

TECHNICAL SESSION ICCCE 2023

| Time | Tuesday, 15 August 2023 | Wednesday, 16 August 2023 |
|---------------------|--|--|
| 9:00 am - 9:45 am | O: Opening Ceremony | K2: Keynote 2: The Trend and Impact of Computer Technologies to Telecommunication |
| 9:45 am - 10:00 am | Break and Networking | |
| 10:00 am - 10:45 am | C: CONGRESS KEYNOTE: IIUM Honorable Rector YBhg. Prof. Emeritus Tan Sri Dato' Dzulkifli Abdul Razak | K3: Keynote 3: Malaysia Renewable Energy Roadmap |
| 10:45 am - 11:00 am | Break and Networking | |
| 11:00 am - 12:45 pm | <i>11:30 am - 12:30 pm</i> K1: Keynote 1: Harmonizing Computer Technology, AI, and Ethical Engineering for a Sustainable Future | 3A: AI & Machine Learning 1 / Green Technology & Smart Grid 3B: AI & Machine Learning 2 / RF & Microwave Circuits and Devices 3C: AI & Machine Learning 3 / Cyber Security & Network Reliability/ Emerging Technologies |
| 12:45 pm - 2:00 pm | Lunch Break | |
| 2:00 pm - 3:45 pm | 1A: 5G and Beyond Wireless Communications 1B: IoT & Cloud Computing 1 / Power System & Power Electronics 1C: 1C: Energy Harvesting and Renewable Energy | 4A: AI and Machine Learning 4 / Electronic Communication / Advanced Computing Architectures 4B: AI and Machine Learning 5 / Engineering Management 4C: Antennas and Propagation / Optical Communications and Photonics |
| 3:45 pm - 4:00 pm | Break and Networking | |
| 4:00 pm - 5:30 pm | 2A: Signal and Image Processing 2B: IoT & Cloud Computing 2 / Sensor & Actuators 2C: Software Engineering | |

TUESDAY, 15 AUGUST 2023

Tuesday, August 15 8:30 - 10:00 (Asia/Kuala_Lumpur)

OPENING: Opening Ceremony

Tuesday, August 15 11:30 - 12:30 (Asia/Kuala_Lumpur)

Keynote 1: Harmonizing Computer Technology, AI, and Ethical Engineering for a Sustainable Futures

Room: Auditorium A, Block E2 Kulliyah of Engineering & Zoom

Mr. Rafeek Ibrahim, INTEL

Chair: Prof. Dr. Othman Omran Khalifa (International Islamic University Malaysia (IIUM), Malaysia)

This keynote speech explores the intersection of computer technology, AI, and ethical engineering, emphasizing the need to address the ethical considerations that arise alongside technological advancements. It highlights the potential risks and benefits of these technologies and emphasizes the importance of ethical decision-making in their design and implementation. The speech emphasizes key principles of ethical engineering, interdisciplinary collaboration, and the role of education in nurturing a culture of ethical engineering. By harmonizing computer technology, AI, and ethical engineering, we can shape a sustainable future that aligns with our shared values and respects fundamental human rights.

Tuesday, August 15 2:00 - 3:45 (Asia/Kuala_Lumpur)

1A: 5G and Beyond Wireless Communications

Room: E2 -1 -1, Block E2 Kulliyah of Engineering & Zoom Breakout room name: 1A

Chair: Dr. Ahmad Zamani Bin Jusoh (International Islamic University Malaysia (IIUM), Malaysia)

2:00 *Performance Comparison of DPS in NOMA for Different MIMO Antenna Configurations*

Md. Shahriar Sadid and Abdullah Alavi (Metropolitan University, Bangladesh); Moontasir Rafique, Md. Aadnan Farhad and Mohammad T. Kawser (Islamic University of Technology, Bangladesh)

2:15 *Attacks Detection in 6G Wireless Networks Using Machine Learning*

Mamoon Saeed (University of Modern Sciences (UMS), Saudi Arabia); Rashid A. Saeed (Taif University, Saudi Arabia & Sudan University of Science and Technology SUST, Sudan); Abdul Guddoos Gaid (Taiz University, Yemen); Rania A Mokhtar (Taif University, Saudi Arabia); Othman Omran Khalifa (International Islamic University Malaysia (IIUM), Malaysia); Zeinab Ahmed (International Islamic University Malaysia, Malaysia)

2:30 *RIS-Assisted CSIT-Free Data Fusion With Timing Misalignment*

Yaqiong Zhao and Wei Xu (Southeast University, China); Xinquan Ye (Xidian University, China)

2:45 *Design of a Compact Transparent Antenna for 5G Wireless Applications*

Abdullahi Yahye Ahmed and Shakib Abdullahi Osman (SIMAD University, Somalia); Abdulrashid Mumin (SIMAD University, Somalia); Abdirizak Isse Salah, Anisa Ali Hussien and Yusuf Abdirahman Mohamud (SIMAD University, Somalia)

3:00 *Enhanced Single-Shot Beam Training for True-Time-Delay Hybrid Beamforming Architecture*

Mohamd Waeel Hamdy, Mohamed Ahmed Abdelghany and Ahmed Hesham Mehana (Cairo University, Egypt)

3:15 *The Probabilistic Component of Outdoor Radio Propagation Path Loss Models Considering Rain Fade*

Asma Ali Budadal (College of Electrical & Electronics Technology - Benghazi, Libya, Libya & IIUM, Malaysia); Md Rafiqul Islam (International Islamic University Malaysia, Malaysia)

3:30 *Energy Efficient Joint User Association and Power Allocation Using Parameterized Deep DQN*

Amna Mughees (Sunway University, Malaysia); Mohammad Tahir (University of Turku, Finland); Muhammad Aman Sheikh (Cardiff Metropolitan University, United Kingdom (Great Britain)); Angela Amphawan (Sunway University & School of Engineering and Technology, Malaysia); Kian Meng Yap (Sunway University, Malaysia); Md Rafiqul Islam (International Islamic University Malaysia, Malaysia); Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia)

1B: IoT & Cloud Computing 1 / Power System & Power Electronics

Room:: E2 –1 -2, Block E2 Kulliyah of Engineering & Zoom Breakout room name: 1B

Chair: Assoc. Prof. Dr. S. M. A. Motakabber (International Islamic University Malaysia (IIUM), Malaysia)

2:00 *Real-Time Monitoring and Measurement of Electrical Variables Using IoT*

Roger Salazar, Romel Valencia, Pablo Catota, Cristian Tasiguano and Luis Daniel Andagoya-Alba (Instituto Superior Tecnológico Rumiñahui, Ecuador)

2:15 *IOTA-MSS: A Pay-Per-Play Music Streaming System Based on IOTA (On-site)*

Mohammed Ibrahim El-hajj (Twente University, The Netherlands); Daniel Melero Martinez (University of Twente, The Netherlands)

2:30 *Kindergarten Child Performance Monitoring System*

Banuka Rathnayaka, Thisura Rabel, Chamindi Nimesha Namasingha, Dushantha Hettiarachchi and Hansika Mahaadikara (Sri Lanka Institute of Information Technology, Sri Lanka); Sasini Nuwanthika Wellalage (Industry, Sri Lanka)

2:45 *A Trust Aware Secure Ant Colony Optimization Based Routing Algorithm for Internet of Things*

Afsah Sharmin, Farhat Anwar, S. M. A. Motakabber and Aisha-Hassan A. Hashim (International Islamic University Malaysia, Malaysia)

3:00 *Utilizing Voltage Drop Model Analysis to Determine the Optimal Voltage Regulated Distribution Transformer (VRDT) for Grid Feeders (On-site)*

Hana Batrisyia Abdul Rahim and Siti Hajar Yusoff (International Islamic University Malaysia, Malaysia); Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia); Amir Hisham Hashim (Maschinenfabrik Reinhausen APAC, Malaysia); Saerahany Legori Ibrahim and Nur Syazana Izzati Binti Razali (International Islamic University Malaysia, Malaysia)

3:15 *Smart Meter Based on IoT Platform (On-site)*

Muhammad Sharir Fathullah Mohd Yunus and Siti Hajar Yusoff (International Islamic University Malaysia, Malaysia); Siti Nadiah Mohd Sapihie (Petronas Research Sdn. Bhd., Malaysia); Nur Syazana Izzati Binti Razali (International Islamic University Malaysia, Malaysia)

3:30 *Design and Evaluation of a High-Performance Extensible DC-DC Converter Integrated With ANN Based MPPT Controller*

S. M. A. Motakabber and Khadiza Akter (International Islamic University Malaysia, Malaysia); Ahm Zahirul Alam (International Islamic University Malaysia, Malaysia); Siti Hajar Yusoff (International Islamic University Malaysia, Malaysia)

Tuesday, August 15 2:00 - 3:15 (Asia/Kuala Lumpur)

1C: Energy Harvesting and Renewable Energy

Room:: E2 –1 -4, Block E2 Kulliyah of Engineering & Zoom Breakout room name: 1C

Chair: Dr. Mohd Shahrin Abu Hanifah (International Islamic University Malaysia (IIUM), Malaysia)

2:00 *Development of Highly Efficient Hybrid Kinetic -Solar Energy Harvesting System*

Liew Hui Fang (University Malaysia Perlis & FTKE, Malaysia)

2:15 *Implementation and Remote Monitoring of a Photovoltaic Test Bench With and Without Solar Tracking in Equatorial Zones*

Miguel Quiñonez-España (Pontificia Universidad Católica del Ecuador Sede Esmeraldas, Ecuador); Cristian Andrés Tasiguano Pozo (Instituto Superior Tecnológico San Antonio & Pontificia Universidad Católica del Ecuador Sede Esmeraldas, Ecuador); Manuel Nevárez-Toledo (Pontificia Universidad Católica del Ecuador Sede Esmeraldas, Ecuador)

2:30 *Self-Power Devices for A Wireless Sensor System Measuring the Shaft Alignment (On-site)*

Ai Van Hoang, Gon Yang Kim and Young Chul Lee (Mokpo National Maritime University, Korea (South))

2:45 *Modeling of Temperature and Irradiance Effect on Solar Cell Parameters by MATLAB/Simulink and Verification Using Experimental Data*

Mohammad Tamjid Hossain Partho (Northern University Bangladesh, Bangladesh); Mohammad Shafiul Alam (Northern University Bangladesh, Malaysia & International Islamic University Malaysia, Malaysia); Muhammad Mahbubur Rashid (IIUM Gombak Malaysia, Malaysia)

3:00 *Analysis of Voltage Profile in Micro Grids Isolated by the Insertion of Non-Conventional Generation Plants*
Byron Benalcazar (Instituto Tecnológico Universitario Rumiñahui, Ecuador); Pablo Catota and Cesar Andres Minaya (Instituto Superior Tecnológico Rumiñahui, Ecuador); Vicente Astudillo (Instituto Tecnológico Universitario Rumiñahui, Ecuador); Veronica Vergara (Cenace, Ecuador)

Tuesday, August 15 4:00 - 5:30 (Asia/Kuala_Lumpur)

2A: Signal and Image Processing

Room:: E2 –1 -1, Block E2 Kulliyah of Engineering & Zoom Breakout room name: 2A

Chair: Assoc. Prof. Dr. Ani Liza Bt. Asnawi (International Islamic University Malaysia (IIUM), Malaysia)

- 4:00 *Vision-Based Monitoring (VBM) for Plant Quality and Control System (On-site)*
Fei Siang Tay (Swinburne University of Technology Sarawak Campus, Malaysia); Yi Lung Then (Universiti Malaysia Sarawak, Malaysia)
- 4:15 *Signal Restoration With Fractional Transform Sparse Representation and Autoencoder*
Shivani Saxena (Institute of Advanced Research, India); Surbhi Mistry and Nilesh Patel (Institute of Advanced Research, India); Mohendra Roy Action (Pandit Deendayal Energy University, Thailand); Ahsan Zaigam Rizvi (Institute of Advance Research, India)
- 4:30 *Design and Development of a Semi-Automated Kitchen Waste Composter*
Moshe Coleen Adique and Aaron Jimson Mandap (Ateneo de Manila, Philippines); Maria Leonora Guico and Jan Kevin Albior Galicia (Ateneo de Manila University, Philippines)
- 4:45 *Acoustic Sensor Module for Mosquito Detection and Classification*
Kim Ramos, John Sebastian Bacabac, Maria Leonora Guico and Jan Kevin Albior Galicia (Ateneo de Manila University, Philippines)
- 5:00 *Development of U-Net Architecture for Audio Super Resolution (On-site)*
Teddy Surya Gunawan, Muhammad Rusdy Mohd Sarif and Mira Kartiwi (International Islamic University Malaysia, Malaysia); Yasser Asrul Ahmad (IIUM, Malaysia)
- 5:15 *A Novel Thermal Imaging Dataset for Children's Autism Spectrum Disorder (On-site)*
Melinda Melinda, Ahmadiar Ahmadiar, Maulisa Oktiana, Yunidar Yunidar, Muhammad Shadiq Adi Nugraha and Muhammad Al Lail Qadrillah (Universitas Syiah Kuala, Indonesia)

2B: IoT & Cloud Computing 2 / Sensor & Actuators

Room:: E2 –1 -2, Block E2 Kulliyah of Engineering & Zoom Breakout room name: 2B

Chair: Dr. Farah Abdul Rahman (International Islamic University Malaysia (IIUM), Malaysia)

- 4:00 *Assistive Shopping Tool for the Visually Impaired (On-site)*
Fatin Najihah Ruzani Nashrom, Huda Adibah Mohd Ramli, Norazlina Saidin and Farah Abdul Rahman (International Islamic University Malaysia, Malaysia)
- 4:15 *Indoor Navigation and Mapping for Wheelchair People in KOE*
Nur Najihah Nor Hisham, Nurul Arfah Che Mustapha and Azhar Mohd Ibrahim (International Islamic University Malaysia, Malaysia)
- 4:30 *Machine Learning (ML) Assisted Edge Security Framework on FPGAs*
Abdul Manan Sheikh (International Islamic University Malaysia, India); Md Rafiqul Islam (International Islamic University Malaysia, Malaysia); Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia); Suriza Ahmad Zabidi (International Islamic University Malaysia, Malaysia); Athaur Rahman Najeeb (International Islamic University of Malaysia, Malaysia); Ahmed Basahel (International Islamic University Malaysia, Malaysia)
- 4:45 *IoT Based Indoor Air and Water Quality Monitoring System Using Node-RED*
Zharfan Hasbullah (Universiti Sains Islam Malaysia, Malaysia); Hafizal Bin Mohamad (USIM, Malaysia)
- 5:00 *Portable Real Time Microwave Milk Quality Monitoring Sensor (On-site)*
Lubina Iram (Sukkur-IBA University, Pakistan); Muhammad Y Sandhu (Gdansk University of Technology, Pakistan & Sukkur IBA University, Pakistan); Akm Zakir Hossain and Sana Ullah Khan (Universiti Teknikal Malaysia Melaka, Malaysia)

5:15 Biocompatibility Assessment of Wearable C/TPU/Tegaderm Strain Sensors (On-site)

Nur Nazihah Abu Hassan Zahri, Anis Nurashikin Nordin, Ahmad Fairuzabadi Mohd Mansor, Rosminazuin Ab Rahim and Aliza Aini Md Ralib (International Islamic University Malaysia, Malaysia); Muhammad Irsyad Suhaimi (Jabil Circuit Inc, USA); Lai Ming Lim (Jabil Circuit Inc, Malaysia)

Tuesday, August 15 4:00 - 5:15 (Asia/Kuala_Lumpur)

2C: Software Engineering

Room:: E2 -1 -4, Block E2 Kulliyah of Engineering & Zoom Breakout room name: 2C

Chair: Assoc. Prof. Dr. Suriza Ahmad Zabidi (International Islamic University Malaysia (IIUM), Malaysia)

4:00 Design and Development of an Intuitive Desktop Application for Rapid SARS-CoV-2 Diagnosis Using Electrochemical Potentiostat (On-site)

Faisal Ahmed Assaig, Teddy Surya Gunawan, Anis Nurashikin Nordin and Rosminazuin Ab Rahim (International Islamic University Malaysia, Malaysia); Zainiharyati Mohd Zain (Universiti Teknologi MARA, Malaysia)

4:15 Software for the Electronic Measurement of Work Stress in the Microenterprise Sector

Gustavo E Fernandez (Instituto Superior Tecnológico España & CYSSA, Ecuador); Gissela A Arcos (Instituto Superior Tecnológico España, Ecuador); María A Barba and Lucila J De la Calle (Universidad Nacional de Chimborazo, Ecuador); José L Vásquez (Universidad Estatal de Bolívar, Ecuador)

4:30 Development of Monitoring System for Mentor-Mentee Programme (On-site)

Noralia Hazira Norhamidi, Mohd Shahrin Abu Hanifah, Nurul Fariza Zulkurnain and Rosminazuin Ab Rahim (International Islamic University Malaysia, Malaysia)

4:45 Development of Energy Management Information System (EMIS) for Energy-Saving Awareness (On-site)

Dayana Khadijah Enche Shaari (International Islamic University of Malaysia, Malaysia); Mohd Shahrin Abu Hanifah (International Islamic University Malaysia, Malaysia)

5:00 Enhanced Operations and Maintenance Solution for IMS System (On-site)

Tien Xuan Nguyen, Phuong Thi Hoai Nguyen, Nam Huu Tien Chu, Lam The Nguyen and Vuong Ngo (Viettel High-Technologies Industries Corporation, Vietnam)

WEDNESDAY, 16 AUGUST 2023

Wednesday, August 16 9:00 - 9:45 (Asia/Kuala_Lumpur)

Keynote 2: The Trend and Impact of Computer Technologies to Telecommunication

Room:: E2 -1 -2, Block E2 Kulliyah of Engineering & Zoom

Mr. Tan Cheng Peng, Maxis

Chair: Prof. Dr. Muhammad Ibn Ibrahimy (International Islamic University Malaysia (IIUM), Malaysia)

With the advancement of computer technologies, we see the increasing capabilities of telecommunication to connect, serve and impact lives of individuals and businesses. We will take a quick look on how we got here, and what impact has it made. Also looking forward, what we would be expecting computer technologies to have impact on how we deliver and use telecommunication services.

Wednesday, August 16 10:00 - 10:45 (Asia/Kuala_Lumpur)

Keynote 3: Malaysia Renewable Energy Roadmap

Room:: E2 -1 -2, Block E2 Kulliyah of Engineering & Zoom

Mr. Saiful Hakim Abdul Rahman, Sustainable Energy Development Authority (SEDA)

Chair: Assoc. Prof. Dr. Khairayu Badron (International Islamic University Malaysia (IIUM), Malaysia)

Moving forward, Malaysia aims to achieve a higher RE growth, from the existing 23% or 8.45 GW RE in its power installed capacity. Malaysia Renewable Energy Roadmap (MyRER) projected to increase the share of RE to 31% or 12.9 GW in 2025, and 40% or 18.0 GW in 2035. The RE Initiatives under this roadmap are expected to support Malaysia's commitment to greenhouse gas (GHG) emission reduction under the Paris Agreement led by the United Nations Framework Convention on Climate Change (UNFCCC). Malaysia's global climate commitment is to reduce its economy-wide carbon intensity (against GDP) of 45% in 2030 compared to 2005 level. Realization of the Government's vision is crucial in supporting the nation to achieve its Nationally Determined Contributions (NDC) targets. This talk will describe on the identified resource potential, strategies, key actions, opportunities, current and future scenarios.

Wednesday, August 16 11:00 - 12:45 (Asia/Kuala_Lumpur)

3A: AI & Machine Learning 1 / Green Technology & Smart Grid

Room:: E2 -1 -1, Block E2 Kulliyah of Engineering & Zoom Breakout room name: 3A

Chair: Ir. Dr. Yasser Asrul Ahmad (International Islamic University Malaysia (IIUM), Malaysia)

11:00 *Multi-CNN Voting Method for Improved Arabic Handwritten Digits Classification*

Areeg Fahad (Al-Nahrain University, Iraq); Muhammad Zarkoosh (Freelancer, Iraq); Sana Sabah Sabary (Luleå University of Technology, Sweden)

11:15 *The Impact of Feature Selection on Malware Classification Using Chi-Square and Machine Learning*

Areeg Fahad (Al-Nahrain University, Iraq); Muhammad Zarkoosh (Freelancer, Iraq); Sana Sabah Sabary (Luleå University of Technology, Sweden)

11:30 *The Color-Texture Features and Machine Learning Approach for Quality Detection of Coffee Beans*

Anindita Septiarini and Hamdani Hamdani (Universitas Mulawarman, Indonesia); Aji Ery Burhandenny and Subhan Nur (Mulawarman University, Indonesia); Edy Winarno (Universitas Stikubank Semarang, Indonesia)

- 11:45 *Analysis of EfficientNet Architecture Performance for Classifying the Tea Leaves Diseases*
Ummul Hairah, Anindita Septiarini and Novianti Puspitasari (Universitas Mulawarman, Indonesia);
Efraim Romiyanto (Mulawarman University, Indonesia); Noor Alam Hadiwijaya and
Damar Nurcahyono (Politeknik Negeri Samarinda, Indonesia)
- 12:00 *Comparison of Bayes Theorem and Dempster Shafer Methods for Detection Pests of Mayas Rice Plants*
Novianti Puspitasari, Haviluddin Haviluddin, Ummul Hairah and
Anindita Septiarini (Universitas Mulawarman, Indonesia)
- 12:15 *Optimizing Optical Efficiency of Solar Power Tower Using a Novel Equation for Varying Heliostat
Elevation in Biomimetic Layout*
Md. Imran Shahriar (Shahjalal University of Science and Technology, Bangladesh)
- 12:30 *A Hemisphere-Based Approach for the Design and Optimization of Nonequal Heliostat Fields for Solar
Power Towers*
Md. Imran Shahriar (Shahjalal University of Science and Technology, Bangladesh)

3B: AI & Machine Learning 2 / RF & Microwave Circuits and Devices

Room:: E2 –1 -2, Block E2 Kulliyyah of Engineering & Zoom Breakout room name: 3B

Chair: Assoc. Prof. Dr. Khairul Azami Sidek (International Islamic University Malaysia (IIUM),
Malaysia)

- 11:00 *Detection of Leukemia Using Inception-V3 and GoogLeNet*
Yessi Jusman (Universitas Muhammadiyah Yogyakarta, Indonesia)
- 11:15 *Wet and Dry Cough Classification System Using Support Vector Machine and Logistic Regression*
Sean Andrei Co, Claudine Anne Madamba, Maria Leonora Guico and Jan Kevin Albior Galicia (Ateneo
de Manila University, Philippines)
- 11:30 *Measurement and Forecasting of Fluctuating Cryptocurrency Prices Using Deep Learning*
FoZIA Zeeshan (Lincoln University Christchurch, New Zealand); Narayan Nepal Nepal (University of
Canterbury, New Zealand); Mohammad Norouzifard (University of Auckland, New Zealand
& YooBee College of Creative Innovation, New Zealand)
- 11:45 *A Robust and Accurate Potato Leaf Disease Detection System Using Modified AlexNet Model*
Abhishek Bajpai (Rajkiya Engineering College, Kannauj, Uttar Pradesh, India); Mohini Tyagi
(Rajkiya Engineering College Kannauj, India); Manish Khare (Dhirubhai Ambani Institute of
Information and Communication Technology, India); Abhinav Singh (REC Kannauj, India)
- 12:00 *Utilizing Deep Learning for the Real-Time Detection of Breast Cancer Through Thermography*
Mohammed Abdullah Salim Al Husaini (Sultan Qaboos University, Oman & International Islamic
University Malaysia, Oman); Mohamed Hadi Habaebi (International Islamic University Malaysia
(IIUM), Malaysia); Md Rafiqul Islam (International Islamic University Malaysia, Malaysia)
- 12:15 *Performance Evaluation of Coherent MIMO Radar Assisted With Space-Time Coding*
Othman Omran Khalifa (International Islamic University Malaysia (IIUM), Malaysia); Mohamed E
Barakat (Sudan University of Science and Technology, Sudan); Rashid A. Saeed (Taif University, Saudi
Arabia & Sudan University of Science and Technology SUST, Sudan); Salaheldin Edam (Beijing
University of Post and Telecommunications, Sudan); Mohammed Barakat (Sudan University of Science
and Technology, Sudan)
- 12:30 *Investigation on the Planar Resonator for Fabric Based Chipless RFID (On-site)*
Akm Zakir Hossain and Sana Ullah Khan (Universiti Teknikal Malaysia Melaka, Malaysia); S. M.
Kaysar Azam and Muhammad Ibn Ibrahimy (International Islamic University Malaysia, Malaysia)

3C: AI & Machine Learning 3 / Cyber Security & Network Reliability/ Emerging Technologies

Room:: E2 –1 -4, Block E2 Kulliyyah of Engineering & Zoom Breakout room name: 3C

Chair: Assoc. Prof. Dr. Nurul Fariza Zulkurnain (International Islamic University Malaysia (IIUM), Malaysia)

- 11:00 *MFCCs and TEO-MFCCs for Stress Detection on Female Gender Through Deep Learning (On-site)*
Nur Aishah Zainal, Ani Liza Asnawi, Ahmad Zamani Jusoh, Siti Noorjannah Ibrahim, Huda Adibah
Mohd Ramli and Nor Fadhillah Mohamed Azmin (International Islamic University Malaysia, Malaysia)
- 11:15 *Web-Based Safety Eyewear Detection System in Workplace Using Machine Learning (On-site)*
Nurul Fariza Zulkurnain (International Islamic University Malaysia, Malaysia); Yasser Asrul Ahmad
and Najla Athirah Mohd Nazri (IIUM, Malaysia)

- 11:30 *Photovoltaic Module Defects Classification Analysis Using ShuffleNet Architecture in Electroluminescence Images*
Shahrani Shahbudin and Muhammad Waliuddin Faiz Mohamad Rozi (Universiti Teknologi MARA, Malaysia)
- 11:45 *Intelligent Analysis of Students' Performance in Nigerian Schools: A Multi-Layer Perceptron Based Prediction*
Rashidah Funke Olanrewaju (International Islamic University Malaysia, Malaysia); Esther Samuel Alu (Nasarawa State University, Nigeria); Afolayan A. Obiniyi (Obiniyi, Nigeria); Muhammad Dahiru Liman (Federal University of Lafia, Nigeria)
- 12:00 *Harnessing the Power of a Bidirectional Long Short-Term Memory-Based Prediction Model: A Case of Student Academic Performance*
Fatima AbdulSalam Yunus (Nasarawa State University Keffi, Nasarawa State, Nigeria); Rashidah Funke Olanrewaju (International Islamic University Malaysia, Malaysia); Binyamin Adeniyi Ajayi (Nasarawa State University Keffi, Nasarawa State, Nigeria); Abdullahi Audu (Nasarawa State University, Keffi, Nigeria)
- 12:15 *Unmasking log4j's Vulnerability: Protecting Systems Against Exploitation Through Ethical Hacking and Cyberlaw Perspectives*
Muhammad Fakhrol Safitra (Telkom University, Indonesia); Furqan Maulana (University of Telkom & XYZ Company, Indonesia); Hanif Fajri and Muharman Lubis (Telkom University, Indonesia)
- 12:30 *A Survey on Blockchain Security and Its Impact Analysis*
Md Rafiqul Islam (International Islamic University Malaysia, Malaysia); Muhammad Mahbubur Rashid (IIUM Gombak Malaysia, Malaysia)

Wednesday, August 16 2:00 - 3:45 (Asia/Kuala Lumpur)

4A: AI and Machine Learning 4 / Electronic Communication / Advanced Computing Architectures

Room:: E2 -1 -1, Block E2 Kulliyah of Engineering & Zoom Breakout room name: 4A

Chair: Assoc. Prof. Dr. Siti Noorjannah Ibrahim (International Islamic University Malaysia (IIUM), Malaysia)

- 2:00 *Task Reverse Offloading With Deep Reinforcement Learning in Multi-Access Edge Computing*
Mamoon Saeed (University of Modern Sciences (UMS), Saudi Arabia); Rashid A. Saeed (Taif University, Saudi Arabia & Sudan University of Science and Technology SUST, Sudan); Rania A Mokhtar (Taif University, Saudi Arabia); Othman Omran Khalifa (International Islamic University Malaysia (IIUM), Malaysia); Zeinab Ahmed (International Islamic University Malaysia, Malaysia); Mohammed Barakat (Sudan University of Science and Technology, Sudan); Areeg Ali Elnaim (Alneelain University Khartoum, Sudan)
- 2:15 *Pest Detection in Plants Using Google Inception V3 Architecture as Image Embedding (On-site)*
Intan Nurma Yulita (Universitas Padjadjaran, Indonesia); Firman Ardiansyah (Institut Teknologi Dan Bisnis Ahmad Dahlan Lamongan, Indonesia)
- 2:30 *Study on Artificial Neural Network Optimization for Electric Vehicle Battery State of Charge Estimation*
Aaruththiran Manoharan (& University of Nottingham Malaysia Campus, Malaysia); Mumtaj Begam Kasim Rawthar (University of Nottingham Malaysia Campus, Malaysia); Denesh Sooriamorthy (Taylor's University, Malaysia); Vimal Rau Aparow (University of Nottingham Malaysia & Faculty of Science and Engineering, Malaysia)
- 2:45 *Convolution Neural Networks Based Feature Fusion for Automatic Modulation Classification*
Mohamed S Elshebani (College of Electronic Technology Bani Walid, Libya); Yahya Ali (University of Tripoli Libya, Libya); Nser Azroug (Academy of Postgraduate Studies, Libya); Ramdan Kalifa (Higher Institute, Libya); Othman Omran Khalifa (International Islamic University Malaysia (IIUM), Malaysia); Rashid A. Saeed (Taif University, Saudi Arabia & Sudan University of Science and Technology SUST, Sudan)

- 3:00 *Forecasting Indonesian Crude Oil Price Using Autoregressive Integrated Moving Average (ARIMA) Method*
 Haviluddin Haviluddin and Masna Wati (Universitas Mulawarman, Indonesia); Muh Jamil (Universitas Mulawarman & Departemen Of Information Technology And Computer Science, Indonesia); Akhmad Masyudi, Anindita Septiarini and Muhammad Bambang Firdaus (Universitas Mulawarman, Indonesia)
- 3:15 *Lora Performance Evaluation in Coherent Rayleigh Fading Channel (On-site)*
 Yasser Asrul Ahmad (IIUM, Malaysia); Muhammad Nasrin Aqil Abdul Hamid, Khaizuran Abdullah and Ahmad Fadzil Ismail (International Islamic University Malaysia, Malaysia)
- 3:30 *Evaluating the Placement of Radio Hubs in Wireless NoC Architecture Through Distance Analysis*
 Asrani Lit (Universiti Malaysia Sarawak (UNIMAS), Malaysia); Abadi Chanik Azhar and Yi Lung Then (Universiti Malaysia Sarawak, Malaysia); Abdul Rahman Kram (University Malaysia Sarawak, Malaysia); Nurul Izzati Hashim (Universiti Malaysia Sarawak, Malaysia) & Universiti Pertahanan Nasional Malaysia, Malaysia); Fariza Mahyan (Politeknik Kuching Sarawak, Malaysia)

Wednesday, August 16 2:00 - 3:30 (Asia/Kuala_Lumpur)

4B: AI and Machine Learning 5 / Engineering Management

Room:: E2 -1 -2, Block E2 Kulliyah of Engineering & Zoom Breakout room name: 4B

Chair: Dr. Nadirah Abdul Rahim (International Islamic University Malaysia (IIUM), Malaysia)

- 2:00 *Artificial Intelligence-Based Real-Time Facial Emotion Monitoring System*
 Kishore T (NIT Warangal, India); Daya Sagar Tummala (National Institute of Technology Warangal, India)
- 2:15 *A Homogeneous Meta-Learning LSTM-RNN Ensemble Method for Electric Vehicle Battery State of Charge Estimation*
 Rae Hann Wong (Taylor's University, Malaysia); Aaruththiran Manoharan (& University of Nottingham Malaysia Campus, Malaysia); Denesh Sooriamoorthy (Taylor's University, Malaysia); Nohaidda Sariff (Taylors University, Malaysia)
- 2:30 *Lane Detection Using Deep Learning for All-Weather Conditions*
 Hadhrami Ab Ghani (Universiti Malaysia Kelantan, Malaysia); Atiqullah Mohamed Daud (Multimedia University Melaka, Malaysia); Rosli Besar (Multimedia University, Malaysia); Zamani Md Sani (Universiti Teknikal Malaysia Melaka, Malaysia); Mohd Nazeri Kamaruddin and Syabeela Syahali (Multimedia University, Malaysia)
- 2:45 *License Plate Detection Using Deep Learning Object Detection Models*
 Kar Wan Leong (UTAR, Malaysia); Humaira Nisar (Universiti Tunku Abdul Rahman, Malaysia); Vooi Voon Yap (Aberystwyth University, United Kingdom (Great Britain)); Kim Ho Yeap (UTAR, Malaysia); Po Kim Lo (Universiti Tunku Abdul Rahman, Malaysia)
- 3:00 *Kalman Filter for Tracking a Noisy Cosinusoidal Signal With Constant Amplitude*
 Prima Wijaya Kusuma (Universitas Mercu Buana, Indonesia); Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia); Galang P. N. Hakim (International Islamic University Malaysia, Malaysia & Universitas Mercu Buana, Indonesia); Rachmat Muwardi (Beijing Institute of Technology, Indonesia); Md Rafiqul Islam (International Islamic University Malaysia, Malaysia)
- 3:15 *Operational Cost Analysis of an Earth Station System Using Parallel Configuration*
 Wan Muhamad Syaamil W. Aris and Nadirah Abdul Rahim (International Islamic University Malaysia, Malaysia)

Wednesday, August 16 2:00 - 4:00 (Asia/Kuala_Lumpur)

4C: Antennas and Propagation / Optical Communications and Photonics

Room:: E2 –1 -4, Block E2 Kulliyah of Engineering & Zoom Breakout room name: 4C

Chair: Dr. Norazlina Saidin (International Islamic University Malaysia (IIUM), Malaysia)

2:00 *Design of a Flexible Textile Antenna for Early Breast Tumor Detections*

Mahfuz Md Mahmudul Hasan and Md Rafiqul Islam (International Islamic University Malaysia, Malaysia); Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia); Norun Abdul Malek (International Islamic University Malaysia, Malaysia); Md Waliullah Sami (International Islamic University Chittagong, Bangladesh)

2:15 *Q & V Band Dual Offset Feed Parabolic Antenna for Satellite Communications in Equatorial Region (On-site)*

Yasser Asrul Ahmad (IIUM, Malaysia); Nur Hazirah Kamaruddin, Muhammad Nasrin Aqil Abdul Hamid and Khairayu Badron (International Islamic University Malaysia, Malaysia)

2:30 *Design of Quad Element MIMO Array With EBG Structure for Mutual Coupling Reduction (On-site)*

Md Abu Tayab Sakib, Md Rafiqul Islam, Md Shazzadul Islam, G. m. Asadullah and Mohd Saiful Riza Bashri (International Islamic University Malaysia, Malaysia)

2:45 *Multiwavelength Random Fiber Laser Based on Bidirectional SOA and Lyot Filter*

Allen Paul David (Universiti Teknologi Malaysia, Malaysia); Abdul Hadi Sulaiman (Universiti Tenaga Nasional, Malaysia); Hanun Enani Muhamad Aliza and Airull Azizi Awang Lah (Universiti Teknologi Malaysia, Malaysia); Siti Azlida Ibrahim (Multimedia University, Malaysia); Nelidya Md. Yusoff (Universiti Teknologi Malaysia, Malaysia)

3:00 *Multiwavelength Random Fiber Laser Using Dual Bidirectional Semiconductor Optical Amplifiers and PMF-Based Mach-Zehnder Interferometer*

Airull Azizi Awang Lah (Universiti Teknologi Malaysia, Malaysia); Abdul Hadi Sulaiman (Universiti Tenaga Nasional, Malaysia); Nelidya Md. Yusoff, Hanun Enani Muhamad Aliza and Allen Paul David (Universiti Teknologi Malaysia, Malaysia); Mohd Shahril Salleh (Telekom Malaysia R&D Sdn Bhd, Malaysia); Sumiaty Ambran (Universiti Teknologi Malaysia & Malaysia-Japan International Institute of Technology, Malaysia)

3:15 *Multiwavelength Random Fiber Laser Based on Dual-Bidirectional SOA at Different Comb Filters*

Airull Azizi Awang Lah (Universiti Teknologi Malaysia, Malaysia); Abdul Hadi Sulaiman (Universiti Tenaga Nasional, Malaysia); Hanun Enani Muhamad Aliza and Allen Paul David (Universiti Teknologi Malaysia, Malaysia); Sumiaty Ambran (Universiti Teknologi Malaysia & Malaysia-Japan International Institute of Technology, Malaysia); Mohd Shahril Salleh (Telekom Malaysia R&D Sdn Bhd, Malaysia); Nelidya Md. Yusoff (Universiti Teknologi Malaysia, Malaysia)

3:30 *Flatness Investigation of Multiwavelength SOA Random Fiber Laser Based on Sagnac Loop Mirror*

Hanun Enani Muhamad Aliza (Universiti Teknologi Malaysia, Malaysia); Abdul Hadi Sulaiman and Aiman Ismail (Universiti Tenaga Nasional, Malaysia); Allen Paul David (Universiti Teknologi Malaysia, Malaysia); Fairuz Abdullah (Universiti Tenaga Nasional & Institute of Power Engineering, Malaysia); Md Zaini Jamaludin (Universiti Tenaga Nasional, Malaysia); Airull Azizi Awang Lah and Nelidya Md. Yusoff (Universiti Teknologi Malaysia, Malaysia)

3:45 *Macro-Bending Effect of Single-Mode Fiber for Glucose Sensor*

Norazlina Saidin, Nur Farizah Harith, Huda Adibah Mohd Ramli, Aliza Aini Md Ralib and Norun Abdul Malek (International Islamic University Malaysia, Malaysia)