

2014 4th International Conference on Engineering Technology and Technopreneurship

(ICE2T 2014)

**Kuala Lumpur, Malaysia
27-29 August 2014**



IEEE Catalog Number: CFP1464Y-POD
ISBN: 978-1-4799-4620-4

Program

2014 4th International Conference on Engineering Technology and Technopreneuship (ICE2T)

Day 1 Technopreneurship

<i>Information Technology Adoption, possible challenges, and Framework of Supply Chain Management: a Case Study of a Leading Gulf Economy</i> Habib Ullah Khan (Qatar University & Qatar University, Qatar), Hassan A. Artail (American University of Beirut, Lebanon), Zaki Malik (Wayne state university, USA), Mahmood Niazi (King Fahd University of Petroleum and Mineral, KSA., Saudi Arabia)	1
<i>Role of customer knowledge in developing new products and services</i> Maziar Irani (Universiti Teknologi Malaysia (UTM), Malaysia), Tan Sri Ir. Dr. Mohd Zulkifli bin Tan Sri Mohd Ghazali (Universiti Teknologi Malaysia (UTM), Malaysia)	6
<i>Issues and Challenges in Implementing Entrepreneurial Students Character Building (SCB) Activities: A Study at UniKL BMI</i> Norida Kamaruddin (UniKL BMI, Malaysia), Sudirman Zainal Abidin (Universiti Kuala Lumpur BMI, Malaysia), Anis Nur Assila Rozmi (Universiti Kuala Lumpur BMI, Malaysia)	10
<i>An Overview of Business Simulation System for Malaysian Entrepreneur</i> Rosilah Hassan (Universiti Kebangsaan Malaysia & UKM, Malaysia), Norngainy Tawil (Universiti Kebangsaan Malaysia (UKM), Malaysia), Norizan Razak (Universiti Kebangsaan Malaysia, Malaysia)	15
<i>Driving Factors of Purchase Intention Towards Organic Food: A Conceptual Study</i> Mohamed Basha (Universiti of Kualalumpur, UAE)	19
<i>Redefining The University Science Park model in UniKL BMI Academic setting: A Conceptual Study on Economic Growth through Tech Entrepreneurship, Innovation and Commercialization</i> Mohd Hazli Mohd Rosli (Universiti Kuala Lumpur, Malaysia), Anis Nur Assila Rozmi (Universiti Kuala Lumpur BMI, Malaysia)	23
<i>Evaluation of Economic Benefits for Market Models in Restructured Electricity Supply Industry (ESI)</i> Norhafiza Mohamad (Universiti Kuala Lumpur, Malaysia)	28
<i>Review on Constraint Based Modelling in Intelligent Learning Environment</i> Rajermani Thinakaran (Nilai University, Malaysia), Rosmah Ali (Universiti Teknologi Malaysia, Malaysia)	33
<i>Information System Model for the Measurement of Learning Outcome Attainment</i> Shamsul Anuar Mokhtar (University Kuala Lumpur, Malaysia)	37
<i>Competency Assessment of Short Free Text Answers</i> Normaziah Abdul Aziz (International Islamic University Malaysia, Malaysia), Adidah Lajis (University Kuala Lumpur, Malaysia)	41

Day 1 Communication

<i>LTE Higher Layer Performance with 4-NIRA MANET Routing</i> Farukh Rahman (RMIT University, Australia), Mark A. Gregory (RMIT University, Australia)	46
<i>PHY Layer Performance of Heterogeneous LTE-Advanced Network in 3D Extended Channel Models</i> Zuhanis Mansor (University of Kuala Lumpur British Malaysian Institute (UniKI-BMI), Malaysia)	52
<i>Multi-Criteria Load Balancing Decision Algorithm for LTE Network</i> Nathaniel Salawu (University Technology Malaysia, Malaysia), Sharifah Hafizah Syed Ariffin (Universiti Teknologi Malaysia, Malaysia), Ali Farzamnia (Universiti Teknologi Malaysia, Malaysia), Joshua A. Abolarinwa (Universiti Teknologi Malaysia & FUTMin, Malaysia)	57

<i>Performance Evaluation of IPv6 Test-bed Network at UKM</i>	
Mohammad Mirwais Yousafzai (Universiti Kebangsaan Malaysia, Malaysia), Rosilah Hassan (Universiti Kebangsaan Malaysia & UKM, Malaysia), Nor Effendy Othman (Universiti Kebangsaan Malaysia, Malaysia), Samer Sami Hasan (University Kebangsaan Malaysia & UKM, Malaysia), Umi Kalthom Ali (Universiti Kebangsaan Malaysia, Malaysia)	63
<i>Applying QoS to 4-N Intelligent MANET Routing Algorithm by IPv6 Association</i>	
Farukh Rahman (RMIT University, Australia), Mark A. Gregory (RMIT University, Australia)	67
<i>An Evidential Network Forensics Analysis with Metrics for Conviction Evidence</i>	
Ahmad Roshidi Amran (Universiti Kuala Lumpur, Malaysia), Amna Saad (Universiti Kuala Lumpur, Malaysia)	73
<i>Bandwidth Efficient Router Design With Introduction of Buffering to Reduce Retransmission Cost of Corrupt Data</i>	
Abbad Ur Rehman (Beijing Institute of Technology, P.R. China), Shaheer Hussain (The Islamia University of Bahawalpur, Pakistan), Muhammad Arslan Akbar (The Islamia University of Bahawalpur, Pakistan), Asad Sharif (The Islamia University of Bahawalpur, Pakistan), Muhammad Attique Qamar (Beijing Institute of Technology, P.R. China)	79
<i>Security Threats for IPv6 Transition Strategies: A Review</i>	
Amjed Sid Ahmed Mohamed Sid Ahmed (Universiti Kebangsaan Malaysia, Malaysia), Rosilah Hassan (Universiti Kebangsaan Malaysia & UKM, Malaysia), Nor Effendy Othman (Universiti Kebangsaan Malaysia, Malaysia)	83
<i>WLAN Environment for Indoor Localization</i>	
Muhammad Fadli Burhan (Universiti Tenaga Nasional & UNITEN, Malaysia), Nagaletchumi Balasubramaniam (Universiti Tenaga Nasional, Malaysia)	89
<i>Statistical Electromagnetic Analysis of PEC Sphere Scattering</i>	
Qian Xu (The University of Liverpool, United Kingdom), Yi Huang (University of Liverpool, United Kingdom), Xu Zhu (University of Liverpool, United Kingdom), Lei Xing (University of Liverpool, United Kingdom), Aznida Abu Bakar Sajak (University of Liverpool & University of Kuala Lumpur, United Kingdom)	94

Day 1 Electrical

<i>An Intelligent Wind Farm Model for Three-phase Unbalanced Power Flow Studies</i>	
Chandrabhanu Opathella (Ryerson University, Canada), Daniel Cheng (Ryerson University, Canada), Bala Venkatesh (Ryerson University, Canada)	99
<i>A Simulation Study on the Airfoils using VAWT Design For Low Wind Speed Application</i>	
Pusparini Dewi Abd. Aziz (Universiti Kuala Lumpur & British Malaysian Institute, Malaysia), Ahmad Khairul Ramzi Mohamad (Universiti Kuala Lumpur British Malaysian Institute, Malaysia), Fatimah Zaharah Hamidon (Universiti Kuala Lumpur British Malaysian Institute, Malaysia), Norhafiza Mohamad (Universiti Kuala Lumpur, Malaysia), Najiyah Saleh (Universiti Kuala Lumpur-British Malaysian Institute, Malaysia), Noor Hidayah Mohd Yunus (Technical University, Malaysia)	105
<i>Power quality improvement of grid connected doubly fed induction generator using STATCOM and BESS</i>	
Mohamad Javad Ghorbanian (University of Malaya, Malaysia), Fatemeh Goodarzvand (Department of Electrical Engineering, Malaysia), Alireza Pourdaryaei (University of Malaya, Malaysia), Wan Nor Liza Wan Mahadi (University of Malaya, Malaysia)	110
<i>Solar Water Pumping Optimization for Domestic Use in Kota Bharu, East Coast of Peninsular Malaysia</i>	
Wan Mustafa Wan Sulong (Universiti Kuala Lumpur Malaysia France Institute, Malaysia), Mohd Fairus Bin Humar (Universiti Kuala Lumpur, Malaysia), Khairul Parman Zakaria (Universiti Kuala Lumpur, Malaysia), Hisham Hamid (Universiti Kuala Lumpur Malaysia France Institute, Malaysia)	116
<i>Techno-Economical Feasibility Study of UniKL MICET Lighting Fixture Energy Saving By Using Motion Sensor</i>	
Abdul Hakim Abu Bakar (Universiti Kuala Lumpur, Malaysia)	121

<i>Community Energy Storage, a Critical Element in Smart Grid: A Review of Technology, Prospect, Challenges and Opportunity</i> Junainah Sardi (Universiti Teknikal Malaysia Melaka, Malaysia), Mithulan Nadarajah (University of Queensland, Australia)	125
<i>Mitigating Voltage Sag by Implementing STATCOM on DFIG-based Wind Farms Connected to a Power System</i> Mohamad Javad Ghorbanian (University of Malaya, Malaysia), Fatemeh Goodarzvand (Department of Electrical Engineering, Malaysia), Alireza Pourdaryaei (University of Malaya, Malaysia), Wan Nor Liza Wan Mahadi (University of Malaya, Malaysia)	131
<i>Dual Control Direct Digital Synthesizer (DCDDS) For Electronic Testing and Experimental Work</i> Nurul Amziah Md Yunus (Universiti Putra Malaysia, Malaysia), Nasri Sulaiman (Universiti Putra Malaysia, Malaysia), Noor Ain Kamsani (Universiti Putra Malaysia, Malaysia), Seaw Wei Tan (Universiti Putra Malaysia, Malaysia)	137
<i>Aligned-Gap Multiple Split Ring Resonator for Dielectric Sensing Application</i> Izyani Mat Rusni (Universiti Putra Malaysia, Malaysia), Alyani Ismail (Universiti Putra Malaysia, Malaysia), Adam Reda Hasan Alhawari (Universiti Putra Malaysia, Malaysia), Mohd Nizar Hamidon (University Putra Malaysia, Malaysia), Nor Azah Yusof (Universiti Putra Malaysia, Malaysia)	143

Day 2 Application of Engineering Technology

<i>Using a Biometric System to Control Access and Exit of Vehicles at Shopping Malls in South Africa</i> Robert Hans (Tshwane University of Technology, South Africa)	148
<i>ZigBee Environment for Indoor Localization</i> Muhammad Fadli Burhan (Universiti Tenaga Nasional & UNITEN, Malaysia), Nagaletchumi Balasubramaniam (Universiti Tenaga Nasional, Malaysia)	152
<i>Multiple Pulse K-Nearest Neighbors Authentication for Malay ECG Based Class Attendance System</i> Sairul Safie (Universiti Kuala Lumpur, Malaysia), Mohd Ismail Yusof (Universiti Kuala Lumpur, Malaysia), Haidawati Nasir (Universiti Kuala Lumpur, Malaysia), Kushsairy Kadir (Universiti Kuala Lumpur British Malaysian Institute, Malaysia)	156
<i>Wheat Yield Prediction: Artificial Neural Network based Approach</i> Muhd Abdul Kadir (UniKL BMI, Malaysia), Mohd Ayob (Universiti Kuala Lumpur & University of York, Malaysia), Nadaraj Miniappan (UniKL BMI, Malaysia)	161
<i>Integration of Principal Component Analysis and Neural Classifier for Fault Detection and Diagnosis of Tennessee Eastman Process</i> Mostafa Noruzi Nashalji (Islamic Azad University & Young Research Club, Iran), Seyedamin Arvand (KTH Royal Institute of Technology, Sweden), Mohammad Norouzfard (Islamic Azad University, Parand Branch, Iran)	166
<i>Air Contaminants Monitoring of Carbon Monoxide and Hydrogen using Standalone Microcontroller Based System for Passive Smoker</i> Mohamed Kamarul Zaman Mohamed Zaiedi (Universiti Kuala Lumpur & Malaysia Institute of Information Technology, Malaysia)	171
<i>An Instance Based Schema Matching Between Opaque Database Schemas</i> Sameer Munir, Munir (The University of Faisalabad, Pakistan), Muhammad Riaz (Blekinge Institute of Information Technology, Sweden), Faraz Khan (The University of Faisalabad, Pakistan)	177
<i>Influence of the chemical composition of Polyurethane block on the surface roughness in machining</i> Louis Denis Kevin Catherine (Universiti Kuala Lumpur IPROM, Malaysia), Mohd Yazid (Lecturer in Unikl iprom, Malaysia)	183
<i>Fatigue Life Assessment and Enhancement on Welded Structure: Review on Assessment Methods with Case Study and Recent Technology</i> Dahia Andud (UNIKL MFI, Malaysia)	189

Day 2 Communication

<i>A Comparison of the Effect of Substrate on the Performance of THz Antenna</i> Aznida Abu Bakar Sajak (University of Liverpool & University of Kuala Lumpur, United Kingdom), Rula Alrawashdeh (The University of Liverpool, United Kingdom), Lei Xing (University of Liverpool, United Kingdom), Saqer S. Alja'afreh (University of Liverpool, United Kingdom), Yaochun Shen (University of Liverpool, United Kingdom)	195
<i>Evaluation of Slot Patch Unit Cell for Discrete Lens Antenna Applications</i> Abdisamad Ali Awaleh (University Tun Hussein Onn Malaysia, Malaysia), Samsul Haimi Dahlan (Universiti Tun Hussien Onn Malaysia, Malaysia)	199
<i>Integration of Split Ring Resonators (SRRs) to UHF RFID Tag Antenna for Size Reduction</i> Nor Hidayah Daud (Universiti Putra Malaysia, Malaysia)	204
<i>A Singly-Fed Wideband Circularly Polarized Cylindrical Dielectric Resonator Antenna Using Conformal Half-Loop Excitation</i> Mohamad Ismail Sulaiman (Universiti Kuala Lumpur & British Malaysia Institute, Malaysia), Hafiz Basarudin (University Kuala Lumpur British Malaysian Institute, Malaysia)	209
<i>RFID and ZigBee Integrated Environment for Indoor Localization</i> Muhammad Fadli Burhan (Universiti Tenaga Nasional & UNITEN, Malaysia), Nagaletchumi Balasubramaniam (Universiti Tenaga Nasional, Malaysia)	213
<i>Preliminary study of EUMETSAT's Multi-Sensor Precipitation Estimate product for microwave links in Malaysia</i> Hafiz Basarudin (University Kuala Lumpur British Malaysian Institute, Malaysia), Tengku Azita Tengku Aziz (Universiti Kuala Lumpur British Malaysian Institute, Malaysia), Mohamad Ismail Sulaiman (Universiti Kuala Lumpur & British Malaysia Institute, Malaysia), Abdul Halim Ali (Universiti Kuala Lumpur - International College & Wireless Research Lab, Malaysia)	218
<i>Effect of Rain Induced Scintillation on Ku-Band Satellite Link in Tropical Region</i> Hassan Dao (Universiti Kuala Lumpur, Malaysia), Md Rafiqul Islam (International Islamic University Malaysia, Malaysia), Megat Farez Azril Zuhairi (Universiti Kuala Lumpur & Universiti Kuala Lumpur, Malaysia), Megat Norulazmi Megat Mohamed Noor (Universiti Kuala Lumpur, Malaysia), Sayed Aziz Sayed Hussin (Universiti Kuala Lumpur, Malaysia)	222
<i>IGMP Behaviour in Multicast over Satellite</i> Sameer Munir, Munir (The University of Faisalabad, Pakistan), Faraz Khan (The University of Faisalabad, Pakistan)	226
<i>Performance Analysis of Rayleigh fading channels in GI-Less OFDM System using QAM modulations</i> Mohd Zain Ismail (Universiti Kuala Lumpur British Malaysian Institute, Malaysia)	231

Day 2 Electrical

<i>Switched-Capacitor DC-DC Boost Converter of Variable Output Voltage</i> Ahmed Rasheed (The University of Faisalabad, Faisalabad & Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Pakistan)	235
<i>Fault Tree Analysis in UPS Reliability Estimation</i> Mohd Rahmat (University of Kuala Lumpur & British Malaysian Institute, Malaysia)	240
<i>GSM Wireless Datalogger of Small Hydro Power Generation System</i> Mohd Fairus Bin Humar (Universiti Kuala Lumpur, Malaysia), Engku Ahmad Azrulhisham (Universiti Kuala Lumpur, Malaysia), Khairul Hamzani (UniKL MFI, Malaysia), Wan Mustafa Wan Sulong (Universiti Kuala Lumpur Malaysia France Institute, Malaysia), Samizee Abdullah (Universiti Kuala Lumpur, Malaysia), Mohd Juhari Mat Basri (Universiti Kuala Lumpur, Malaysia), Mohd Akram Dandu, Dandu (University of Kuala Lumpur & British Malaysian Institute, Malaysia)	246

<i>Prototype Development of Brown Plant hopper (BPH) Detector and Data Logger</i>	
Mohd Ayob (Universiti Kuala Lumpur & University of York, Malaysia), Abdul Halim Abdul Rahman (Universiti Kuala Lumpur, Malaysia), Muhd Khairulzaman Abdul Kadir (University of Warwick, United Kingdom), Nur Husna Izzati Hashim (Universiti Kuala Lumpur British Malaysian Institute, Malaysia), Noorsahida Saleha Sahlan (UniKL BMI, Malaysia), Mohd Desa Haji Hassim (Ministry of Agriculture Malaysia & IADA Barat Laut Selangor, Malaysia)	252
<i>Fuzzy Logic Controller for Shunt Active Power Filter</i>	
Azuki Abdul Salam (Universiti Kuala Lumpur British Malaysian Institute, Malaysia), Nik Azran Ab Hadi (Universiti Teknikal Malaysia, Melaka Malaysia, Malaysia), Ismail Adam (University Kuala Lumpur British Malaysian Institute, Malaysia)	256
<i>Discrete Time Optimum Power Flow Simulation of 118 IEEE Test Bus with Intermittent Generation</i>	
Saharuddin Bin Othman Othman (UniKL BMI, Malaysia)	260
<i>Design of Single Phase to Three Phase Static Power Converter</i>	
Fatimah Zaharah Hamidon (Universiti Kuala Lumpur British Malaysian Institute, Malaysia), Imran Hanif Mohd Ali (Universiti Kuala Lumpur British Malaysian Institute, Malaysia), Mohd Nurfaizad Khadari (Universiti Kuala Lumpur British Malaysian Institute, Malaysia), Pusparini Dewi Abd Aziz (Universiti Kuala Lumpur British Malaysian Institute Malaysia, Malaysia), Noor Hidayah Mohd Yunus (Universiti Kuala Lumpur BMI, Malaysia)	266
<i>Emulation of Petri Net Controller with Programmable Logic Controller in Industrial Process Plant</i>	
Mohamad Shaiful Osman (Universiti Kuala Lumpur, Malaysia)	272
<i>Analysis of Voltage Stability Problems in Power System</i>	
Noor Ropidah Bujal (University of Technical Malaysia & Merlimau Melaka Polytechnic Malaysia, Malaysia), Amilia Hasan (Universiti Technical Malaysia Malacca & Polytechnic Merlimau, Malacca, Malaysia), Marizan Sulaiman (Supervisor, Malaysia)	278

Day 3 Biomedical

<i>Design of an Artificial Arm with Hand Gripper for Telemedicine System</i>	
Nurul Fazlin Roslan (UNIKL BRITISH MALAYSIAN INSTITUTE, Malaysia), Abdul Malik Mohd Ali (Universiti Kuala Lumpur-British Malaysian Institute, Malaysia), Suhairi Rizuan Che Ahmad (Universiti Kuala Lumpur-British Malaysian Institute, Malaysia)	284
<i>Analysis of Droplet Mixing and Splitting Operations by a Low Actuation Voltage Electrowetting-on-dielectric Device</i>	
Mst Fateha Samad (Deakin University, Australia), Abbas Z. Kouzani (Deakin University, Australia), Md Kamal Hosain (Deakin University, Australia), Kevin Magniez (Deakin University, Australia), Md Saiful Islam (Deakin University, Australia), Akif Kaynak (Deakin University, Australia), Subrat Das (Deakin University, Australia), Muhd Alam (Deakin University, Australia), Amir Moghadam (Deakin University, Australia)	289
<i>Virtual Reality-based Technique for Stress Therapy</i>	
Imran Mahalil (Universiti Tenaga Nasional & Uniten, Malaysia), Mohd Ezanee Rusli (Universiti Tenaga Nasional, Malaysia), Mohd Zaliman Mohd Yusoff (Universiti Tenaga Nasional, Malaysia), Azmi Mohd Yusof (College of Information Technology, Universiti Tenaga Nasioanl, Malaysia), Ahmad Zainudin (College of Information Technology, Universiti Tenaga Nasioanl, Malaysia)	295
<i>Segmentation of Heart Sound Signals into Cycles based on Peak Intervals Pattern</i>	
Mohd Zubir Suboh (Universiti Kuala Lumpur, Malaysia), Muhyi Yaakop (Universiti Kuala Lumpur, Malaysia), Mohd Syazwan Md Yid (Universiti Kuala Lumpur, Malaysia), Mohammad Hendra Che Morad (Universiti Kuala Lumpur, Malaysia)	301
<i>Development of Artificial hand Gripper by using Flex Force Sensor</i>	
Mohammad Miqdad Abdul Aziz (Universiti Kuala Lumpur, Malaysia), Suhairi Rizuan Che Ahmad (Universiti Kuala Lumpur-British Malaysia Institute, Malaysia), Pusparini Dewi Abd Aziz (Universiti Kuala Lumpur British Malaysian Institute Malaysia, Malaysia), Nurul Fazlin Roslan (UNIKL BRITISH MALAYSIAN INSTITUTE, Malaysia), Abdul Malik Mohd Ali (Universiti Kuala Lumpur-British Malaysian Institute, Malaysia)	305

<i>Portable Telehealth Aggregation Manager</i>	
Safiullah Khan (Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Pakistan), Ahmed Rasheed (The University of Faisalabad, Faisalabad & Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Pakistan), Mati Ullah (Bahcesehir University, Turkey), Arshad Ali (Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Pakistan)	309
<i>Future Direction of the Electromyography Based Method to Evaluate Muscle Fatigue</i>	
Nurul Fauzani Jamaluddin (Univeristi Putra Malaysia, Malaysia)	314
<i>A Development of Smart ECG Machine Using LabVIEW For Education</i>	
Ahmad Sabry Mohamad (Universiti Kuala Lumpur, Malaysia)	320

Day 3 Electronics

<i>Designing of a Control Scheme for the Solar Rickshaw in Comparative Study with Conventional Auto Rickshaw</i>	
Bilal Masood (Superior University, Lahore, Pakistan), Rao Asif (Superior University, Pakistan), Rizwan Superior University (Naqvi, Pakistan)	324
<i>An Active Power Filter With 5-Level NPC Inverter</i>	
Mahadzir Abdul Ghani (Universiti Kuala Lumpur, Malaysia)	330
<i>A Comparative Study between LBP and Haar-like features for Face Detection Using OpenCV</i>	
MohdKhairi Kamaruddin (Universiti Kuala Lumpur & British Malaysian Institute, Malaysia)	335
<i>Adaptive Fuzzy Logic Traffic Light Management System</i>	
Muhyi Yaakop (Universiti Kuala Lumpur, Malaysia)	340
<i>High Level Modeling Of Physical Layer Noise Parameters Using SystemC</i>	
Sundaresan Chidambaram (Manipal University, India), Vishnu Satya Chaitanya (Manipal University, India)	344
<i>Web Based Graphic User Interface (W-GUI) through C# Platform for Environment Data Management System</i>	
Mohd Amir Abas (Universiti Kuala Lumpur, Malaysia)	348
<i>Maximum Power Point Tracking using Hybrid Perturb & Observe and Incremental Conductance Techniques</i>	
Muhammad Shahzad Siddique (Superior University, Pakistan), Bilal Masood (Superior University, Lahore, Pakistan), Rao Asif (SUPERIOR UNIVRSITY, Pakistan), Muhammad Zia UI Haq (Superior University, Pakistan)	354