technology Ladkrabang, Thailand.

Running conference during the pandemic is not without challenge. But Alhamdulillah, this conference is the result of dedicated work especially from the local organizing team, MyHIMS Solutions and collaborators. Finally, the conference would not be possible without the excellent papers contributed by authors. We thank all the authors for their contributions and hope you enjoy your participation at ISMI 2021! Thank you.

DR. NUR ARINA BAZILAH AZIZ
ISMI 2021 Conference Chair
Department of Mathematical Sciences
Faculty of Science
Universiti Teknologi Malaysia

Welcoming Message
Conference Chair ISM-V2021

Assalamu'alaikum and greetings!

Welcome participants to the 5th Institut Statistik Malaysia (ISMy) International Statistical Conference, ISM-V 2021. This year, Universiti Teknologi Malaysia is the host to this biennial conference and the first ISM International Statistical Conference to run virtually as part of a collocated event under MYHIMS-C, from August 17th to August 19th, 2021. This opening date of the conference remarkably coincides with ISM's 37th anniversary celebration!

This year the conference theme "Statistics in the Spotlight: Navigating the New Norm," welcomes over 80 presenting and non-presenting participants from 26 different institutions and organisations both local and overseas. We have received more than 70 scientific manuscripts to be presented of which nearly 25% of them are from students. Presenters are split into different virtual rooms with specific discussion topics so that participants can access the rooms based on their area of interests. This conference is a departure from previous ISM-V conference in that participants are also able to access and attend events from a collocated conference that gathers players from industries, thus providing ample opportunity for discussion.

I would like to express my sincerest gratitude to all participants for their participation and valuable contributions to ISM-V 2021. In addition, my heartfelt thanks go to each member in the conference taskforce from the Department of Mathematical Sciences, Faculty of Science and the event organiser MYHIMS Solutions PLT who have put out their best in making this conference a success, despite the trying times that we are in. We are truly grateful to ISMy for entrusting us in organising this important conference. In conjunction with its 37th anniversary, here's wishing Institut Statistik Malaysia continued success in steering the society to greater heights in the years to come!

DR. ZARINA MOHD KHALID
ISM-V 2021 Conference Chair
Department of Mathematical Sciences
Faculty of Science
Universiti Teknologi Malaysia

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MYHIMS-C 2021

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ISMI 2021 Plenary Speaker

PROFESSOR GRAEME WAKE
Adjunct Professor, Auckland University of Technology, New Zealand.

Sustainable Farming: Monitoring Catchment Pollution

Abstract: Many agricultural projects begin by making sense of data, which has been collected in a (sometimes)arbitrary fashion without some real goal or purpose, and most likely the reason for its collection is not very clear. It is very important to know what is wanted and what is needed to understand before data is assembled. Therefore, having a pre-determined model is important. In this exposition it is intended to highlight the use of stochastic processes as a way of quantifying the dynamic relationships of sequences of random events. Stochastic models play an important role in elucidating many areas of the agricultural and ecological sciences which, for countries like New Zealand, are important and highly valued. They can be used to analyse the variability inherent in these processes and give some precision to their understanding. Here emphasis is given to transforming a stochastic Ito-type process model into a more familiar Fokker-Planck equation with drift to enable data to be usefully interpreted and to give stochastic predictions to be made for agricultural practice and predictions for use in catchment areas. Intensive farming practice leads to cumulative effects, so the "run-off" adds sequentially to give a long-term prediction. The Fokker-Planck equation is akin to the more familiar advection-dispersion equation which is firstly a non-autonomous linear partial differential for the evolving probability density function of the degree of pollution. The drift-term enables it to be transformed into a more familiar equation which is tractable analytically. The evolving probability distributions of Nitrogen concentration are determined explicitly employing recent calculus techniques. This is of value in understanding "downstream effects" in the catchment models. It is intended to become a part of a larger project nationally to underpin farming pollution in catchment areas caused by the need of more intensive farming practices.

ISM-V2021

Plenary Speaker

PROFESSOR CHRISTIAN MARTIN HENNIG
University of Bologna, Italy.

Testing in Models That Are Not True

Abstract: The starting point of my presentation is the apparently popular idea that in order to do hypothesis testing (and more generally frequentist model-based inference) we need to believe that the model is true, and the model assumptions need to be fulfilled. I will argue that this is a misconception. Models are, by their very nature, not "true" in reality. Mathematical results secure favourable characteristics of inference in an artificial model world in which the model assumptions are fulfilled. For using a model in reality we need to ask what happens if the model is violated in a "realistic" way. One key approach is to model a situation in which certain model assumptions of, e.g., the model-based test that we want to apply, are violated, in order to find out what happens then. This, somewhat inconveniently, depends strongly on what we assume, how the model assumptions are violated, whether we make an effort to check them, how we do that, and what alternative actions we take if we find them wanting. I will discuss what we know and what we can't know regarding the appropriateness of the models that we "assume", and how to interpret them appropriately, including new results on conditions for model assumption checking to work well, and on untestable assumptions.

Industrial Plenary Speakers

DR. DZAHARUDIN MANSOR
National Technology Officer
Microsoft (Malaysia) Sdn. Bhd.

Intensifying Tech Intensity: Staying Relevant and Succeeding in the 4th Industrial Revolution

Abstract: Data and AI is accelerating the 4th Industrial Revolution, but COVID-19 has forced upon us digital transformation much sooner than expected. While our customers today need to continue run their matured business efficiently and successfully, it is no longer an option for them to continuously embark on bold and rapid innovation to seek new disrupt or protect against being disrupted. This requires companies to leverage on the democratized digital platforms to enable them to engage the modern customers effectively and optimally, while constantly exploring new business models in ways that manages the risks. In addition, the people need to have the right skills to harness the value of data using the digital platforms. The core body of knowledge in STEM plays a central role data science that enables organizations to unlock the power of Data and AI. With the fast-changing use of technology, it is important for all of us to strengthen the relatively timeless fundamentals, and supplement these with applied skills that we need to constantly learn to be successful in this new world. This interplay of technology adoption and skilling is we term as "Tech Intensity" which is needed by all organizations to stay relevant and succeed in this new world.

https://www.thegeniusworks.com/2018/09/satya-nadella-on-tech-intensity-at-microsofts-huge-gathering-of-business-leaders-ready-to-envision-the-future

TS. DR. MOHAMED ACKIEL MOHAMED
Senior Vice President, Special Projects
Serba Dinamik Group Bhd.

Innovation: The Inevitable Process

Abstract: This presentation discusses about the very meaning of innovation, understating its relevance and implementation in the current scenario. It also shares some typical types of innovations and example study cases with actual market experience sharing along the lines of Innovation in products, services, marketing, business models, process as well as organizational. Indeed, innovation is inevitable, hence, innovate or you will evaporate.

MYHIMS-C Special Session

Industrial Mathematics in Asia Pacific and European Region

PROFESSOR OSAMU SAEKI
Director, Institute of Mathematics for Industry
Kyushu University, Japan.

Collaborative Activities in Research and Education at the Institute of Mathematics for Industry

Abstract: In April 2021, the Institute of Mathematics for Industry (IMI), Kyushu University, celebrated its 10th anniversary since its establishment. On the occasion of this milestone of IMI, which has been the unique research institute of industrial mathematics in Japan, the speaker will present, as director of IMI, various collaborative activities of IMI; researches in fundamental mathematics, mathematics applied to other disciplines, joint projects with industry, together with educational activities, including the WISE program (Doctoral Program for World-leading Innovative & Smart Education) funded by the Ministry of Education, Culture, Sports, Science and Technology, Japan, recently launched.

DR. HILARY OCKENDON
Emeritus Professor of OCIAM Mathematical Institute,
University of Oxford, UK.

Industrial Mathematics in the Modern World

Abstract: Since attending the first Study Group with Industry in 1968, I have witnessed the vast growth of industrial mathematics – both in the areas of application (and the definition of 'industry') and in the mathematical tools that can be applied. Mathematicians have always enjoyed solving problems and the challenge has been to develop the contacts between mathematicians and industry; this means both convincing industry that mathematics may be able to help them and getting mathematicians to communicate their ideas in a way that is accessible to an industrial scientist. I shall describe some of the ways that have evolved to facilitate and encourage this interaction. Recently, pressure from industry has led to more specialised Study Groups and Covid-19 has led to the development of virtual Study Groups, which provide new opportunities for mathematicians around the world.

DR. BUSAYAMAS PIMPUNCHAT
Head of Mathematics Department,
King Mongkut's Institute of Technology Ladkrabang, Thailand.

Forecasting A Distance of Cycling for Health Using a Hybrid GA-SVR Approach

Abstract: Predicting optimal cycling distance around 30 minutes for physically constrained individuals, such as those having a congenital disease or an elderly must pay a strictly attention. The data was collected from completing a questionnaires of 94 people who cycled at a cycling track in Ladkrabang District, Bangkok. The focus of this research was on predicting optimal distances using the support vector regression (SVR) method. The SVR modeling has shown, SVR parameters must be set carefully for the model effectively. This study proposed the traditional SVR and Genetic Algorithm-based Support Vector Regression (GA-SVR). In the part of GA-SVR, the optimal parameter was found using the Genetic Algorithm (GA), and the optimal parameter was used to create the SVR model. The results showed that the GA-SVR outperforms more than the MLR and SVR models based on the root mean squared error (RMSE) and mean absolute percentage error (MAPE). Then GA-SVR model is regarded as an effective approach to predict cycling distances for physically constrained individuals.

Networking with Industry

DATUK IR. DR. AZUHAN MOHAMED
General Manager,
Air Kelantan Sdn. Bhd.

Groundwater for Public Water Supply in Malaysia

Abstract: Groundwater accounts for less two percent of the raw water in public water supply operations in Malaysia. The main reason for this is that Malaysia receives more than 2,500 mm of rainfall annually. Other reasons include visibility and the fact that surface water sector is well established nationwide. Groundwater, being a hidden resource, is not well appreciated by the local water industry players and the prevalent idea that groundwater development is only suitable for small scale water supplies to isolated rural areas. Nearly all the groundwater for public water supply occurs in Kelantan. However, groundwater for public water supplies is well established in the developed economies around the world. Groundwater development is about utilising the natural capital, namely: (1) Groundwater storage accounts for more than 95 % of the easily available freshwater resources in the world (natural storage that is, groundwater is naturally stored in the spaces in the ground); (2) Groundwater flows from the recharge areas to the discharge areas that include rivers, lakes and seas (natural pipeline); and (3) Groundwater is relatively clean (natural filtration by the materials in the ground as it flows from the recharge to the discharge areas). The frequent disruption in public water supplies in the country due to droughts and pollution incidences calls for sustainable development of groundwater. Groundwater is naturally better.

MR. KAMARUDIN ISMAIL
Co-Founder and Technical Head,
Ifactors Sdn. Bhd.

Submarine Cable Repair and Maintenance: Engineering and Technology Behind It

Abstract: Maintenance and repair are part of the process in Engineering. Ifactors has been involved in cable repair and maintenance since 2007 and based on the cumulative experience gathered during this period, Ifactors has formulated a basic understanding and fundamental needs of the maintenance process that are required to be prepared prior to starting the work and completing the tasks. The experience gathered has also made us aware and analyse the risks way before starting any preventive maintenance or corrective maintenance to the structure. There is no standard stencil solution that can be used for all cable corrective maintenance work. Even though there are some basic requirements, but at the end of the day, experience and proper risk analysis need to be applied to get the best solutions for each operation.

MR. MOHAMAD NIZAM KHALID
Chief Executive Officer,
Mathcraft Sdn. Bhd.

Esentry: Automated Trading System for Bursa Malaysia

Abstract: In an increasingly challenging economy, multiple source income is required to sustain the life of a family. Trading is a simple source of income generation, but it requires the right knowledge, effective systems, and proper capital management to ensure that it becomes one of the tools in adding income. Esentry is developed to cover all aspects that an investor needs, ranging from capital management, market, and stock analysis, monitoring of stock price movements, stock portfolio management, and subsequently automatically conducting trading activities on behalf of investors with highly effective and accurate financial risk controls. When the risk can be controlled, then profit can be generated more consistently.

MR. KAI WOON GOH
Co-Founder and Managing Director,
InsightX Technology.

Machine Learning Based Predictive Maintenance System for Conveyor and Automated Guided Vehicle

Abstract: The emergence of sensor devices, particularly under the effect of the Fourth Industrial Revolution (Industry 4.0) which advocates the concept of smart factory has led to the massive increase in the volume of data collected from manufacturing processes. In the field of smart factories driven by Industry 4.0, conveyor systems and automated guided vehicle (AGV) are essential equipment and often integrated together as a complete material handling solution for the industry. The failure in any key components of both the equipment can lead to breakdown and production loss. The component failures have to be detected earlier so that proper maintenance can be scheduled accordingly to avoid breakdown. Machine learning model based predictive maintenance is an effective approach to classify and predict the component failures in industrial equipment. To build a model with high accuracy, the input variables need to have high statistical correlation with the target fault predictions or also known as feature selection. The accuracy of the model also highly depends on the proper choice of machine learning technique. Vibration measurements have proved to be successful in condition monitoring for conveyor and AGV for predictive maintenance. This research proposes the use of vibration, temperature and power signals for machine learning model based automated fault diagnosis and remaining useful lifetime (RUL) prediction of conveyor and AGV. Industrial chain conveyors and unit load carrier AGV were used in this research to conduct the experiments. This research presents a predictive maintenance system for real-time detection of single and multiple-combined faults in conveyor and AGV fed through sensors set which consist of vibration set in a wide vibration frequency range covering from 1Hz and high frequencies up to 20,000 Hz, temperature, and power. Four experiments with 3600 samples per condition were conducted to collect the sensory data in variable load, ideal, and fault conditions. Six Machine learning models were developed and built and deployed to monitor the condition and predict the potential faults of conveyor and AGV. The machine learning models built are Stepwise Logistic Regression (SLR), Forward Logistic Regression (FLR), Artificial Neural Network (ANN), Decision Tree (DT), Random Forest (RF), and Gradient Boosting (GB). The performance collected from all six models are compared and validated to select the champion model which has the highest accuracy. Auto Regressive Integrated Moving Average (ARIMA) models were developed and built to predict the RUL of the key components of conveyor and AGV. Results show that there are strong relationships between the sensory data and the state of health of the critical components. After evaluating all relevant candidate models, one model was selected as the champion model based on model performance on the validation data. The champion machine learning model achieves high accuracy with low average square error below 0.10. RUL of the model is predicted and visualised in time series graph to compare with actual condition of the key components. Vibration, temperature and power signals have proved to be effective in machine learning model based fault diagnosis and RUL prediction of conveyor and AGV.

Programme Schedule

MYHIMS-C DAY 1 17 AUGUST 2021, TUESDAY	
TIME	**MAIN ROOM**
08.00am - 08.45am	REGISTRATION
08.45am - 09.30am	OPENING CEREMONY
09.45am - 10.30am	INDUSTRY PLENARY SESSION 1 "Intensifying Tech Intensity: Staying Relevant and Succeeding in the 4th Industrial Revolution" Speaker: DR. DZAHARUDIN MANSOR National Technology Officer Microsoft (Malaysia) Sdn. Bhd.
10.35am - 11.20am	INDUSTRY PLENARY SESSION 2 "Innovation: The Inevitable Process" Speaker: TS. DR. MOHAMED ACKIEL MOHAMED Senior Vice President, Special Projects, Serba Dinamik Group Bhd.
11.30am - 01.00pm	FORUM 1 Forum Theme: Post-Pandemic Lessons for Industries Moderator: AZREENA AZIZAN Country Affiliate, FasterCapital Panels: ROHAIDA ALI BADARUDDIN Director of Scomi Transit Projects DR. JAMES TEE Chief Executive Officer, Smart City & Urban Tech, Green Packet Board of Directors UTM AIDAN SAHERAN Chief Commercial Officer of Naluri
01.00pm - 02.00pm	LUNCH & NETWORKING
02.00pm - 03.15pm	PARALLEL SESSIONS (1)
03.30pm - 05.00pm	MYHIMS-C SPECIAL SESSION - INDUSTRIAL MATHEMATICS IN ASIA PACIFIC AND EUROPEAN REGION

	Speaker 1: DR. HILARY OCKENDON Emeritus Professor of OCIAM, Mathematical Institute, University of Oxford, UK Speaker 2: PROF. OSAMU SAEKI Director, Institute of Mathematics for Industry, Kyushu University, Japan Speaker 3: DR. BUSAYAMAS PIMPUNCHAT Head of Mathematics Department, King Mongkut's Institute of Technology Ladkrabang, Thailand
05.00pm	END OF THE DAY

MYHIMS-C DAY 2 18 AUGUST 2021, Wednesday	
TIME	MAIN ROOM
08.45am - 10.00am	NETWORKING WITH INDUSTRY (1) DATUK IR. DR. AZUHAN BIN MOHAMED General Manager, Air Kelantan Sdn. Bhd. KAMARUDIN ISMAIL Co-Founder and Technical Head, Ifactors Sdn. Bhd. GOH KAI WOON Co-Founder and Managing Director, InsightX Technology
10.00am - 10.45am	MORNING BREAK
10.45am - 11.45am	ISMI PLENARY SESSION "Sustainable Farming: Monitoring Catchment Pollution" PROFESSOR GRAEME WAKE Adjunct Professor, Department Mathematical Sciences, Auckland University of Technology, New Zealand
11.45am - 01.00pm	PARALLEL SESSIONS (2)
01.00pm - 02.00pm	LUNCH BREAK
02.00pm - 03.10pm	PARALLEL SESSIONS (3)
03.20pm - 04.20pm	ISM-V PLENARY SESSION "Testing in Models That Are Not True"

	PROFESSOR CHRISTIAN MARTIN HENNIG Full Professor at Department of Statistical Sciences "Paolo Fortunati" University of Bologna, Italy
04.30pm - 05.30pm	PARALLEL SESSIONS (4)
05.30pm	END OF THE DAY

MYHIMS-C DAY 3 19 AUGUST 2021, Thursday	
TIME	MAIN ROOM
08.30am - 09.40am	PARALLEL SESSIONS (5)
09.45am - 10.25am	NETWORKING WITH INDUSTRY (2) MOHAMAD NIZAM KHALID Chief Executive Officer, Mathcraft Sdn. Bhd. DR. NORAZMI ALIAS Senior Vice President, Research Management & Talent Development and Johor Initiatives, CREST
10.25am - 10.30am	MORNING BREAK
10.30am - 12.00pm	FORUM 2 Forum Theme: Post-Pandemic Upskilling Moderator: SR AZMI BIN HASSAN Geostrategist, MYHIMS Industry Expert Panels: ADAM BRIMO Founder & Group CEO at OpenLearning Limited (ASX:OLL) NORALIZA MOHAMAD ALI Senior Deputy Executive Director, Malaysian Bureau of Labour Statistics SYAMSUL FAIZAL AHIM Account Director, Education, CISCO MOHAMAD NAZRUL AZIZ Head, Industry Partnership & Graduate and Emerging Talent, TalentCorp Malaysia
12.00pm - 12.30pm	CLOSING REMARKS
12.30pm	LUNCH BREAK & NETWORKING - END -

Parallel Sessions

PARALLEL SESSIONS (1) Date: 17 August 2021, Tuesday								
Time	ISMI 2021				ISM-V 2021			
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7	ROOM 8
	Contributed session	Contributed session	Contributed session	Invited Session	Special Topic Session (1)	Special Topic Session (2)	Contributed session	Contributed session
02.10pm	ISMI 43	ISMI 3	ISMI 8	ISMI 166	ISMV089	ISMV076	ISMV041	ISMV046
02.25pm	ISMI 96	ISMI 4	ISMI 56	ISMI 170	ISMV090	ISMV080	ISMV027	ISMV066
02.40pm	ISMI 133	ISMI 5	ISMI 82	ISMI 173	ISMV088	ISMV082	ISMV068	ISMV005
02.55pm		ISMI 84	ISMI 138		ISMV091	ISMV085	ISMV071	ISMV035
03.10pm							ISMV003	ISMV095

PARALLEL SESSIONS (2) Date: 18 August 2021, Wednesday								
Time	ISMI 2021				ISM-V 2021			
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7	ROOM 8
	Contributed Session	Contributed Session	Contributed Session	Contributed Session	Special Topic Session (3)	Special Topic Session (4)	Contributed Session	Contributed Session
11.55am	ISMI 20	ISMI 7	ISMI 26	ISMI 54	ISMV023	ISMV020	ISMV025	ISMV064
12.10pm	ISMI 34	ISMI 22	ISMI 88	ISMI 60	ISMV040	ISMV032	ISMV038	ISMV045
12.25pm	ISMI 83	ISMI 27	ISMI 89	ISMI 141	ISMV093	ISMV092	ISMV050	ISMV004
12.40pm	ISMI 105	ISMI 64				ISMV057	ISMV033	

PARALLEL SESSIONS (3) Date: 18 August 2021, Wednesday								
Time	ISMI 2021				ISM-V 2021			
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7	ROOM 8
	Contributed Session	Contributed Session	Contributed Session	Invited Session	Contributed Session	Contributed Session	Contributed Session	Contributed Session
02.10pm	ISMI 46	ISMI 6	ISMI 112	ISMI 144	ISMV048	ISMV034	ISMV094	ISMV047
02.25pm	ISMI 97	ISMI 81	ISMI 115	ISMI 23	ISMV015	ISMV006	ISMV081	ISMV013
02.40pm	ISMI 132	ISMI 187	ISMI 128	ISMI 146	ISMV043	ISMV061	ISMV067	ISMV019
02.55pm	ISMI 136				ISMV072	ISMV058	ISMV010	

PARALLEL SESSIONS (4) Date: 18 August 2021, Wednesday								
Time	ISMI 2021				ISM-V 2021			
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7	ROOM 8
	Contributed Session	Contributed Session	Contributed Session	Contributed Session	Contributed Session	Contributed Session	Contributed Session	
04.30pm	ISMI 125	ISMI 135	ISMI 140	ISMI 24	ISMV079	ISMV049	ISMV075	
04.45pm	ISMI 137	ISMI 145	ISMI 158	ISMI 94	ISMV077	ISMV087	ISMV086	
05.00pm	ISMI 157	ISMI 150	ISMI 183	ISMI 185	ISMV069	ISMV029	ISMV065	
05.15pm	ISMI 164	ISMI 184						

PARALLEL SESSIONS (5) Date: 19 August 2021, Thursday								
Time	ISMI 2021				ISM-V 2021			
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6	ROOM 7	ROOM 8
	Contributed Session	Contributed Session		Invited Session	Contributed Session	Contributed session	Contributed session	Contributed session
08.40am	ISMI 48	ISMI 91		ISMI 169	ISMV078	ISMV059	ISMV096	ISMV018
08.55am	ISMI 71	ISMI 151		ISMI 171	ISMV031	ISMV028	ISMV001	ISMV062
09.10am	ISMI 130	ISMI 186		ISMI 120	ISMV007	ISMV056	ISMV022	ISMV044
09.25am					ISMV030	ISMV024	ISMV054	ISMV084

ISMI 2021 Presenters

PARALLEL SESSIONS 1
Date: 17 August 2021

Venue: Room 1
Topic: Modelling & Computer Mathematics

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Ulfa Siti Nuraini	ISMI 43	ResNet-UNet with Transfer Learning for Segmenting the Ventricular Space Cardiac Ultrasound Video	Institut Teknologi Sepuluh Nopember nuraini.19062@mhs.its.ac.id
2.25pm – 2.40pm	Fuaada Mohd Siam	ISMI 96	Mathematical Models of The Generation of Radiation-Induced DNA Double-Strand Breaks and Misrepair Cells by Direct and Indirect Action	Universiti Teknologi Malaysia fuaada@utm.my
2.40pm – 2.55pm	Amer M. Salman	ISMI 133	Optimal Control of The SIRS Model for COVID-19 In the Presence of Limited Medical Resources and Reinfection Problems	Universiti Sains Malaysia amer.zaidi96@gmail.com

Venue: Room 2
Topic: Operations Research

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Gregoria Ariyanti	ISMI 3	Graph Applications Using Graphviz in Drainage System: The Case in Madiun City, Indonesia	Widya Mandala Surabaya Catholic University, Madiun City Campus ariyantigregoria@gmail.com
2.25pm – 2.40pm	Farhana Johar	ISMI 4	Optimizing Transportation Company Vendor Payment Schedule Using Genetic Algorithm	Universiti Teknologi Malaysia farhanajohar@utm.my
2.40pm – 2.55pm	Nur Rasyida Mohd Rashid	ISMI 5	Measuring Efficiency of Water Supply Service: Application of CCR And SBM	Universiti Teknologi MARA Negeri Sembilan Branch, Kuala Pilah Campus syida@uitm.edu.my
2.55pm – 3.10pm	Wan Zakiyatussariroh Wan Husin	ISMI 84	Neural Network Analysis in Forecasting the Malaysia Unemployment Rates	Universiti Teknologi MARA Cawangan Kelantan wanzh@uitm.edu.my

Venue: Room 3
Topic: Fluid Mechanics & Heat Transfer

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Nadeem Ahmad Sheikh	ISMI 8	Fractional Model for The Flow of Brinkman-Type Fluid with Mass Transfer	Universiti Teknologi Petronas nadeem_18000052@utp.edu.my
2.25pm – 2.40pm	Nurul Musfirah Binti Murad	ISMI 56	Unsteady Mixed Convection Flow of Hybrid Nanofluid Over a Moving Wedge	Universiti Teknologi Malaysia nurulmusfirah@graduate.utm.my
2.40pm – 2.55pm	Siti Hajar Mohd Hanafi	ISMI 82	Unsteady Free Convection MHD Flow Over a Vertical Cone in Porous Media with Variable Heat and Mass Flux in Presence of Chemical Reaction	Universiti Teknologi Malaysia jajahnfi@gmail.com
2.55pm – 3.10pm	Intan Diyana binti Munir	ISMI 138	The Effect of Catheter and Stenosis on The Dispersion Function of Unsteady Solute Dispersion in A Blood Flow of Herschel-Bulkley Through a Catheterized Artery	Universiti Teknologi Malaysia intandiyana1995@graduate.utm.my

Venue: Room 4
Topic: Applied Mathematics
Invited Session (Alumni)

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Norfarizan Mohd Said	ISMI 166	Experience In the Implementation of Computational and Mathematical Thinking in Utilizing Nuclear Research Reactor	Malaysian Nuclear Agency farizan.mathbrain@gmail.com
2.25pm – 2.40pm	Mohd Zulariffin Md Maarof	ISMI 170	Malaysian Seller Case Study: How to Turn eBay Data into Money for Working as A Digital Nomad	Universiti Tun Hussein Onn Malaysia zulariffin@uthm.edu.my
2.40pm – 2.55pm	Hoo Ching Dew	ISMI 173	The Empowering Innovative Mathematics Curriculum and Industry Collaboration in Gearing Malaysia for IR4.0 Era	Vice President, Asia Pacific Region, BDP International chingdew.hoo@bdpint.com

PARALLEL SESSIONS 2
Date: 18 August 2021

Venue: Room 1
Topic: Applied Statistics & Stochastic

TIME	PRESENTER	ID	TITLE	AFFILIATION
11.55am – 12.10pm	Siti Nurlaili Karim	ISMI 20	New Class of Lebesgue Quadratic Stochastic Operators Generated By 2-Measurable Partition	International Islamic University Malaysia sitinurlaili.karim@gmail.com
12.10pm – 12.25pm	Huma Basheer	ISMI 34	Modelling And Forecasting of Monthly Crude Palm Oil Price of Malaysia Using Hybrid Wavelet- Modified GMDH Model	Universiti Tun Hussein Onn Malaysia hw140007@siswa.uthm.edu.my
12.25pm – 12.40pm	Wan Zakiyatussariroh Wan Husin	ISMI 83	Predicting Student Performance Using Data Mining Techniques	Universiti Teknologi MARA wanzh@uitm.edu.my
12.40pm – 12.55pm	Haliza Abd Rahman	ISMI 105	Exponential Growth Model and Stochastic Population Models: A Comparison Via Population Data	Universiti Teknologi Malaysia halizarahman@utm.my

Venue: Room 2
Topic: Operations Research

TIME	PRESENTER	ID	TITLE	AFFILIATION
11.55am – 12.10pm	Nur Shuwaibah Mohd Zawawi	ISMI 7	Genetic Algorithm for Multimodal Distribution Network Design with Time Window	Universiti Teknologi Malaysia nshuwaibah2@graduate.utm.my
12.10pm – 12.25pm	Hasimah binti Sapiri	ISMI 22	Quantitative Risk Assessment of Unemployment Among Youths in Malaysia	Universiti Utara Malaysia hasimah@uum.edu.my
12.25pm – 12.40pm	Aulia Rahmayu Firdaus	ISMI 27	Application of Graph to Changing of Active Sentence to Passive Sentence in Indonesia	Andalas University auliarahmayufirdaus@gmail.com
12.40pm – 12.55pm	Norhaslinda Zull Pakkal	ISMI 64	The Numerical Analysis of Hybrid Conjugate Gradient Method Under Armijo Line Search and Its Application	Universiti Teknologi MARA Cawangan Terengganu Kampus Kuala Terengganu lindazullpakkal@uitm.edu.my

Venue: Room 3
Topic: Fuzzy & Algebra

TIME	PRESENTER	ID	TITLE	AFFILIATION
11.55am – 12.10pm	Shinta Yuliana	ISMI 26	Algebraic Structure Modelling of Changing Active Imperative Sentence into Passive Imperative Sentence	Andalas University sshintayyuliana@gmail.com
12.10pm – 12.25pm	Muhammad Adam Bin Abdullah	ISMI 88	Solving Travelling Problem Using Genetic Algorithm	Universiti Sains Malaysia muhdadam54@gmail.com
12.25pm – 12.40pm	Sharul Nizam Hasan	ISMI 89	Generation Of Synthetic Dataset for Wireline Log by Using Empirical Equations	Universiti Teknologi Malaysia sharulnizam@utm.my

Venue: Room 4
Topic: Fluid Mechanics & Heat Transfer

TIME	PRESENTER	ID	TITLE	AFFILIATION
11.55am – 12.10pm	Mohamad Hidayad Ahmad Kamal	ISMI 54	Stagnation Point Flow of a Hybrid Nanofluid Under the Gravity Modulation Effect	Universiti Teknologi Malaysia mohamadhidayadahmadkamal@gmail.com
12.10pm – 12.25pm	Marjan Mohd Daud	ISMI 60	Application Of Caputo Fractional Derivatives to The Convective Flow of Casson Fluids In A Microchannel With Thermal Radiation	Universiti Teknologi Malaysia mrjndaud@gmail.com
12.25pm – 12.40pm	Nurul Aini Binti Jaafar	ISMI 141	Mathematical Analysis of Unsteady Solute Dispersion with Chemical Reaction Through Cosine and Bell Shaped Stenosed Arteries	Universiti Teknologi Malaysia nurulaini.jaafar@utm.my

PARALLEL SESSIONS 3
Date: 18 August 2021

Venue: Room 1
Topic: Modelling & Computer Mathematics

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Muhammad Nasrudin	ISMI 46	On The YOLOv4 Architecture for Fast and Real Time Congenital Heart Disease Detection Via Ultrasound Videos	Institut Teknologi Sepuluh Nopember nasrudin.sta068.its@gmail.com
2.25pm – 2.40pm	Yeak Su Hoe	ISMI 97	Convergence Study of Finite Cloud Method in Solving High Gradient Problem	Universiti Teknologi Malaysia s.h.yeak@utm.my
2.40pm – 2.55pm	Zati Iwani binti Abdul Manaf	ISMI 132	Dynamical System Analysis of The Prey-Predator Interactions Incorporating Prey Refuge and Herd Behavior in Preys	Universiti Sains Malaysia zati431@uitm.edu.my
2.55pm – 3.10pm	Issam Gaber Ahmed	ISMI 136	Estimating The Reproductive Number of Covid 19 Transmission in Malaysia Using Sequential Parameter Estimation and Data Assimilation of The SIR Model	Universiti Sains Malaysia issam@student.usm.my

Venue: Room 2
Topic: Applied Statistics & Stochastic

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Norshahida Shaadan	ISMI 6	Application of Functional Time Series Model in Forecasting Monthly Diurnal Maximum API Curves: A Comparison Between Multi-Step Ahead and Iterative One-Step Ahead Approach	Universiti Teknologi MARA shahida@tmsk.uitm.edu.my
2.25pm – 2.40pm	Noor Ilanie Nordin	ISMI 81	The Hybrid and Classification Performance on Small Number of Events Per Variable	Universiti Malaysia Terengganu ilanie4445@gmail.com
2.40pm – 2.55pm	Hafizah Bahaludin	ISMI 187	The Impact of Covid-19 Pandemic on The Interconnectedness of Stocks in Bursa Malaysia	Universiti Islam Antarabangsa hafizahbahaludin@iium.edu.my

Venue: Room 3
Topic: Fuzzy & Algebra

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Suzelawati Zenian	ISMI 112	Flat EEG Image Segmentation by Thresholding: Classical, Fuzzy, And Advanced Fuzzy Sets	Universiti Malaysia Sabah suzela@ums.edu.my
2.25pm – 2.40pm	Muhamad Luqman Sapini	ISMI 115	Bibliometric Analysis of Published Literature on Persistent Homology	Universiti Kebangsaan Malaysia luqman0211@uitm.edu.my
2.40pm – 2.55pm	Nur Farhana Hazwani Binti Abdul Shamad	ISMI 128	Joint Effects of Dispersal and Trophic Interactions on The Biodiversity of Species	Universiti Sains Malaysia farhanahazwani@student.usm.my

Venue: Room 4
Topic: Operations Research
Invited Session

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Adibah Shuib	ISMI 144	A Mixed Integer Goal Programming (MIGP) Model for The Urban Public Transit Bus Network Design	Institut Teknologi Sepuluh Nopember adibah@tmsk.uitm.edu.my
2.25pm – 2.40pm	Shukur Hasan	ISMI 23	Analysis of Palm Oil Price Dynamics Between Malaysia and Indonesia	Universiti Teknologi Malaysia shukur.hasan@gmail.com
2.40pm – 2.55pm	Adibah Shuib	ISMI 146	A Mixed Integer Programming (MIP) Model for Inventory Routing Problem (IRP) of Fuel Distribution with Multi-Compartment Homogeneous Vehicles	Universiti Teknologi MARA adibah@tmsk.uitm.edu.my

PARALLEL SESSIONS 4
Date: 18 August 2021

Venue: Room 1
Topic: Applied Statistics & Stochastic

TIME	PRESENTER	ID	TITLE	AFFILIATION
4.30pm – 4.45pm	Khang Yi Sim	ISMI 125	The Causal Nexus Between Government Expenditure and Economic Growth: Wagner Versus Keynes Hypothesis	Universiti Sains Malaysia khangzyisim@gmail.com
4.45pm – 5.00pm	Nurul Sima binti Mohamad Shariff	ISMI 137	An Empirical Analysis on The Impact of Money Attitudes on Retirement Savings Behavior in Malaysia	Universiti Sains Islam Malaysia nurulsima307@gmail.com
5.00pm – 5.15pm	Shaymaa Mustafa	ISMI 157	Predicting Well Location Between River and Second Contaminant Source in Riverbank Filtration Systems	Universiti Teknologi Malaysia mdshaymaa@utm.my
5.15pm – 5.30pm	Noratiqah Mohd Ariff	ISMI 164	Prediction of Multivariate Air Quality Time Series Data Using Long Short-Term Memory Network	Universiti Kebangsaan Malaysia tqah@ukm.edu.my

Venue: Room 2
Topic: Operations Research

TIME	PRESENTER	ID	TITLE	AFFILIATION
4.30pm – 4.45pm	Nurul Ashikin binti Othman	ISMI 135	Analysing Trends and Forecasting of COVID19 Pandemic in Malaysia Using Singular Spectrum Analysis	Universiti Sains Malaysia nao_nashikinothman@student.usm.my
4.45pm – 5.00pm	Nur Aidya Hanum Aizam	ISMI 145	Application Of a General University Course Timetabling Mathematical Model to A Malaysian Public University Problem	Universiti Malaysia Terengganu aidya@umt.edu.my
5.00pm – 5.15pm	Nur Atikah Salahudin	ISMI 150	Channel Assignment in Wireless Mesh Networks Using Improved Greedy Algorithm, Simulated Annealing And T-Coloring	Universiti Teknologi MARA Cawangan Terengganu Kampus Kuala Terengganu atikahsalahudin@uitm.edu.my
5.15pm – 5.30pm	Muhammad Syafiq Rashid	ISMI 184	A Bibliometric Analysis of Scopus-Indexed Literatures on Vehicle Routing Problem	Universiti Teknologi Malaysia syafiq_rashid@yahoo.com

Venue: Room 3
Topic: Fuzzy & Algebra

TIME	PRESENTER	ID	TITLE	AFFILIATION
4.30pm – 4.45pm	Shamsatun Nahar binti Ahmad	ISMI 140	Fuzzy Method on Education and Social Mobility of Orang Asli Jakun to Leverage Life Quality	Universiti Teknologi MARA, Johor Branch, Segamat Campus shams551@uitm.edu.my
4.45pm – 5.00pm	Cheah Yuat Hoong	ISMI 158	Modeling of Traffic Flow on Roundabouts	Universiti Teknologi Malaysia y_hoong0617@yahoo.com
5.00pm – 5.15pm	Mohd Tirmizi Mohd Lutfi	ISMI 183	Stability In 2-Dimensional Discrete Skew Product Dynamical System: An Application to Competition Model	Universiti Malaysia Terengganu mohdtirmizibinmohdlutfi@gmail.com

Venue: Room 4
Topic: Fluid Mechanics & Heat Transfer

TIME	PRESENTER	ID	TITLE	AFFILIATION
4.30pm – 4.45pm	Mohamad Naufal Zainal Abidin	ISMI 24	Numerical Simulation of Heat Transfer Using Finite Element Method	Universiti Sains Malaysia naufal9714@gmail.com
4.55am – 5.00pm	Ridhwan Reyaz	ISMI 94	Presence of Riga Plate on MHD Caputo Casson Fluid: An Analytical Study	Universiti Teknologi Malaysia ridhwanreyaz@gmail.com
5.00pm – 5.15pm	Wan Rukaida Wan Abdullah	ISMI 185	Solving Mixed Convection Boundary Layer Flow of Viscoelastic Nanofluid Past Over a Sphere	Universiti Teknologi Malaysia wrukaida@utm.my

PARALLEL SESSIONS 5
Date: 19 August 2021

Venue: Room 1
Topic: Modelling & Computer Mathematics

TIME	PRESENTER	ID	TITLE	AFFILIATION
8.40am – 8.55am	Nur Indah Nirmalasari	ISMI 48	Ventricular Septal Defect Detection Based on Children's Heart Ultrasound Video in Parasternal and Apical Views Using Faster R-CNN	Institut Teknologi Sepuluh Nopember nurindahnirmalasarii@gmail.com
8.55am – 9.10am	Zuhaila Ismail	ISMI 71	Finite Element Analysis of Biomagnetic Fluid Flow in A Channel with An Overlapping Stenosis	Universiti Teknologi Malaysia zuhaila@utm.my
9.10am – 9.25am	Subhi Jamiluddin	ISMI 130	Analysis Of COVID-19 Transmission Dynamics in Selangor Using An SIR-Type Model with Neural Network Approach	Universiti Sains Malaysia subhi@student.usm.my

Venue: Room 2
Topic: Applied Statistics & Stochastic

TIME	PRESENTER	ID	TITLE	AFFILIATION
8.40am – 8.55am	Mong Cheong Fu	ISMI 91	Forecasting Malaysia Bulk Latex Prices Using Autoregressive Integrated Moving Average (ARIMA), Exponential Smoothing and Artificial Neural Network (ANN)	Universiti Teknologi Malaysia irvinemong@gmail.com
8.55am – 9.10am	Mohd Aftar Abu Bakar	ISMI 151	Time Series Clustering of Malaysia Air Quality Data	Universiti Kebangsaan Malaysia aftar@ukm.edu.my
9.10am – 9.25am	Hanani Farhah Binti Harun	ISMI 186	Extending Generalised Leland Models: Simulation Using Monte Carlo	Universiti Malaysia Terengganu hanani.harun@umt.edu.my

Venue: Room 4
Topic: Fluid Mechanics & Heat Transfer
Invited Session

TIME	PRESENTER	ID	TITLE	AFFILIATION
8.40am – 8.55am	Sharidan Shafie	ISMI 169	Quadratic Convective Nanofluid Flow at A Three-Dimensional Stagnation Point with the G-Jitter Effect	Universiti Teknologi Malaysia ridafie@yahoo.com
8.55am – 9.10am	Abdul Rahman Mohd Kasim	ISMI 171	A Study on Two-Phased Williamson Fluid in The Presence of MHD And Thermal Radiation Effects Under Newtonian Heating Thermal Boundary Condition	Universiti Tun Hussein Onn Malaysia rahmanmohd@ump.edu.my
9.10am – 9.25am	Basuki Widodo	ISMI 120	MHD Aluminum Oxide-Water Nanofluid Flow on Lower Stagnation Point of a Sliced Magnetic Sphere When Mixed Convection Included	ITS Surabaya, Indonesia bwdantr@gmail.com

ISM-V2021 Presenters

PARALLEL SESSIONS 1
Date: 17 August 2021

Venue: Room 5
Topic: Recent Developments in Directional Statistics
Special Topic Session

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Ibrahim Bin Mohamed	ISMV089	A New Crescent Moon Visibility Criteria Using Local Best Time Data: A Case Study of Teluk Kemang, Malaysia	University Of Malaya imohamed@um.edu.my
2.25pm – 2.40pm	Adzhar Rambli	ISMV090	Analysis Of Malaysian Tenpin Bowler's Body Movement Using Circular Statistics	Universiti Teknologi MARA adzhar_rambli@tmsk.uitm.edu.my
2.40pm – 2.55pm	Abdul Ghapor Hussin	ISMV088	A Comparison of Asymptotic and Bootstrapping Approach in Constructing Confidence Interval of The Concentration Parameter in Von Mises Distribution	Universiti Pertahanan Nasional Malaysia abdulghapor@gmail.com
2.55pm – 3.10pm	Siti Fatimah binti Hassan	ISMV091	DA Algorithm in Handling Missing Values Problem in Circular Data Distributed With Von Mises Distribution	Centre For Foundation Studies in Science sfhassan@um.edu.my

Venue: Room 6
Topic: Robust Methods for Issues in High Dimensional Data
Special Topic Session

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Habshah Midi	ISMV076	Robust SIMPLS Estimation Method in The Presence of Outliers for High Dimensional Data	Universiti Putra Malaysia habshahmidi@gmail.com
2.25pm – 2.40pm	Nor Mazlina Abu Bakar	ISMV080	Robust Bootstrapping for Fixed Effect Panel Data Model	Universiti Sultan Zainal Abidin normazlina@unisza.edu.my
2.40pm – 2.55pm	Shelan Saied Ismaeel	ISMV082	Robust Multicollinearity Diagnostic Measure for Fixed Effect Panel Data Model	University Of Zakho shelan.ismaeel@uoz.edu.krd
2.55pm – 3.10pm	Sohel Rana	ISMV085	Identification Of Outliers in High-Dimensional Multivariate Data Based on Lower-Dimensional Projection Methods	East West University srana@ewubd.edu

Venue: Room 7
Topic: Trends and Challenges in Educational Assessments

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Zahayu binti Md Yusof	ISMV041	Evaluating Factors Affecting University Students' Academic Performance by Using Structural Equation Model	Universiti Utara Malaysia zahayu@uum.edu.my
2.25pm – 2.40pm	Ch'ng Chee Keong	ISMV027	Analytic Hierarchy Process (AHP) In Analyzing the Factors That Affect Students' Tendency in Choosing Technical and Vocational Education and Training (TVET)	Universiti Utara Malaysia chee@uum.edu.my
2.40pm – 2.55pm	Siti Aishah binti Mohd Shafie	ISMV068	Impacts Of Gadgets on Development and Knowledge of Primary School Students in Urban Area of Negeri Sembilan	Universiti Teknologi MARA Cawangan Negeri Sembilan Kampus Seremban ctaishah@uitm.edu.my
2.55pm – 3.10pm	Qhatrunnada Suyansah	ISMV071	The Impact of Students' Academic Performance and Soft Skills on Graduate Employability: A Case Study at Universiti Malaysia Sabah	Universiti Malaysia Sabah qhatrunnadas@gmail.com
3.10pm – 3.25pm	Mohd Bakri Adam	ISMV003	Challenges Of Learning and Teaching Statistics Components for Secondary School	Universiti Putra Malaysia bakri@upm.edu.my

Venue: Room 8
Topic: Statistical Modelling of Malaysia Health Data

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Shariffah Suhaila Syed Jamaludin	ISMV046	Functional Data Analysis: Exploratory Tools on COVID-19 Pandemic	Universiti Teknologi Malaysia suhailasj@utm.my
2.25pm – 2.40pm	Adriana Irawati Nur Ibrahim	ISMV066	Forecasting The Transmission of COVID-19 Using LSTM Networks	University Of Malaya adrianaibrahim@um.edu.my
2.40pm – 2.55pm	Nurliyana binti Juhan	ISMV005	Comparison Between Suitable Priors in Bayesian Modelling of Risk Factor of Malaysian Coronary Artery Disease Female Patients	Universiti Malaysia Sabah liyana87@ums.edu.my
2.55pm – 3.10pm	Ruzaini Zulhusni bin Puslan	ISMV035	Modelling COVID-19 Disease in Peninsular Malaysia Using Logistic Regression	Universiti Teknologi Malaysia ruzainizulhusni@gmail.com
3.10pm – 3.25pm	Syed Anand Najmi Sayed Abu Bashar	ISMV095	Analysis Of Ethereum Versus Bitcoin: The Machine Learning Approach	UiTM SHAH ALAM syedanandnajmi@gmail.com

PARALLEL SESSIONS 2
Date: 18 August 2021

Venue: Room 5
Topic: Web Analytics for User Profiling and Prediction
Special Topic Session

TIME	PRESENTER	ID	TITLE	AFFILIATION
11.55am – 12.10pm	Liong Choong Yeun	ISMV023	Visualization And Prediction of User Ratings on Video Games Using Web Analytics	Universiti Kebangsaan Malaysia lg@ukm.edu.my
12.10pm – 12.25pm	Alia Muhammad Radzi	ISMV040	Web Analytics to Dissect the Different Types of Books on The New York Times Bestseller List	Universiti Kebangsaan Malaysia p106900@siswa.ukm.edu.my
12.25pm – 12.40pm	Jamaliah Jaafar	ISMV093	Public Maturity Assessment on Official Statistics (PMAOS): Using Web Analytics to Understand Insight of Perception Developed by Media and DOSM User Needs	Department Of Statistics Malaysia (DOSM) jamaliah@dosm.gov.my

Venue: Room 6
Topic: Clusters and Predictions
Special Topic Session

TIME	PRESENTER	ID	TITLE	AFFILIATION
11.55am – 12.10pm	Norhaiza Ahmad	ISMV020	Performance of Overlapping Two-Way Clustering Models Under Collinearity	Universiti Teknologi Malaysia norhaiza@utm.my
12.10pm – 12.25pm	Shazlyn Milleana binti Shaharudin	ISMV032	Students' Performance Prediction in Higher Education During Pandemic COVID-19 Based on Recurrent Forecasting-Singular Spectrum Analysis	Universiti Pendidikan Sultan Idris shazlyn@fsmt.upsi.edu.my
12.25pm – 12.40pm	Yee We Jet	ISMV092	Characterising COVID-19 Between States Variation in Malaysia	Universiti Teknologi Malaysia weijet1997@live.utm.my
12.40pm – 12.55pm	Nur Syazwin Mansor	ISMV057	Grouping River Flow Patterns Based on Nonlinear Features of Short Time Series Data	Department of Statistics Malaysia & Universiti Teknologi Malaysia syazwin@dosm.gov.my

Venue: Room 7
Topic: Innovative Statistical Methods in Medical Research

TIME	PRESENTER	ID	TITLE	AFFILIATION
11.55am – 12.10pm	Jayanthi Arasan	ISMV025	Modified Diagnostics for Survival Regression Model with Non-Monotonic Hazard Function and Censored Data	Universiti Putra Malaysia jayanthi@upm.edu.my
12.10pm – 12.25pm	Noryanti Muhammad	ISMV038	Formulation of Predictive Modelling the Cardiovascular Diseases	Universiti Malaysia Pahang noryanti@ump.edu.my
12.25pm – 12.40pm	Mohd Nazrul bin Mohd Amin	ISMV050	Forecasting Mortality Rates Due to Cardiovascular Diseases: A Comparison Between the Lee-Carter and The Weighted Hyndman-Ullah Models	Universiti Teknologi MARA nazrul@tmsk.uitm.edu.my
12.40pm – 12.55pm	Nurain Ibrahim	ISMV033	Feature Selection Method Using the Adjusted Correlation Sharing T-Statistics (ADJCORT) And Considering Time-Dependent Area Under Roc Curve for Classification: Application to Heart Failure Data	Universiti Teknologi MARA nurain@tmsk.uitm.edu.my

Venue: Room 8
Topic: Nonlinear Data Series Analysis in Environmental Studies

TIME	PRESENTER	ID	TITLE	AFFILIATION
11.55am – 12.10pm	Wan Zawiah Wan Zin	ISMV064	Evaluation Of the CORDEX-SEACLID Regional Climate Models Performance in Simulating Rainfall Characteristics of The Wettest State in Malaysia	Universiti Kebangsaan Malaysia w_zawiah@ukm.edu.my
12.10pm – 12.25pm	Zahrah Fayez M Althobaiti	ISMV045	Prediction Of CO2 Emissions in Saudi Arabia Using Genetic Algorithms Based on Grey Model GM(1,1)	Universiti Teknologi Malaysia zalthebiti@ut.edu.sa
12.25pm – 12.40pm	Khang Yi Sim	ISMV004	Revisited The Nexus of Energy Variables and Carbon Dioxide Emissions: A Panel Data Nonlinear Regression	Universiti Sains Malaysia khangzyisim@gmail.com

PARALLEL SESSIONS 3
Date: 18 August 2021

Venue: Room 5
Topic: Modeling Meteorological Data

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Siti Mariam Norrulashikin	ISMV048	Daily Rainfall Long Memory Analysis in Kelantan	Universiti Teknologi Malaysia sitimariam@utm.my
2.25pm – 2.40pm	Nor Hafizah Moslim	ISMV015	Some Insights on The Pattern of Wind Direction in Peninsular Malaysia	University Of Malaya fizahm@ump.edu.my
2.40pm – 2.55pm	Muhamad Safiih Lola	ISMV043	Improved Of Forecasting Sea Surface Temperature Based on Hybrid Arima and Support Vector Machines Model	Universiti Malaysia Terengganu safiihmd@umt.edu.my
2.55pm – 3.10pm	Darmesah Gabda	ISMV072	Modelling Distributional Linkage Between Extreme Rainfall and Climate Model Data	Universiti Malaysia Sabah darmesah@ums.edu.my

Venue: Room 6
Topic: Statistical Applications in Public Health

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Adina Najwa Kamarudin	ISMV034	Willingness To Pay for Heart Disease Insurance: A Case Study of a University Hospital in Malaysia	Universiti Teknologi Malaysia adina.najwa@utm.my
2.25pm – 2.40pm	Adie Safian Ton Mohamed	ISMV006	Meta-Analysis of Cultural Differences in Western and Asian Cancer Patients' Preferences in Breaking Bad News	Universiti Teknologi MARA Cawangan Pahang adiesafian@uitm.edu.my
2.40pm – 2.55pm	Zahraddeen Abdullahi	ISMV061	Impact of Frailty in Cure Rate Models: A Systematic Review	Universiti Teknologi Malaysia zahraddeen@graduate.utm.my
2.55pm – 3.10pm	Norazliani Md Lazam	ISMV058	Forecasting The Incidence Rates of Top Three Cancers in Malaysia	Universiti Teknologi MARA norazliani@uitm.edu.my

Venue: Room 7
Topic: Advances in Consumer and Stock Price Analysis

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Siti Rohani Mohd Nor	ISMV094	Modelling Natural Rubber Price in Malaysia Using Hybrid Forecasting Model	Universiti Teknologi Malaysia sitirohani@utm.my
2.25pm – 2.40pm	Norshela binti Mohd Noh	ISMV081	Formulating A Deterministic Equivalent of Stochastic Programming in Describing Behaviour of Prices and Demand Uncertainty	Universiti Teknologi Malaysia shelanoh@gmail.com
2.40pm – 2.55pm	Aw Yew Chung	ISMV067	Imputation Data for Neural Network Stock Market Forecasting	Universiti Teknologi Hussein Onn Malysia nicksonaw97@gmail.com
2.55pm – 3.10pm	Nor Azliana Aridi	ISMV010	A Stylized Facts Comparison Between Low-Frequency and High-Frequency Data of Brazil Stock Market (Bovespa)	Multimedia University nor.azliana.aridi@mmu.edu.my

Venue: Room 8
Topic: Forecasting Analysis in Energy Supply and Demand

TIME	PRESENTER	ID	TITLE	AFFILIATION
2.10pm – 2.25pm	Nur Arina Bazilah Kamisan	ISMV047	Hybrid Holts - Winter's Model and Artificial Neural Network for Short Term Load Data	Universiti Teknologi Malaysia nurarinabazilah@utm.my
2.25pm – 2.40pm	Nur Rafiqah binti Abdul Razif	ISMV013	Application Of Empirical Mode Decomposition in Improving Group Method of Data Handling Forecasting Accuracy of Electricity Load Demand	Universiti Teknologi Malaysia nrafiqah2@graduate.utm.my
2.40pm – 2.55pm	Nor Hafizah Hussin	ISMV019	A Comparative Study of Time Series Models and Artificial Neural Network in Modelling and Forecasting Wind Speed Data	Universiti Teknologi Malaysia norhafizah.hussin@graduate.utm.my

PARALLEL SESSIONS 4
Date: 18 August 2021

Venue: Room 5
Topic: Statistics in Environment and Investment Applications

TIME	PRESENTER	ID	TITLE	AFFILIATION
4.30pm – 4.45pm	Tan Pei Ling	ISMV079	Non-Parametric Conditional Mean Cumulative Function for Random-Interval Observations in Panel Count Data Analysis	Tunku Abdul Rahman University College tanpeiling@tarc.edu.my
4.45pm – 5.00pm	Lee Yon Qing	ISMV077	Awareness of Reduce, Reuse and Recycle: An Application of Partial Least Square Structural Equation Modeling	Universiti Tunku Abdul Rahman eeyonqing@1utar.my
5.00pm – 5.15pm	Che Normelissa binti Mohd Zainudin	ISMV069	Non-Trading Days Model for Stock Market Forecasting	Universiti Tun Hussein Onn Malaysia melissazainudin@gmail.com

Venue: Room 6
Topic: Population Growth and Mortality Analysis

TIME	PRESENTER	ID	TITLE	AFFILIATION
4.30pm – 4.45pm	Syazreen Niza Shair	ISMV049	Multi-Dimensional Data Analysis Approach: Forecasting Malaysian Mortality Rates by Age, Gender and States	Universiti Teknologi MARA syazreen@tmsk.uitm.edu.my
4.45pm – 5.00pm	Mahdir bin Bahar	ISMV087	Wage Determinant Between Male and Female Workers in Malaysia Labor Market	Universiti Malaysia Sabah mahdirbahar@gmail.com
5.00pm – 5.15pm	Nurulkamal Masseran	ISMV029	Statistical Analysis on Household Income Data in Perak, Malaysia	Universiti Kebangsaan Malaysia kamalmsn@ukm.edu.my

Venue: Room 7
Topic: Water Resource Management Analysis

TIME	PRESENTER	ID	TITLE	AFFILIATION
4.30pm – 4.45pm	Saadi Bin Ahmad Kamaruddin	ISMV075	Artificial Neural Network Models for Urban Waste Water Treatment Plant	Universiti Utara Malaysia s.ahmad.kamaruddin@uum.edu.my
4.45pm – 5.00pm	Razira Aniza binti Roslan	ISMV086	Prediction of Riverflow Using Bivariate Extreme Value Distribution	University Malaysia Sabah raziraroslan@gmail.com
5.00pm – 5.15pm	Ayman Mohd Hussein	ISMV065	Seminih Reservoir Lifetime Prediction Using Sediment Approaches	Universiti Malaysia Pahang ateahaymanhussein71@gmail.com

PARALLEL SESSIONS 5
Date: 19 August 2021

Venue: Room 5
Topic: Statistical Analysis and Modeling on The Tourist Arrival, Agriculture & Environment

TIME	PRESENTER	ID	TITLE	AFFILIATION
8.40am – 8.55am	Ng Kooi Huat	ISMV078	Antecedents Of Junk Food Purchase Intention Among Generation Z: A Case Study of Kota Bharu, Kelantan.	Universiti Tunku Abdul Rahman khng@utar.edu.my
8.55am – 9.10am	Johannah Jamalul Kiram	ISMV031	Ordinary Kriging and Cokriging for Teak Stand in Sabah	University Of Malaya johannah612@ums.edu.my
9.10am – 9.25am	Aimi Athirah Ahmad	ISMV007	A Copula-Based Modelling of Agro-Climatic Pattern in Relation to Durian Production	Malaysian Agricultural Research and Development Institute (MARDI) aimiathirah69@gmail.com
9.25am – 9.40am	Rafidah Binti Ali	ISMV030	Comparative Analysis of Hybrid Models for Prediction of Tourist Arrivals	UniKL MITEC rafidahali@unikl.edu.my

Venue: Room 6
Topic: Performance Analysis in Goods and Services

TIME	PRESENTER	ID	TITLE	AFFILIATION
8.40am – 8.55am	Nur Anisah binti Mohamed @ A Rahman	ISMV059	Optimised Reduction of Surgical Gloves Pinholes Using Forward Search Method	University of Malaya nuranisah_mohamed@um.edu.my
8.55am – 9.10am	Tan Swee Choon	ISMV028	Analyzing Footwear Quality Using Decision Trees and Logistic Regression Models	Universiti Utara Malaysia henrydarke12@gmail.com
9.10am – 9.25am	Zaharuzaman Jamaluddin	ISMV056	The Mediating Effect of Technology Capabilities Between Forwarding Services and Tracking Performance for The Forwarding Company in Selangor	Universiti Selangor zaharuzaman@unisel.edu.my
9.25am – 9.40am	Friday Zinzendoff Okwonu	ISMV024	Modified Chi- Square Test of Goodness of Fit (MCSTGF) Based on Least Square Method: A Study on The Statistical Drive Time Through the Creeks of Niger Delta	Universiti Utara Malaysia o.friday.zinzendoff@uum.edu.my

Venue: Room 7
Topic: Recent Advances in Statistics and Computations

TIME	PRESENTER	ID	TITLE	AFFILIATION
8.40am – 8.55am	Zarina Mohd Khalid	ISMV096	Comparing The Effectiveness of Online and Face-To-Face Teaching and Learning Approaches on Student Performance Using Nonparametric Methods	Universiti Teknologi Malaysia zarinamkhalid@utm.my
8.55am – 9.10am	Ahmad Farid bin Amin	ISMV001	Analyzing The Effects of Networking Behaviour on Employee Performance in Private University Using the Structural Equation Modelling	Universiti Teknologi Malaysia Kuala Lumpur ahmadfaridamin@gmail.com
9.10am – 9.25am	Demudu Naganaidu	ISMV022	Comparison On L1-Penalised Regression (Lasso) Model Optimization	Universiti Teknologi Malaysia demudu@amu.edu.my
9.25am – 9.40am	Sarimah Surianshah	ISMV054	Analysing The Endogeneity Bias in The Model of Online Learning in Mathematics and Science Using a Two-Step Least Squares Method	Universiti Malaysia Sabah sarimah.surianshah@ums.edu.my

Venue: Room 8
Topic: Water Resource Management Analysis

TIME	PRESENTER	ID	TITLE	AFFILIATION
8.40am – 8.55am	Sharifah Fairuz Syed Mohamad	ISMV018	Analysis of Lending Interest Rate and Economic Activities in Malaysia	Universiti Sains Islam Malaysia sh.fairuz@usim.edu.my
8.55am – 9.10am	Mohd Helmie bin Hamid	ISMV062	MODWT Gaussian Process Regression for Monthly Crude Oil Price Forecasting	Universiti Teknologi Malaysia helmiehamid@gmail.com
9.10am – 9.25am	Khang Yi Sim	ISMV044	Examination on the asymmetric effects of commodity price changes on sectoral CPI inflation of Malaysia	Universiti Sains Malaysia khangzyisim@gmail.com
9.25am – 9.40am	Venessa Tay Sin Yi	ISMV084	Comparative Evaluation of Consumer Price Index Forecasting Accuracy using Singular Spectrum Analysis	Universiti Teknologi Malaysia venessatay5266@gmail.com