

## TECHNICAL SESSION ICCCE 2025

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Time	Tuesday, August 26	Wednesday, August 27
8:30 - 9:00 am		
9:00 - 10:00 am	OPENING: OPENING CEREMONY	<a href="#"><u>Keynote 2:</u></a> Cloud Remote System with AI Chatbot
10:00 - 11:00 am	Break and Networking	<a href="#"><u>3A:</u></a> <a href="#"><u>AI and Machine Learning</u></a> <a href="#"><u>3B:</u></a> <a href="#"><u>Antenna and Propagation</u></a> <a href="#"><u>3C: (ONLINE):</u></a> <a href="#"><u>Signal and Image Processing/Wireless or Radio Access Technologies/5G, 6G and Beyond</u></a> <a href="#"><u>Wireless Communication</u></a>
11:00 am - 12:00 pm	<a href="#"><u>Keynote 1:</u></a> Conjugated Molecule Design and Synthesis for Advanced Organic and Perovskite Photovoltaics	
12:00 - 12:15 pm		
12:15 - 2:00 pm		Lunch Break
2:00 - 3:45 pm	<a href="#"><u>1A:</u></a> <a href="#"><u>Optical Communications and Photonics/Wireless or Radio Access Technologies/5G, 6G and Beyond</u></a> <a href="#"><u>Wireless Communication/Sustainable Technologies</u></a> <a href="#"><u>1B:</u></a> <a href="#"><u>Smart Grid and Renewable Energy/ Signal and Image Processing</u></a> <a href="#"><u>1C: (ONLINE):</u></a> <a href="#"><u>AI and Machine Learning</u></a> <a href="#"><u>1D: (ONLINE):</u></a> <a href="#"><u>Cyber Security and Privacy/Data Science and Big Data Analytics/ Internet of Things and Big Data</u></a>	<a href="#"><u>4A:</u></a> <a href="#"><u>Satellite and Wireless Communication/Smart Cities and Green Technology/Printed Electronics</u></a> <a href="#"><u>4B: (ONLINE):</u></a> <a href="#"><u>Smart Grid and Renewable Energy/Sustainable Technologies//Multimedia and Web Services/ Satellite and Wireless Communication/</u></a> <a href="#"><u>4C: (ONLINE):</u></a> <a href="#"><u>AI and Machine Learning</u></a>
3:45 - 4:00 pm		Break and Networking
4:00 - 5:30 pm	<a href="#"><u>2A:</u></a> <a href="#"><u>Cyber Security and Privacy/Data Science and Big Data Analytics</u></a> <a href="#"><u>2B:</u></a> <a href="#"><u>Instrumentation and Control/ Internet of Things and Big Data/Multiple Access Techniques/VLSI and MEMS Design</u></a> <a href="#"><u>2C: (ONLINE):</u></a> <a href="#"><u>Augmented Reality and Virtual Reality/Bioinformatics Engineering/Computer Network and Protocol</u></a>	

\* *Names and order of the authors are based on the EDAS data provided by the authors.*

## Tuesday, 26 August 2025

### Tuesday, August 26 8:30 - 10:00 (Asia/Kuala Lumpur)

OPENING: OPENING CEREMONY

### Tuesday, 26 August 2025 11:00 - 12:00 (Asia/Kuala Lumpur)

Keynote 1: Conjugated Molecule Design and Synthesis for Advanced Organic and Perovskite Photovoltaics

*Prof. Chih-Ping Chen*

**Chair:** Nurul Fadzlin Hasbullah (International Islamic University Malaysia, 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, 26 August 2025 2:00 - 3:45 (Asia/Kuala Lumpur)

#### 1A: Optical Communications and Photonics/Wireless or Radio Access Technologies/5G, 6G and Beyond Wireless Communication/Sustainable Technologies

Room: E2-1-1

**Chair:** Norazlina Saidin (International Islamic University Malaysia, Malaysia)

##### 2:00 Performance Analysis of PIN and APD Photodetectors in an Optical Communication System Under Adverse Conditions

Md Rafiqul Islam (International Islamic University Malaysia, Malaysia), Eltahir Idris Eltahir Mohamed (UIA, Malaysia & Omdurman Ahlia University (OAU), Sudan), Elessaid Saad (Karary University, Sudan), Elfatih Elsheikh (King Khalid University (KKU), Saudi Arabia), A. Awad Babiker (Karary University, Sudan), Aisha-Hassan A. Hashim (International Islamic University Malaysia, Malaysia), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia)

##### 2:15 Stretchable Distributed Fiber Bragg Grating for Sensor Applications

Norazlina Saidin, Muhammad Wafiy Abd Wahab, Tamana Baba, Aliza Aini Md Ralib, Huda Adibah Mohd Ramli and Norun Abdul Malek (International Islamic University Malaysia, Malaysia)

##### 2:30 Bending Loss Phenomenon in Optical Signal Evaluation on Single-Mode Fiber

Fatima Nur Ramadhami, Saktioto Saktioto, Yan Soerbakti, Tengku Emrinaldi and Syamsudhuha Syamsudhuha (Universitas Riau, Indonesia), Rina Amelia (Universitas Sumatra Utara, Indonesia), Okfalisa Okfalisa (Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia), Dedi Irawan (Physics, FKIP, Universitas Riau, Indonesia), Nor Ain Husein (Universiti Teknologi Malaysia & Advanced Photonic Science Institute, Malaysia), Muhammad Sufi Roslan (Universiti Teknologi Malaysia, Malaysia), Kusherbayeva Maikul and Kushkimbayeva Bibara (M. Kh. Dulati Taraz State University, Kazakhstan)

##### 2:45 Multi-Channel Chitosan Coated Quartz Crystal Microbalance Device for Continuous Detection of Isopropyl Alcohol

Ahmad Fairuzabadi Mohd Mansor, Anis Nurashikin Nordin, Muhammad Khairul Faisal Muhammad Atan and Aliza Aini Md Ralib (International Islamic University Malaysia, Malaysia), Lun Hao Tung and Zambri Samsudin (Jabil Circuit Inc, Malaysia)

##### 3:00 Design of a RISC Processor-Based Data Acquisition System for a 3D Vibration Analyzer

Mohammad Mominul Hoque, S. M. A. Motakabber and Md Rafiqul Islam (International Islamic University Malaysia, Malaysia), Sany Izan Ihsan (IIUM, Malaysia)

### **3:15 Assessment of 5G Performance in Philippines Using Mobility Tests**

Therdpong Daengsi (Rajamangala University of Technology Phra Nakhon, Thailand), Zool Hilmi Ismail (Universiti Teknologi Malaysia, Malaysia), Tipmanee Rompun and Mongkol Siriwig (RMUTP, Thailand), Phisit Pornpongtechavanich (Rajamangala University of Technology Rattanakosin, Thailand & Industry and Technology, Thailand), Paramate Horkaew (Suranaree University of Technology, Thailand)

### **3:30 5G-NR Resource Management in Multi-Orbit Non-Terrestrial Systems with Multi-Connectivity**

Mikko Majamaa (Magister Solutions Ltd, Finland), Eva Lagunas, Abuzar Babikir Mohammad Adam and Flor Ortiz (University of Luxembourg, Luxembourg), Lauri Sormunen (Magister Solutions Ltd, Finland), Timo Hämäläinen (JYU, Finland), Symeon Chatzinotas (University of Luxembourg, Luxembourg), Tommi Mikkonen (University of Jyväskylä, Finland)

## **1B: Smart Grid and Renewable Energy/ Signal and Image Processing**

Room: E2-1-2

**Chair:** Mohd Fahmi Hussin (International Islamic University Malaysia, Malaysia)

### **2:00 Efficient Control of a Bidirectional DC-DC Converter for Battery Charging and Discharging in Electric Vehicle Motor Drives**

Khadiza Akter (International University of Business Agriculture and Technology, Bangladesh), S. M. A. Motakabber and AHM Zahirul Alam (International Islamic University Malaysia, Malaysia), Md. Tanjil Rahman Tanim, Danish Mahmud and Bayajid Hossain (International University of Business Agriculture and Technology, Bangladesh)

### **2:15 Socio-Economic Impacts of Clean Energy Transition in Bangladesh**

Khadiza Akter and Firuz Ahamed Nahid (International University of Business Agriculture and Technology, Bangladesh), S. M. A. Motakabber and AHM Zahirul Alam (International Islamic University Malaysia, Malaysia)

### **2:30 Thermolectric Generator Optimisation for Electrical Oven Waste Heat Recovery at Low Temperatures**

Mohamed Bashir Ali Bashir (Jouf University, Saudi Arabia), Hossain MD Shouquat (International University of Business Agriculture and Technology (IUBAT), Bangladesh), Khadiza Akter (International University of Business Agriculture and Technology, Bangladesh), S. M. A. Motakabber and AHM Zahirul Alam (International Islamic University Malaysia, Malaysia)

### **2:45 Proposal for a Tidal Barrage Power Plant on the Sandwip Channel**

Md. Omar Faruqe and Md Waliullah Sami (International Islamic University Chittagong, Bangladesh), M.M. Hasan Mahfuz (Concordia University, Canada), Md Rafiqul Islam (International Islamic University Malaysia, Malaysia)

### **3:00 GRotate: Drum-Type Hydroponic System for Plant Growth Using NDVI Monitoring**

Jasmin Blancia (Ateneo de Manila, USA), Marion Abbygail S. de Leon, Andrew Go-Alcantara, Dominic Rodrigo Pagulayan, Jan Kevin Albior Galicia, Maria Leonora Guico and Jose Claro Monje (Ateneo de Manila University, Philippines)

### **3:15 Modelling of Hot-Spot Temperature and Loss-of-Life for Non-Thermally and Thermally Upgraded Paper in QNAN Transformer Based on IEC 60076-7**

Mohd Fahmi Hussin (International Islamic University Malaysia, Malaysia), Naijiah Saleh and Nor Shafiqin Shariffuddin (Universiti Kuala Lumpur British Malaysian Institute, Malaysia)

### **3:30 Measuring How Can Smart Tourism Technology Increase Tourist Satisfaction and Revisit Intention in Malang Tourism City Though MACITO Apps**

Dediek Tri Kurniawan and Rizky Firmansyah (Universitas Negeri Malang, Indonesia), Mohd Rizal Palil (Universiti Kebangsaan Malaysia, Malaysia), Dadang Firmansyah (IPB University, Indonesia), Kennis Rozana and Dinta Sugiarto (Universitas Negeri Malang, Indonesia), Adelia Shabirna Prameka (Universitas Brawijaya, Indonesia)

## **1C (ONLINE): AI and Machine Learning**

Room: E2-1-3

**Chair:** Ahmad Zamani Jusoh (International Islamic University Malaysia, Malaysia)

### **2:00 Deep Learning-Based Recommendation System to Address Challenges in Providing Electronic Services**

Turki Al-Hinai, Juma Said Al Kulaibi, Mohammed Abdullah Salim Al Husaini and Yousuf Nasser Al Husaini (Arab Open University Oman, Oman), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia)

### **2:15 A Hybrid FeedForward Neural Network-Genetic Algorithm Approach for Beam Selection Optimization in 5G Massive MIMO Systems**

Lujain Almomani (School of Engineering University of Wollongong in Dubai, United Arab Emirates & University of Wollongong Dubai, United Arab Emirates), Mohammad Abbasi (University of Wollongong in Dubai, United Arab Emirates), Ayesha Wasim Qureshi (University of Wollongong in Dubai, United Arab Emirates & Universiti Malaysia Perlis, Malaysia), Kiyan Afsari and Mohd Fareq Abd Malek (University of Wollongong in Dubai, United Arab Emirates)

### **2:30 AI-Driven Employee Performance Prediction in the Public Sector with GAs and SHAP Interpretability**

Tawfeeq Mohamed Alsobaey (Ministry of Education, Bahrain & University of Bahrain, Bahrain), Faisal Alkhateeb (University of Bahrain, Bahrain & Yarmouk University, Jordan)

### **2:45 Implementation of Convolutional Neural Networks with Transfer Learning for Brain Tumor Detection Using Large-Scale Magnetic Resonance Image Datasets**

Daniel Eduardo Daud, Johny Wijaya and Stephen Novianto Wijaya (Bina Nusantara University, Indonesia), Erwin Halim (Bina Nusantara University, Indonesia & School of Information Systems, Indonesia)

### **3:00 Comparative Performance Analysis in Melanoma Detection with DeeplabV3+ Segmentation**

Christian Nathanael Pranata, Peter Miracle Halim, Cecilia Ariani Dewi and Jeklin Harefa (BINUS University, Indonesia)

### **3:15 Social Media Analysis Using LSTM and Bi-LSTM for Automated Identification of Depression Cancer Patients**

Fasya Hanifah Putti and Muhammad Ary Murti (Telkom University, Indonesia), Astri Novianty (Telkom University, Indonesia & Institut Teknologi Bandung, Indonesia), Casi Setianingsih (Budapest University of Technology and Economics, Hungary), Nur Hafieza Ismail (Universiti Malaysia Pahang Al-Sultan Abdullah, Malaysia)

### **3:30 Explainable AI for Autonomous Systems: a Framework for Trustworthy Decision-Making**

Isan Sahoo (IEEE Senior Member, USA), Koushik K Ganeeb (Salesforce, USA), Pavan Nutalapati (USA), Milan Parikh (IETE, SCRS, IEEE Senior Member, Cytel, USA & Cytel, USA), Girish A Gajwani (Independent Researcher, USA), Rakesh Keshava (IEEE Senior Member, USA), Bindu Harve (Independent Researcher, USA)

## **1D (ONLINE): Cyber Security and Privacy/Data Science and Big Data Analytics/ Internet of Things and Big Data**

Room: E2-1-4

**Chair:** Hasmah Mansor (International Islamic University Malaysia, Malaysia)

### **2:00 Penetration Testing Analysis on IP Cameras in IoT Ecosystems**

Jin Qiuyu and Azana Hafizah Mohd Aman (Universiti Kebangsaan Malaysia, Malaysia), Zainab S. Attarbashi (International Islamic University Malaysia, Malaysia), Yahya Tuhami (Arab Open University, Saudi Arabia), Zulhilmi Che Azizan (University Kebangsaan Malaysia, Malaysia)

### **2:15 Resilient Autonomy: Securing Intelligent Systems Against Adversarial Attacks**

Pavan Nutalapati (USA), Isan Sahoo, Deepak Kole and Rakesh Keshava (IEEE Senior Member, USA), Milan Parikh (IETE, SCRS, IEEE Senior Member, Cytel, USA & Cytel, USA), Girish A Gajwani and Bindu Harve (Independent Researcher, USA)

### **2:30 Inventory Prediction Using ABC Analysis and Decision Tree Algorithm**

Nur Izzah Idrus (Petronas Leadership Centre, Malaysia), Nur Farissa Hazira Hishamuddin (10 Infinity Sdn Bhd, Malaysia), Norulhidayah Isa (Universiti Teknologi MARA & Cawangan Terengganu Kampus Kuala

Terengganu, Malaysia), Hasiah Mohamed (UiTM Cawangan Terengganu, Malaysia & Kampus Kuala Terengganu, Malaysia)

**2:45 Secure and Scalable Data Sharing in IoT Environments with Blockchain Integration**

Balakrishna Pothineni (JPMorgan Chase, USA), Deepak Kole and Isan Sahoo (IEEE Senior Member, USA), Nandagopal Seshagiri (Okta Inc., USA), Milan Parikh (IETE, SCRS, IEEE Senior Member, Cytel, USA & Cytel, USA), Ashok Gadi Parthi (Verizon, USA), Bindu Harve (Independent Researcher, USA)

**3:00 Phase Laser Ranging Radar Based on IoT Communication**

Ketty Siti Salamah and Trie Kadarina (Universitas Mercu Buana, Indonesia), Puput Dani Prasetyo (BRIN, Indonesia), Rachmat Muwardi (Universitas Mercu Buana, Indonesia), Mirna Yunita and Rizky Rahmatullah (Beijing Institute of Technology, China)

**3:15 Towards Smart Farming an IoT Based Optimized Agriculture System**

Leena Affouri (Birzeit University, Bizeit, Ramallah, Palestine), Mariam Hamad, Salwa Fayad and Wasel Ghanem (Birzeit University, Palestine), Ali Kadhim Lwas (University of Fallujah, Iraq), Ashraf Al-Rimawi (Birzeit University, Palestine & BZU, Palestine), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia), Alhareth Mohammed Zyoud (Birzeit University, Palestine)

**3:30 A Deep Learning Lora-Based Indoor Localization Technique**

Kamilia Aqqad, Karmel Aqqad, Naeema Khdeir, Raha Zabade and Wasel Ghanem (Birzeit University, Palestine), Ali Kadhim Lwas (University of Fallujah, Iraq), Ashraf Al-Rimawi (Birzeit University, Palestine & BZU, Palestine), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia), Alhareth Mohammed Zyoud (Birzeit University, Palestine)

**Tuesday, 26 August 2025 4:00 - 5:30 (Asia/Kuala Lumpur)**

**2A: Cyber Security and Privacy/Data Science and Big Data Analytics**

Room: E2-1-1

**Chair:** Sarah Yasmin Mohamad (International Islamic University Malaysia, Malaysia)

**4:00 The Impact of Privacy and Security on E-Commerce Adoption: a Cross-Country Analysis**

Auliya Az-zahra and Rio Guntur Utomo (Telkom University, Indonesia), Farisyah Setiadi (Telkom University & Indonesia National ICT Council, Indonesia)

**4:15 Randomization Effect for Enhanced IoT-Network Intrusion Detection Systems**

Zetty Rania Mohamad Yusof (International Islamic University Malaysia, Malaysia), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia), Md Rafiqul Islam (International Islamic University Malaysia, Malaysia), Athaur Rahman Najeeb (International Islamic University of Malaysia, Malaysia)

**4:30 A Descriptive Mixed-Methods Approach to Activity Evaluation Using Natural Language Processing**

Mark Anthony A Ozaeta (Colegio San Agustin-Biñan, Philippines & Technological Institute of the Philippines-Manila, Philippines), Zennia G Zamora and Rodel D. Magin (Colegio San Agustin-Biñan, Philippines)

**4:45 Blockchain-Enabled Cybersecurity Framework for Industrial Supply Chains Using Machine Learning**

Mamoon Mohammed Saeed (University of Modern Sciences, Yemen), Rashid A. Saeed (Taif University, Saudi Arabia & Sudan University of Science and Technology SUST, Sudan), Mohammed O Osman (Lusail University, Qatar), Mohammed Suleiman Elbasheir (Sudan University of Science & Technology (SUST), Sudan), Rania A Mokhtar (Sudan University of Science and Technology, Sudan)

**5:00 A Cryptographically-Linked Metadata Schema for Academic Credential Interoperability: the ILMEO Model**

Abdulkadir Tasdelen (Ankara Yildirim Beyazit University, Turkey & International Islamic University Malaysia, Malaysia), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia), Md Rafiqul Islam (International Islamic University Malaysia, Malaysia)

## **2B: Instrumentation and Control/ Internet of Things and Big Data/Multiple Access Techniques/VLSI and MEMS Design**

Room: E2-1-2

**Chair:** Aliza Aini Md Ralib (International Islamic University Malaysia, Malaysia)

### **4:00 IoT and Mobile Application for Visualization and Control for Drum-Type Hydroponic System**

Jasmin Blancia (Ateneo de Manila, USA), Marion Abbygail S. de Leon, Andrew Go-Alcantara, Dominic Rodrigo Pagulayan, Jan Kevin Albior Galicia, Maria Leonora Guico and Jose Claro Monje (Ateneo de Manila University, Philippines)

### **4:15 Effects of Rain Rate with Various Integration Times on ITU-R P530-18 Attenuation Prediction Model**

Mohammad Rofiqul Hassan and Md Rafiqul Islam (International Islamic University Malaysia, Malaysia), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia), Asma Ali Budadal, Head of Te (College of Electrical and Electronics Technology - Benghazi- Libya, Libya & Libyan International University (LIMU), Libya), Khairayu Badron and Suriza Ahmad Zabidi (International Islamic University Malaysia, Malaysia), M.M. Hasan Mahfuz (Concordia University, Canada)

### **4:30 Uplink Rate Splitting Multiple Access Based Multi-AUV Data Transmission Strategy for Advanced Underwater Acoustic Communication**

Shiv Kumar and Sagnik Bhattacharyya (IIT Ropar, India), Sam Darshi (Indian Institute of Technology Ropar, India), Ankur Bansal (Indian Institute of Technology Jammu, India), Ashish Antony Jacob (Lead - Products & Research, India)

### **4:45 Lightweight TinyML NIDS for IOT Devices**

Siti Sarah Binti Mohd Yusoff (International Islamic University Malaysia, Malaysia), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia), Md Rafiqul Islam (International Islamic University Malaysia, Malaysia), Athaur Rahman Najeeb (International Islamic University of Malaysia, Malaysia)

### **5:00 PID-Controlled Temperature System Using Arduino for Portable Virus Detection Application**

Muhammad Faris Danial Bin Muhammad Zulhelmi Toh, Muhammad Khairul Faisal Muhammad Atan, Rosminazuin Ab Rahim, Aliza Aini Md Ralib, Ahmad Fairuzabadi Mohd Mansor, Nor Farahidah Za'bah and Anis Nurashikin Nordin (International Islamic University Malaysia, Malaysia)

### **5:15 Validation of Spectroscopy Performance and Calibration in Compliance with ISO Standards**

Duratul Ain Rozli and Nur Ain Mohd Aziz (MIMOS Berhad, Malaysia), Abdur Rehman Laili (MIMOS BERHAD, Malaysia), Hany Syazwana Harun and Muhammad Hafiz Laili (MIMOS Berhad, Malaysia)

## **2C (ONLINE): Augmented Reality and Virtual Reality/Bioinformatics Engineering/Computer Network and Protocol**

Room: E2-1-3

**Chair:** Amelia Wong Azman (International Islamic University Malaysia, Malaysia)

### **4:00 Deep Learning-Based Early Detection of Retinopathy of Prematurity from Retinal Images of Preterm Infants**

Mohammed Abdullah Salim Al Husaini (Arab Open University Oman, Oman), Ahmed Mahfouz (AOU, Oman & Minia University, Egypt), Mohammad Abrar and Yousuf Nasser Al Husaini (Arab Open University Oman, Oman), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia)

### **4:18 Self-Detection of Diabetic Foot Ulcer Using Thermography and Deep Learning**

Hajer Sulaiman Nasser Al Wahaibi, Taqwa Ali Mohammed Alismaili, Mohammed Abdullah Salim Al Husaini and Yousuf Nasser Al Husaini (Arab Open University Oman, Oman), Rawad Abdulghafor (AOU Oman, Oman), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia)

### **4:36 Investigating Multi-Channel Performance in Mesh Wireless Networks-on-Chip Design**

Asrani Lit (Universiti Malaysia Sarawak (UNIMAS), Malaysia), Rohana Sapawi (Faculty of Engineering UNIMAS, Malaysia), Nordiana Rajae, Shamsiah binti Suhaili and Nur Alia Athirah Mohtadzar (Universiti Malaysia Sarawak, Malaysia), Mohammed Sultan Mohammed (Curtin University Malaysia, Malaysia & Hodeidah University, Yemen)

**4:54 Virtual Fitting Room with 3d Avatars and Augmented Reality Integration: a Preliminary Study**

Hasiah Mohamed (UiTM Cawangan Terengganu, Malaysia & Kampus Kuala Terengganu, Malaysia), Nur Alia Alesya Abdul Aziz (Universiti Teknologi MARA Cawangan Terengganu, Malaysia), Norulhidayah Isa (Universiti Teknologi MARA & Cawangan Terengganu Kampus Kuala Terengganu, Malaysia), Zawawi Abdul Wahab (Universiti Teknologi MARA Cawangan Terengganu, Malaysia)

**5:12 SDN Based Firewall Using RYU Controller**

Salem Omar Sati (Misurata University, Libya & HHU GERMANY, Germany), Zainab S. Attarbashi (International Islamic University Malaysia, Malaysia)

# **Wednesday, 27 August 2025**

## **Wednesday, 27 August 2025 9:00 - 10:00 (Asia/Kuala Lumpur)**

**Keynote 2:** Cloud Remote System with AI Chatbot

*Dr. Angie See Tien Ng*

**Chair:** Teddy Surya Gunawan (International Islamic University Malaysia, 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, 27 August 2025 10:00 - 12:15 (Asia/Kuala Lumpur)**

### **3A: AI and Machine Learning**

Room: E2-1-1

**Chair:** Norun Fariyah Abdul Malek (International Islamic University Malaysia, Malaysia)

#### **10:00 AI Web Assistant in Fashion Design**

Zehaab Ahmad, Norun Abdul Malek, Malik Arman Morshidi, Ani Liza Asnawi, Norazlina Saidin, Khaizuran Abdullah and Hazlina Md Yusof (International Islamic University Malaysia, Malaysia)

#### **10:15 The Influence of Chatbot Implementation on Consumer Purchase Intention on Platforms That Use Live Streaming Shopping**

Jonathan Adhianto (Binus University, Indonesia), Erwin Halim (Bina Nusantara University, Indonesia & School of Information Systems, Indonesia)

#### **10:30 Reinforced Learning Algorithm for Efficient Energy Tracking in Peer-to-Peer Energy Trading**

Ahmad Haikal Firdaus Ahmad Tajuddin, Noor Hazrin Hany Mohamad Hanif and Muhammad Hafidzuddin Hanif Danial Norizal (International Islamic University Malaysia, Malaysia)

#### **10:45 Object Detection and Localization Sight to Sound Framework for Visually Impaired Community**

Abdullah S Alharthi (King Khalid University, Saudi Arabia), Saudi Alzahri (Misk Schools, Saudi Arabia)

#### **11:00 Driving Behavior Classification from Smartphone Sensor Data Using Graph Attention Network**

Nur Azshimadathul Asyqin Binti Darwis, Malik Arman Morshidi and Zulkifli Zainal Abidin (International Islamic University Malaysia, Malaysia), Muhammad Hariz Danial bin Hasbullah (International Islamic University Malaysia (IIUM), Malaysia)

#### **11:15 A Critical Study of Soft Pseudo-Labels for Semi-Supervised Medical Image Segmentation**

Mohammad Amir Khan (IIUM, Malaysia), Hasan Firdaus Mohd Zaki, Azhar Mohd Ibrahim, Amir Shafie and SM Afzal Hoq (International Islamic University Malaysia, Malaysia)

#### **11:30 A Real-Time Malay Sign Language (MSL) Recognition Tool**

Nurin Qasdina Nazaruddin (International Islamic University Malaysia (IIUM), Malaysia), Huda Adibah Mohd Ramli, Norazlina Saidin, Ani Liza Asnawi, Sarah Yasmin Mohamad and Norun Abdul Malek (International Islamic University Malaysia, Malaysia)

#### **11:45 Minimizing EV Battery Degradation in V2G Systems via XGBoost-Guided Particle Swarm Optimization**

Irfan Syafi Zubir Shah, Mohd Shahrin Abu Hanifah, Teddy Surya Gunawan, Nur Shahida Midi and Siti Hajar Yusoff (International Islamic University Malaysia, Malaysia)

#### **12:00 Optimization of Prediction Model for the Determination of Free Fatty Acid for Crude Palm Oil**

Katrul Nadia Basri and Muhammad Syargawi Abdullah (Photonics Technology Lab, MIMOS Berhad), Nur Aisyah Athirah Mohd Zali (Photonics Technology Lab, MIMOS Berhad, Malaysia), Nur Azera Tuhaime, Mohd Norzaliman Mohd Zain, Mohd Hafizulfika Hisham and Zalhan Md Yusof (Photonics Technology Lab, MIMOS Berhad)

### **3B: Antenna and Propagation**

Room: E2-1-2

**Chair:** Khaizuran Abdullah (International Islamic University Malaysia, Malaysia)

#### **10:00 A Low-Profile s-Band Antenna for 1U CubeSat Communication Systems**

Hassan Al-Lawati, Ghaith Al-Makdami, Omar Al-Alawi and Jasim Al-Mahrrbi (Sultan Qaboos University, Oman)

#### **10:15 A Textile Antenna Embedded in Traditional Attire for Body-Centric Communication**

Hassan Al-Lawati and Zia Nadir (Sultan Qaboos University, Oman)

#### **10:30 AI-Empowered mm-Wave Antenna Design**

Bipul Chandra Das (Mymensingh Engineering College, Bangladesh), M.H. Hasan Shovo (Concordia University, Canada), Md Rafiqul Islam and AHM Zahirul Alam (International Islamic University Malaysia, Malaysia), M.M. Hasan Mahfuz (Concordia University, Canada), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia), Norun Abdul Malek (International Islamic University Malaysia, Malaysia)

#### **10:45 Wearable Fractal Antenna for 1.575 GHz of Global Positioning System and 2.4 GHz of Wireless LAN Applications**

Mohd Fareq Abd Malek (University of Wollongong in Dubai, United Arab Emirates), Nornikman Hassan (Universiti Teknikal Malaysia Melaka, Malaysia), Abeer El Elkhouly and Ayesha Wasim Qureshi (University of Wollongong in Dubai, United Arab Emirates), Hock Chuan Lim (University of Wollongong Dubai & FEIS, United Arab Emirates), Majid Munawar (University of Wollongong in Dubai, United Arab Emirates), Muhammad Zuhair Bolqiah Edris (Universiti Teknikal Malaysia Melaka, Malaysia)

#### **11:00 Transmitter Placement Optimization Using 3D Ray Tracing and PSO in Metallic Environments**

Jonghee Kim (Hannam University, Korea (South)), Minso Park (Mokpo National Maritime University, Korea (South)), Young Chul Lee (Mokpo National University (MMU), Korea (South)), Chi-Hyung Ahn (Korea University of Technology and Education, Korea (South)), Seongwon Oh (Mokpo National Maritime University, Korea (South))

#### **11:15 Influence of Dust Storm Cell Size on the Microwave Attenuation Prediction Methods**

Eltahir Idris Eltahir Mohamed (UIA, Malaysia & Omdurman Ahlia University (OAU), Sudan), Md Rafiqul Islam (International Islamic University Malaysia, Malaysia), Elfatih Elsheikh (King Khalid University (KKU), Saudi Arabia), Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia), Aisha-Hassan A. Hashim (International Islamic University Malaysia, Malaysia), Othman Omran Khalifa (International Islamic University Malaysia (IIUM), Malaysia), Mosab Hamdan (National College Ireland, Ireland & SETU, Ireland)

#### **11:30 Design and Evaluation of Uniform and Non-Uniform Planar Arrays Geometries Using Rectangular Patch Antennas**

Mullah Momin, Md Rafiqul Islam and Norun Abdul Malek (International Islamic University Malaysia, Malaysia), Othman Omran Khalifa (International Islamic University Malaysia (IIUM), Malaysia), Khaizuran Abdullah (International Islamic University Malaysia, Malaysia), M.M. Hasan Mahfuz (Concordia University, Canada)

#### **11:45 Enhancing Wireless Guitar Audio Signal Transmission Using a Flexible Metamaterial-Based Frequency Selective Surface**

Omar Shendy (University of Wollongong in Dubai, UAE, United Arab Emirates), Abeer El Elkhouly, Ayesha Wasim Qureshi and Mohd Fareq Abd Malek (University of Wollongong in Dubai, United Arab Emirates), Hasliza ARahim (Universiti Malaysia Perlis & Advanced Communication Engineering, Centre of Excellence (ACE), Malaysia)

### **3C (ONLINE): Signal and Image Processing/Wireless or Radio Access Technologies/5G, 6G and Beyond Wireless Communication**

Room: E2-1-3

**Chair:** Khairayu Badron (International Islamic University Malaysia, Malaysia)

#### **10:00 Handover Algorithm for UAV-BS 5G Network**

Ahmad Zaki Aiman Bin Abdul Rashid (Universiti Teknologi MARA (UiTM), Malaysia), Azita Laili and Norsuzila Ya'acob (UiTM, Malaysia)

#### **10:15 Machine Learning-Enhanced Power Allocation for mMIMO-NOMA Systems in 6G Networks**

Mohamed Hassan Babikir (Lovely Profession University, India & University of Science & Technology, Sudan), Khalid Hamid (SUST, Saudi Arabia), Elmuntaser Hassan H (Al-Neelain University, Sudan), Rashid A. Saeed (Taif University, Saudi Arabia & Sudan University of Science and Technology SUST, Sudan), Mohammed Suleiman Elbasheir (Sudan University of Science & Technology (SUST), Sudan), Othman Omran Khalifa (International Islamic University Malaysia (IIUM), Malaysia)

#### **10:30 Facial Images Dataset for Early Screening of Autism Children Using Convolutional Neural Network**

Melinda Melinda, Zulfan Zainal, Marty Mawarpury and Yuwaldi Away (Universitas Syiah Kuala, Indonesia)

#### **10:45 Comparison of Efficientnet B3 and Inception V3 Architecture Performance in Heart Disease Arrhythmia Image Classification**

Melinda Melinda, J Prayoga, Herlina Dimiati and Teuku Yuliar Arif (Universitas Syiah Kuala, Indonesia)

#### **11:00 Utilizing Deep Reinforcement Learning for Task Offloading and Resource Management in MEC-Enabled 6G Networks**

Mamoon Mohammed Saeed (University of Modern Sciences, Yemen), Rashid A. Saeed (Taif University, Saudi Arabia & Sudan University of Science and Technology SUST, Sudan), Aisha-Hassan A. Hashim (International Islamic University Malaysia, Malaysia), Zeinab E. Ahmed (University of Gezira & International Islamic University Malaysia, Malaysia), Mohammed Suleiman Elbasheir (Sudan University of Science & Technology (SUST), Sudan)

#### **11:15 Energy Efficient Power Control in 6G Networks for Smart Grid Wide Area Network Using Deep Reinforcement Learning**

Ainul Husna Zaidi, Fauzun Abdullah Asuhaimi, Aneesa Irdina Binti Ismail, Muhammad Arif Izzudin Mohd Razali and Nur Sabrina Suhaimi (Universiti Sains Islam Malaysia, Malaysia), Huda Adibah Mohd Ramli (International Islamic University Malaysia, Malaysia)

**Wednesday, 27 August 2025 2:00 - 3:45 (Asia/Kuala Lumpur)**

### **4A: Satellite and Wireless Communication/Smart Cities and Green Technology/Printed Electronics**

Room: E2-1-1

**Chair:** Nadirah Abdul Rahim (International Islamic University Malaysia, Malaysia)

#### **2:00 Satellite Reliability Analysis Using Mathematical Prediction Models: a Case Study of Satellite Anomalies**

Muhamad Imran Haris Ahmad Mahmood, Nadirah Abdul Rahim and Abdul Mutholib (International Islamic University Malaysia, Malaysia), Mahayaudin M Mansor (Universiti Teknologi MARA, Malaysia)

#### **2:15 Minimax-Type Bandpass Filters with Full-Band Center-Frequency Tuning and Narrow Transition-Band**

Tian-Bo Deng (Toho University, Japan)

#### **2:30 Iterative Complex-Valued Quadratic-Cone Programming for Implementing Phase Equalizers**

Tian-Bo Deng (Toho University, Japan)

#### **2:45 Development of Online Power Energy Monitoring System Using Internet of Things (IoT)**

Mohd Fahmi Hussin, Fathimah Binti Shamsuddin and Nur Shahida Midi (International Islamic University Malaysia, Malaysia)

**3:00 Low-Cost Solar PV Data Logger for off-Grid Monocrystalline Panels: Design and Performance Analysis**

Hossain MD Shouquat (International University of Business Agriculture and Technology (IUBAT), Dhaka 1230, Bangladesh), Khadiza Akter (International University of Business Agriculture and Technology, Bangladesh), S. M. A. Motakabber (International Islamic University Malaysia, Malaysia)

**3:15 Design and Simulation of Printed Force Sensitive Resistor for Wearable Electronics**

Muhammad Izzuddin Mohamad Azhar, Aliza Aini Md Ralib, Nor Hidayati Diyana Nordin, Anis Nurashikin Nordin and Rosminazuin Ab Rahim (International Islamic University Malaysia, Malaysia)

**3:30 Trade-Space Exploration Analysis for a System Incorporating Parametric Cost Mathematical Models: a Case Study of Satellite Anomalies**

Muhammad Aryss Zafran Shahrul Ariffin, Nadirah Abdul Rahim and Abdul Mutholib (International Islamic University Malaysia, Malaysia), Mahayaudin M Mansor (Universiti Teknologi MARA, Malaysia)

**4B (ONLINE): Smart Grid and Renewable Energy/Sustainable Technologies//Multimedia and Web Services/ Satellite and Wireless Communication/**

Room: E2-1-2

**Chair:** Nurul Arfah Che Mustapha (International Islamic University Malaysia, Malaysia)

**2:00 Design and Performance Analysis of Energy-Efficient Atmospheric Water Generators for Standalone Applications**

Ahmed Badawi (UDST, Qatar), Mario I Elzein (University of Doha for Science and Technology, Qatar), Claude Ziad El-Bayeh (UDST, Qatar), Azad Ashraf (University of Doha for Science & Technology, Qatar), Osama Khalid, Nasser Koleed and Mohammed Al-Mass (UDST, Qatar)

**2:15 A Conceptual Framework for Enhancing Sustainability of Halal SMEs in Malaysia Using Blockchain Technology**

Imanina Binti Mohd Zainuldin and Han Foon Neo (Multimedia University, Malaysia), Chuan Chin Teo (Multimedia University Malaysia, Malaysia), Rajiv Dharma Mangruwa (Telkom University, Indonesia)

**2:30 Unleashing Virality: the Complex Forces Behind the Success of Short Videos in Indonesia**

Ibnu Tamiyah Firdaus, Janelle Luana and Chandra Victoria (Bina Nusantara University, Indonesia), Erwin Halim (Bina Nusantara University, Indonesia & School of Information Systems, Indonesia)

**2:45 On the Study of Development of Broadband Pyramidal Microwave Absorber Using Date Palm Leaf Waste: a Sustainable Approach**

Abdollah Hassan, Aparna Krishna, Abdelattif Alotaibi, Anas Labib, Nasser Shaibani, Mohamed Ouda and Jamal Kurdi (University of Doha for Science and Technology, Qatar)

**3:00 Sustainable Fuel Aviation Infrastructure and Transition: Hybrid Agent-Based Modeling and System Dynamics**

Mohd Shoaib and Fanny Camelia (Cranfield University, United Kingdom (Great Britain)), Mebrahitom Asmelaish (Birmingham City University, United Kingdom (Great Britain)), Yaseen Zaidi and Ashraf Tantavy (Cranfield University, United Kingdom (Great Britain)), Ian Marr (Airbus Operations Limited, United Kingdom (Great Britain))

**3:15 Low-Light Enhancement via Encoder-Decoder Network with Illumination Guidance**

Le-Anh Tran (Myongji University, Korea (South)), Chung Nguyen Tran (Universitat Autònoma de Barcelona, Vietnam), Luu Ngoc Nguyen (Sejong University, Korea (South)), Cach Dang (Ho Chi Minh City University of Transport, Vietnam), Jordi Carrabina (Universitat Autònoma de Barcelona, Spain), David Castells-Rufas (Universitat Autònoma de Barcelona, Spain), Minh Son Nguyen (University of Information Technology - VNUHCM, Vietnam)

#### **4C (ONLINE): AI and Machine Learning**

Room: E2-1-3

**Chair:** Nur Shahida Midi (International Islamic University Malaysia, Malaysia)

##### **2:00 Improving Harmful Brain Activity Classification Model with Electroencephalography Spectrogram Using Transfer Learning**

Virra Retnowati A'izzah and Alam Rahmatulloh (Siliwangi University, Indonesia), Vega Purwayoga (Universitas Siliwangi, Indonesia), Erna Haerani (Siliwangi University, Indonesia), Irfan Darmawan (Telkom University, Indonesia), Randi Rizal (Faculty of Information and Communication Technology, Universiti Teknikal Malaysia Melaka, Malaysia)

##### **2:15 Utilizing Machine Learning Algorithms for Diagnosing Diabetic Retinopathy**

Awatif Mohammed Abdulkawaly, Mohammed, Mona Hafed ELfsay and Mohamed Abdalla (University of Benghazi, Libya)

##### **2:30 Deepfake Face Image Detection with Enhanced Generalization: an Optimized VGG16 Approach Using Diverse Datasets**

Tian Wei William Chai and Jason Teo (Universiti Malaysia Sabah, Malaysia)

##### **2:45 Data-Driven Prediction of MBA Admissions: Utilizing Extra Trees and Grid Search for Model Enhancement**

Irfan Darmawan (Telkom University, Indonesia), Amalia Sophia Rusyadi (Siliwangi University, Indonesia), Randi Rizal (Faculty of Information and Communication Technology, Universiti Teknikal Malaysia Melaka, Malaysia), Alam Rahmatulloh and Erna Haerani (Siliwangi University, Indonesia), Ali Impron (Universitas Muhammadiyah Sampit, Indonesia)

##### **3:00 Heartbeat Sound Analysis for Heart Disease Diagnosis Using Long Short-Term Memory Networks**

Mona Hafed ELfsay, Awatif Mohammed Abdulkawaly, Mohammed and Mohamed Abdalla (University of Benghazi, Libya)

##### **3:15 Enhancing Cross-Project Defect Prediction for Automated Software Fault Detection**

Hamzah Rajab, Abraheem Mohammed M Alsubayhay and Mohamed Abdalla (University of Benghazi, Libya)

##### **3:30 Advanced Uses of Generative Adversarial Networks (GANs) for Class Imbalance in Machine Learning**

Rusma Anieza Ruslan and Nureize Arbaiy (Universiti Tun Hussein Onn Malaysia, Malaysia), Pei-Chun Lin (Feng Chia University, Taiwan)