

IEEE WIECON-ECE 2015 SCHEDULE

VENUE: BUET, DHAKA, BANGLADESH

Day 1: Saturday, 19 December 2015	
08:00 AM – 08:50 AM	Registration & Kit Collection IAC, BUET, Dhaka, Bangladesh
09:00 AM – 10:00 AM	Inaugural Ceremony IAC, BUET, Dhaka, Bangladesh
10:00 AM – 10:30 AM	Tea Break
10:30 AM – 01:00 PM	<p>Keynote Talk 1: Communication Networks: Traffic Data, Network Topologies, and Routing Anomalies Ljiljana Trajkovic, Ph.D., P.Eng., Fellow of IEEE President, IEEE Systems, Man, and Cybernetics Society (2014-15) Professor, Simon Fraser University, Canada</p> <p>Keynote Talk 2: Inertial Sensor Based Wearable Devices on Healthcare Pau-Choo (Julia) Chung, Ph.D., Fellow of IEEE Professor, National Cheng Kung University, Taiwan</p> <p>Keynote Talk 3: Women in Engineering Taking the Lead for a Better World Margaretha A.K. Eriksson Director-Elect, IEEE Region 8 (2015-16) IrbisKonsult AB and Halmstad University, Sweden</p> <p>Keynote Talk 4: Today's Industry Applications of Power Electronics and Update on IEEE's Industry Applications Society David B. Durocher President, IEEE Industry Applications Society (2015-16) Global Industry Manager, Eaton Corporation in Wilsonville, OR, USA</p>
01:00 PM – 02:00 PM	Lunch
02:00 PM – 04:00 PM	Technical Oral Sessions – 1,2,3,4,5 (See Details after the Schedule)
02:00 PM – 04:00 PM	<p>Invited Talk -1: Event Detection from Millions of Tweets Related to Disasters Using High-Performance Feature Selection Technique (Technical Session- 1) Takako Hashimoto, Ph.D. Chair, IEEE Women in Engineering (WIE) 2015 Professor, Chiba University of Commerce, Japan</p> <p>Invited Talk -2: Feature-Based Discrimination for Some Respiratory Disease (Technical Session - 3) Norliza Mohd Noor, Ph.D. Associate Professor, UTM, Kuala Lumpur Campus, Malaysia</p> <p>Invited Talk -3: On Application of Evolutionary Computational Techniques for Optimal Feature Subset Selection (Technical Session -5) Basabi Chakraborty, Ph.D. Professor, Iwate Prefectural University, Japan</p>
04:00 PM – 04:15 PM	Tea Break
04:15 PM – 06:15 PM	Technical Oral Sessions-6,7,8,9,10 (See Details after the Schedule)
	<p>Invited Talk -4: Video Processing and Communications Researches (Technical Session - 7) Supavadee Aramvith, Ph.D. Asst. Prof., Chulalongkorn University, Bangkok, Thailand 2015 IEEE Region 10 Women in Engineering (WIE) Coordinator</p>
04:30 PM – 05:30 PM	IEEE WIE Meeting

07:00 PM – 09:00 PM	Conference Banquet
Day 2: Sunday, 20 December 2015	
08:45 AM – 10:30 AM	Technical Sessions – 11,12,13,14,15 (See Details after the Schedule)
10:30 AM – 10:45 AM	Tea Break
10:45 AM – 12:00 PM	Technical Poster Session- 1(See Details after the Schedule)
10:45 AM – 12:00 PM	Tutorial Session - 1: New Criminal and Victim Identification Methods for Sexual Offenses against Women and Children Adams Wai Kin Kong, Ph.D. Associate Professor, Nanyang Technological University, Singapore
12:00 PM – 01:00PM	Keynote Talk 5: A Global View of the Commercial Scale Renewable Energy and the Smart Grid Saifur Rahman, Ph.D., Fellow of IEEE Professor, Virginia Tech, USA President-Elect (2016-17), IEEE PES Keynote Talk6: The Evolution of Interior Permanent Machines and their Control Techniques for Traction and Wind Power Applications Fazlur Rahman, Ph.D., Fellow of IEEE Professor, The University of New South Wales, Sydney, Australia
01:00 PM – 02:00 PM	Lunch
02:00 PM – 04:00 PM	Technical Poster Session -2 (See Details after the Schedule)
02:00 PM – 03:00 PM	Tutorial Session - 2 : Cities in Data Enriched World Iva Bojic, Ph.D. MIT, USA, MIT Senseable City Lab in Singapore
03:00 PM – 04:00 PM	Tutorial Session - 3: Biometrics Authentication – An Insight Chetana Hedge, Ph.D. Associate Professor, RNS Institute of Technology, India
03:00 PM – 05:00 PM	Workshop: Human Machine Interface: Hand Gesture Recognition in Navigational Platform for Rehabilitation of People with Mobility Issues Rajesh Kannan Megalingam, Ph.D., Asst. Professor, Amrita Vishwa Vidyapeetham University, India
04:00 PM – 04:15 PM	Tea Break
04:15 PM – 05:15 PM	Industrial Panel Invited Talk – 1: IAS Chapters and Membership Overview – Products and Services Dr. Peter Magyar, Fellow of IEEE, Chair, IAS Chapters and Membership Department (CMD) Invited Talk – 2: Motor Drives for High Performance Applications Mohammad S. Islam, Ph.D., Fellow of IEEE Chief Scientist at Halla Mechatronics in Bay City, Michigan Invited Talk – 3: Current Scenario of Power Industries in Bangladesh Md. Rabiul Alam Chairman, Energypac Power Generation Ltd. Invited Presentation : Funding Opportunities for International Collaborative Research Fahmida N. Chowdhury, (US) National Science Foundation (NSF)
05:30 PM – 06:30 PM	Awards and Closing Ceremony IAC, BUET, Dhaka, Bangladesh

IEEE WIECON-ECE 2015 TECHNICAL PROGRAM

VENUE: BUET, DHAKA, BANGLADESH

Technical Oral Session 1	
Session: Cloud, Computer Architecture and Software	
Saturday, 02:00PM – 04:00 PM, 19 December 2015, Room: 01	
Session Chair: Salekul Islam, Ph.D., UIU, Bangladesh	
Invited Talk -1	Event Detection from Millions of Tweets related to Disasters using High-Performance Feature Selection Technique Takako Hashimoto, Ph.D., Chair, IEEE WIE, Prof., Chiba Univ. of Commerce, Japan
P-ID	TITLE
79	Spatial Computing using Null Convention Logic
80	Selecting Best Attributes for Software Defect Prediction
86	Guiding Software Developers by Social Networking Application Plug-in Using the Multiple Bridge Source Repository through a Data Mining Integrated Approach
136	CBTS: Correlation Based Transformation Strategy for Privacy Preserving Data Mining
234	Complete Solution of Eight Puzzle Problem using BFS in CUDA Environment
386	Elementization of Thai Postal Addresses: A Hybrid Approach
388	Graph Mining Approach Towards Recommendation System using Feedback

Technical Oral Session 2	
Session: VLSI, Circuits and Systems	
Saturday, 02:00 PM – 04:00 PM, 19 December 2015, Room: 02	
Session Chair: Quazi Delwar Hossain, Ph.D., CUET, , Bangladesh	
P-ID	TITLE
28	Fault Analysis of QCA Combinational Circuit at Layout & Logic Level
77	Short Word Length NULL Convention Logic FIR Filter for Low Power Applications
97	An Efficient Approach to Design a Compact Reversible Programmable Logic Array
250	A Fast Acquisition Phase Frequency Detector for High Frequency PLLs
259	A Novel Current-Mode Biquadratic OTA-C filter
316	An Improved Algorithm for TAM Optimization to Reduce Test Application Time in Core Based SoC

Technical Oral Session 3	
Session: Biomedical Engineering - 1	
Saturday, 02:00 PM – 04:00 PM, 19 December 2015, Room: 03	
Session Chair: Md. Shahjahan, Ph.D., KUET, , Bangladesh	
Invited Talk - 2	Feature-Based Discrimination for some Respiratory Disease Norliza Mohd Noor , Ph.D., Assoc. Prof.,UTM, Kuala Lumpur Campus, Malaysia
P-ID	TITLE
102	Detection of the Lumen Boundary in the Coronary Artery Disease
120	Wireless Health Monitoring System for Patients
126	An Efficient Classification of Four Cognitive Tasks Using Single Channel EEG Data from Neuromonitor device
247	A Double Gate FET Nanoscale Biosensor for Detecting Ovarian Cancer Biomarker HE4
300	Estimation of Work Done in Lower Limb using EMG
339	An Approach for Classifying Alcoholic and Non-Alcoholic Persons Based on Time Domain Features Extracted From EEG Signals
371	The Development of Low Cost Exercise Monitoring Device for Paralytic

Technical Oral Session 4	
Session: Power System and Renewable Energy - 1	
Saturday, 02:00 PM – 04:00 PM, 19 December 2015, Room: 04	
Session Chair: Shahriar Khan, Ph.D., Independent University, Bangladesh	
P-ID	TITLE
20	Control and Design of Grid-Connected Photovoltaic System Integrated with Battery Energy Storage
25	Economic Analysis of a 3KW Solar Based Irrigation System and Comparison with its Diesel Based Counterpart
50	Design and Simulation of Centralized Load Controlled Automated Power System Network (CLCAPSN)
68	Fuzzy Logic Controller for Lithium-ion Battery in Standalone DC Microgrid
106	Improvement of Dielectric Performance of Silicone Rubber by Incorporation of Nano-Sized Fillers
151	Design and Study of an Efficient Conversion Method for PV Cell System
178	Voltage and Power Regulation in a Solar-Wind Hybrid Energy System

Technical Oral Session 5	
Session: AI and Computer Vision	
Saturday, 02:00 PM – 04:00 PM, 19 December 2015, Room: 05	
Session Chair: Mohammed Moshiul Hoque, Ph.D., CUET, Bangladesh	
Invited Talk - 3	On Application of Evolutionary Computational Techniques for Optimal Feature Subset Selection Basabi Chakraborty, Ph.D., Professor, Iwate Prefectural University, Japan
P-ID	TITLE
39	The Impact of Tattoo Segmentation on the Performance of Tattoo Matching
56	Development of Intelligent Wheelchair Simulator for Indoor Navigation Simulation and Analysis
88	A Big Data Analytic Identity Management Expert System for Social Media Networks
122	Emperical Evaluation of K-Means, Bisecting K-Means, Fuzzy C-Means and Genetic K-Means Clustering Algorithms
127	Investigation of Bangladesh Region Based Web Applications: A Case Study of SQLi Vulnerability
209	Optimization of Capacitated Vehicle Routing Problem using Producer-Scrounger Method
212	Sublinear scaling of country attractiveness observed from Flickr dataset

Technical Oral Session 6	
Session: Power Electronics, Machines and Drives	
Saturday, 04:15PM – 06:15 PM, 19 December 2015, Room: 01	
Session Chair: Naruttam Kumar Roy, Ph.D, KUET, Bangladesh	
P-ID	TITLE
12	Parametric Sweep Analysis of Medium Voltage Range Boost Converter for Energy Harvester Application
18	Design and Simulation of Fuzzy Logic Based Speed Control for an SVPWM Inverter-fed Induction Motor Considering Core Loss and Stray Load Losses
113	A Technical Comparison among Different PV-MPPT Algorithms to Observe the Effect of Fast Changing Solar Irradiation
157	Transient Base Charge Modeling of IGBT and its Carrier Lifetime Dependence
182	Design and Implementation of a Variable Frequency Drive for Single-Phase Induction Motor
183	Robust Adaptive Backstepping Speed Controller Design for a Series DC Motor
217	Design of a Multistage 0.1/12 kV DC-DC Matrix Converter Using Cockcroft-Walton Voltage Multiplier Topology
264	High-Efficiency Improved 12kW Switched Mode Telecom Rectifier

Technical Oral Session 7	
Session: Multimedia and Signal Processing	
Saturday, 04:15 PM – 06:15 PM, 19 December 2015, Room: 02	
Session Chair: Mohammad Shorif Uddin, Ph.D., Jahangirnagar University, Bangladesh	
Invited	Video Processing and Communications Researches
Talk - 4	Supavadee Aramvith, Ph.D., Assoc. Prof., Chulalongkorn Univ., Bangkok, Thailand
P-ID	TITLE
26	DPCM-Quantized Block-Based Compressed Sensing of images using Robbins Monro approach
73	Denoising of Video Using Fast Video Decomposition
174	A Modified FXLMS Algorithm for Active Impulsive Noise Control
240	Study on Sampling Matrices for Far-end Image Reconstruction by Block Compressed Sensing
282	Modeling of Human Emotion with Effective Frequency Band during a Test of Sustained Mental Task

Technical Oral Session 8	
Session: Antenna, Microwave and RF Engineering	
Saturday, 04:15PM – 06:15 PM, 19 December 2015, Room: 03	
Session Chair: Pran Kanai Saha, Ph.D., BUET, Bangladesh	
P-ID	TITLE
29	Optimization of Sidelobe Level of Thinned Phased Array Antenna Using Genetic Algorithm and Particle Swarm Optimization
42	Modified Precise Point Positioning with Ambiguity Validation for Better Performance
116	Frequency Diversity Improvement Factor for Rain Fade Mitigation in Malaysia
140	Evaluation of an Ultra Wideband (UWB) TextileAntenna in the Vicinity of Human Body Model for WBAN Applications
160	Accuracy of RF Based Underwater Intruder Localizations Using Sensor Networks with Shadow Fading
197	A Compact, Wide-Beam, High Gain Antenna for Wearable Medical Body-Area Network Devices
270	Feed Line Optimization in Pseudo-Interdigital Bandpass Filters
298	Nonlinear Mixing in Optical Signal Processing

Technical Oral Session 9	
Session: Power System and Renewable Energy- 2	
Saturday, 04:15 PM – 06:15 PM, 19 December 2015, Room: 04	
Session Chair: Tareq Aziz, Ph.D., AUST, Bangladesh	
P-ID	TITLE
199	Comprehensive Mathematical Modelling and Experimental Analysis of a Wireless Power Transfer System for Neighborhood Electric Vehicles
210	Electric and Lighting Energy Audit: A Case Study of Selective Commercial Buildings in Dhaka
220	Tunable-Q Wavelet Transform Based Approach for Recognition of Power Quality Disturbances
223	Accelerated Testing of a Micro PEM Fuel Cell Deployed in the Field
239	Optimal Placement and Sizing of Real Power Supporting DG in Radial Distribution Networks
324	Space Optimization and Backtracking for Dual Axis Solar Photovoltaic Tracker
381	Measurement of Hydrogen Ion Conductivity through Proton Exchange Membrane

Technical Oral Session 10	
Session: Semiconductor Devices, Nano-Technology and Photonics -1	
Saturday, 04:15 PM – 06:15 PM, 19 December 2015, Room: 05	
Session Chair: Samia Subrina, Ph.D., BUET, Bangladesh	
P-ID	TITLE
54	Two-Dimensional Model of Dual Metal Double Gate Tunnel FETs
62	Optical Switching and Bistability in T-shaped Nanoplasmonic Waveguide
74	Comparison between Piezoelectric Plate and Hollow Cylinder-based Energy Harvesters
112	Highly Sensitive Simple Structure Circular Photonic Crystal Fiber Based Chemical Sensor
180	Modeling and Optimization of Two-Terminal Perovskite/Si Tandem Solar Cells: A Theoretical Study
244	Assessment of Effectiveness of Hematite and Bismuth Ferrite Nanoparticles as Adsorbents for Arsenic Removal

Technical Oral Session 11	
Special Session: Biomedical Engineering - 2	
Sunday, 08:45 AM – 10:30 AM, 20 December 2015, Room: 01	
Session Chair: Khondaker Abdullah Al Mamun, Ph.D., UIU, Bangladesh	
P-ID	TITLE
200	Irreversible Wavelet Compression of Radiological Images Based on Visual Threshold
237	Block Based Texture Analysis Approach for Knee Osteoarthritis Identification Using SVM
326	A Histogram Based Scheme in YIQ Domain for Automatic Bleeding Image Detection from Wireless Capsule Endoscopy
353	Palm Vein Recognition System based on Corner Point Detection
354	Automatic Brain Tumor Detection and Segmentation from Multi-Modal MRI Images Based on Region Growing and Level Set Evolution
44	Video Shot Boundary Detection Using Statistical Methods

Technical Oral Session 12	
Special Session: Bioinformatics	
Sunday, 08:45 AM – 10:30 AM, 20 December 2015, Room: 02	
Session Chair: Basabi Chakraborty, Ph.D., Iwate Prefectural University, Japan	
P-ID	TITLE
229	LiCo: A Supervised method for Measurement of DNA Heterogeneity
265	Gene Regulatory Networks Using Bat Algorithm Inspired Particle Swarm Optimization
359	A New Effective Algorithm for Protein Chain Lattice Fit Problem
365	Constructing Phylogenetic Tree and Analysis using Information Retrieval Approach for MYB tfr's of Rice Genome
374	Biological synthesis of germanium dioxide nanoparticles using bacteria

Technical Oral Session 13	
Session: Robotics, Control and Automation	
Sunday, 08:45 AM – 10:30 AM, 20 December 2015, Room: 03	
Session Chair: Abdul Gaffar Khan, Ph.D., RUET, Bangladesh	
P-ID	TITLE
72	Motion Planning and Redundancy Resolution of a Rover Manipulator
175	Nonlinear Robust Backstepping Controller for Attitude Control of a Rotary Wing Unmanned Aerial Vehicle
218	Model-based Distributed Cooperative Control of a Robotic Manipulator
301	Non-Holonomic Mobile Manipulator Kinematic Control using Hybrid Simulated Annealing

Technical Oral Session 14	
Session: Wireless and Optical Communication	
Sunday, 08:45 AM – 10:30 AM, 20 December 2015, Room: 04	
Session Chair: Md. Abdur Rahman, Ph.D., AIUB, Bangladesh	
P-ID	TITLE
53	Resource Allocation in OFDMA-Based Wireless-Powered Cooperative Sensor Networks
128	Partner Selection and Resource Exchange in Co-operative Network
131	A zero-sum Power Allocation Game Over OFDM Gaussian Wiretap Channel with Dual Jamming
187	CPMTS: Catching Packet Modifiers with Trust Support in Wireless Sensor Networks
245	PER Reduction with Relays for Low Energy Short Range 802.15.4 WPN
248	Transmit Energy Calculation in Cross-correlation Based Underwater Network Cardinality Estimation
285	Matching with Externalities for Decoupled Uplink-Downlink User Association in Full-Duplex Small Cell Networks

Technical Oral Session 15	
Session: Semiconductor Devices, Nano-Technology and Photonics-2	
Sunday, 08:45 AM – 10:30 AM, 20 December 2015, Room: 05	
Session Chair: Muhibul Haque Bhuyan, Ph.D.	
P-ID	TITLE
280	Bending Insensitive Dispersion Flattened Modified Equiangular Spiral Photonic Crystal Fiber (MES-PCF)
284	Statistical Analysis of Leakage Current of Trapezoidal FinFETs
289	Effect of Point Defect in the Electronic Structure of Single Layer Graphene on Cu Substrate
329	Thermal Conductivity of Single Layer Graphene Supported on Silicon Nitride/Silicon Substrates
334	Optimization of an Optical Waveguide Biosensor Based on Hybrid Coupler with Short-Range Surface Plasmon Polariton
356	Defected Core Hybrid Cladding Photonic Crystal Fiber with High Birefringence & Highly Negative Dispersion Properties

Technical Poster Session 1	
Session: AI, Computer, Antenna, Wireless, Biomedical and Signal Processing	
Sunday, 10:45 AM – 12:00 PM, 20 December 2015, Room: Poster Area	
Session Chairs: Rifat Shahriyar, Ph.D., BUET & M. Tanseer Ali, Ph.D., AIUB	
P-ID	TITLE
37	Discrimination of Adulteration Orange Juice by Linear Discriminant Analysis (LDA)
46	PFU: Profiling Forum Users in Online Social Networks, a Knowledge Driven Data Mining Approach
90	Shoulder Pain Intensity Recognition using Gaussian Mixture Models
98	An Analytical Study to Minimize Load of ZigBee Network Based on Statistical Modeling
146	Secure Outage Performance Analysis of Wireless Multicasting through Weibull Fading Channel
170	Design of a 3.3V 4.1GHz Narrowband CMOS Differential Low Noise Amplifier
184	Reduction of Interference between Two Neighbouring Antennas by a Modulated Metasurface
193	Neural Network Based Drowsiness Detection Systems using Physiological Parameters
195	Performance Comparison of Non-binary RA and QC-LDPC Codes
207	Smart Shopping Cart: A Novel Approach to Supermarket Shopping
251	Area Coverage for Clustered Directional Sensor Networks using Voronoi Diagram

273	Radiation Pattern Synthesis of TMCAA Using Bacteria Foraging Optimization
288	Sidelobe and Beamwidth Optimization of Linear Antenna Arrays with Symmetric Relocation Boundary Condition of PSO
296	Simulation Study on Nonlinear Ultrasound Imaging Using Different Realistic Synthetic Phantoms
331	Stress Assessment for IT Professionals using Heart Rate Variability
345	Mobility-aware Recovery Technique for Reliable Multicast Routing Protocol in MANETs
357	Opinion Mining using Naïve Bayes
380	A Novel Data Security Framework using E-MOD for Big Data

Technical Poster Session 2
Session: Power, VLSI, Semiconductor and Robotics
Sunday, 2:00 PM – 4:00 PM, 20 December 2015, Room: 05
Session Chairs: Shahidul Islam Khan Ph.D., and Md. Kawsar Alam, Ph.D., BUET

P-ID	TITLE
31	Confinement Effects and Tunability of Quantum Dots within Strong Confinement Regime
35	FPGA Based Wheelchair Autonavagation for People with Mobility Issues
59	An Effective Scan Segmentation Approach to Detect Hardware Trojan in Integrated Circuits
81	Capacitance - to - Voltage Converter Design to Measure Small Change in Capacitance Produced by Human Body Movement
87	Electrostatic Analysis of Graphene Nanoribbon p-n Junction Diode
159	Graphically Including Gain K into Conventional Root Locus
185	Panoramic Mosaic Conception using Optimal Seam Selection and Graded Colour Correction
198	A Simple Branch Exchange Based Network Reconfiguration Method for Loss Minimization with Distributed Generation
203	A Single Phase Differential Zeta Rectifier-Inverter
205	Affordable Electricity Generation Using Low Cost Coal in Bangladesh Context
226	Comparative Study of Performance Vedic Multiplier on The Basis of Adders Used
256	Implementation of Microcontroller Based Maximum Power Point Tracker (MPPT) Using SEPIC Converter
315	Study and Development of Android Controlled Wireless Pole Climbing Robot
321	Augmentation in Object Tracking Performance with Hue Preservation Conditioned on Frequency Domain Characteristics of Video
328	Power Pilferage in Bangladesh: A Simple and Economically Affordable Solution
336	Wizard Chess: An Autonomous Chess Playing Robot Sunandita Sarker
342	Design of a Cost-Effective and Environment Friendly Compact Fluorescent Lamp Disposal System Using Titanium Dioxide Photocatalyst
347	An Energy Efficient Cluster based Forwarding Scheme for Body Area Network Using Nanoscale Electromagnetic Communication
349	Real Time Detection of Speed Breakers and Warning System for on-road Drivers
363	Economic Load Dispatch using Heuristic Algorithms
373	Development of an Effective System for Remote Monitoring of Banana Ripening Process
375	A Practical Implementation of Energy Harvesting, Monitoring and Analysis System for Solar Photo Voltaic Terrestrial Vehicles in Indian ScenariosA case of pilot implementation in the Indian Railways
383	Design of Compact Reversible Online Testable Ripple Carry Adder

Awards and Closing Ceremony
Sunday, 05:30 PM – 06:30 PM, 20 December 2015
Room: IAC, BUET