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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
يُونِيسْتِي اِسْلَامْ اِنْتَارَا اِنْعِسَا مِلَيْسِيَا
Garden of Knowledge and Virtue

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2025 10th International Conference on Computer and Communication Engineering (ICCCE)

Technical Program

26 - 27 August 2025

Organized by:

Department of Electrical and Computer Engineering
Faculty of Engineering



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TABLE OF CONTENTS

Chair message	ii
Organizing Committee	iii
List of Reviewers	v
Keynote 1: Conjugated Molecule Design and Synthesis for Advanced Organic and Perovskite Photovoltaics	viii
Keynote 2: Cloud Remote System with AI Chatbot	ix
Technical Program	1
Acknowledgment of Sponsors	13

MESSAGE FROM THE CHAIRMAN



Prof. Dr. Othman Omran Khalifa

Assalamualaikum warahmatullahi wabarakatuh,

A very warm welcome to all participants of the 10th International Conference on Computer and Communication Engineering 2025 (ICCCE 2025), hosted by the Department of Electrical and Computer Engineering, Faculty of Engineering, International Islamic University Malaysia (IIUM).

The sustained enthusiasm and global participation in previous ICCCE conferences have inspired the Department and Faculty to continue organizing this biennial IEEE-supported and Scopus-indexed event. Our core aim for the ICCCE series is to establish it as a landmark forum in Computer and Communication Engineering, fostering a vibrant environment for the intellectual exchange of ideas and the sharing of research findings among colleagues, researchers, policymakers, and students worldwide. This year's theme, "*Innovative Technologies for a Sustainable and Inclusive Future*" is particularly timely, highlighting the critical role of advanced computing, communication, AI, and digital transformation in achieving the UN Sustainable Development Goals.

Consistent with past conferences, ICCCE 2025 has adhered to strict IEEE guidelines, employing a rigorous double-blind peer-review process managed by our experienced Technical Committee. Authors diligently revised their papers based on reviewer feedback and template requirements. We are pleased to report an acceptance rate of approximately 71% from 131 full paper submissions received via EDAS, representing 37 countries, showcasing cutting-edge research in areas pivotal to global progress.

Organizing an event of this scale requires tremendous effort. I extend my sincere gratitude to the entire Organizing Committee and everyone whose dedication has made this conference a reality. Special thanks are due to our distinguished Keynote Speakers, the International Advisory Board, and our valued Sponsors. I also deeply appreciate the essential contributions of our reviewers; their expertise was crucial in maintaining the conference's high-quality standards.

Whether you are joining us in person or online, I wish you a productive and enjoyable hybrid experience at ICCCE 2025. May this conference be both a significant professional success and a pleasurable event for all involved, inspiring solutions that harness AI and drive digital transformation for a sustainable and Inclusive future.

Thank you.

Prof. Dr. Othman Omran Khalifa
Chairman of ICCCE 2025
Electrical and Computer Engineering Department
Kulliyyah of Engineering,
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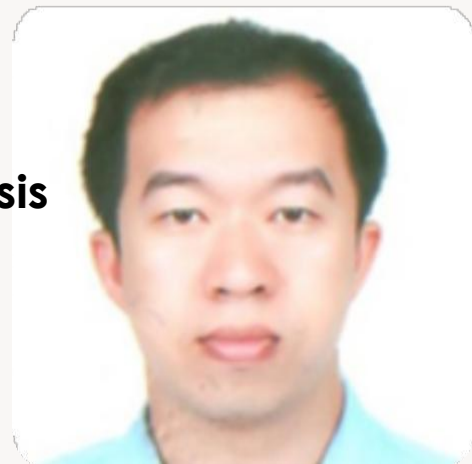
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Keynote Speaker

“Conjugated Molecule Design and Synthesis for Advanced Organic and Perovskite Photovoltaics”

Professor Chih-Ping Chen
Department of Materials Engineering,
Ming Chi University of Technology, Taiwan



Abstract

The rapid expansion of self-powered, integrated Internet of Things (IoT) devices has fueled interest in advanced photovoltaic technologies capable of efficiently harvesting energy. Among these, perovskite solar cells (PSCs) and organic photovoltaics (OPVs) have emerged as frontrunners due to their high power conversion efficiency and solution-based fabrication, making them ideal candidates for addressing IoT energy challenges. A critical factor in optimizing PSC and OPV performance lies in mitigating interfacial defects through engineered charge transport layers, including electron transport layers (ETLs), hole transport layers (HTLs), and interfacial layers (IFLs). In this keynote, I will present our recent advancements in the development of conjugated molecules for ETL, HTL and IFLs, enabling significant performance improvements.[1] Our strategies include the design of efficient electron-selective layers, perovskite bulk passivation techniques, and the implementation of bilayer HTL structures to enhance indoor PSC efficiency. Specifically, we demonstrate how organic semiconductors, sol-gel nickel oxide (NiOx), and self-assembled (SA) layers optimize energy alignment at interfaces, leading to enhanced carrier transport in PSCs. Under 3000K LED illumination at 1000 lux, our optimized $\text{Cs}_{0.18}\text{FA}_{0.82}\text{Pb}(\text{I}_{0.8}\text{Br}_{0.2})_3$ devices achieved an impressive indoor power conversion efficiency exceeding 42%.[2] Furthermore, we optimized bulk heterojunction (BHJ) blend layers—such as PM6:PY-IT, and PM6:Y6 and its derivatives—and their ternary counterparts to realize high-performance OPVs.[3] Our studies demonstrate that optimized ternary blend morphologies enhance exciton dissociation, carrier transport, and overall power conversion efficiency. Additionally, we highlight improvements in OPV thermal and ambient stability, paving the way for more robust and reliable organic photovoltaic technologies. These advancements underscore the critical role of molecular design in improving passivation, electron transport, and interfacial properties—pushing the boundaries of next-generation PSCs and OPVs for energy-efficient IoT applications.

Biodata

Prof Chih-Ping Chen is a Distinguished Researcher and a Professor at the Department of Materials Engineering, Ming Chi University of Technology, Taiwan. His research areas vary from Electro-Optical Materials, Nano-composites, Organic Semiconductor, Organic and to Perovskite Photovoltaics and Photodetector. He obtained his PhD from the Department of Chemical Engineering, National Chung Hsing University (NCHU), Taiwan in 2004.

He has also won several awards such as:

- Outstanding Paper Award, Industrial Technology Research Institute, 2009, 2010 and 2011
- Outstanding Young Polymer Science and Technology Award, 2016, The Polymer Society, Taipei
- Outstanding Young Scholars Program (2018–2021)

Keynote Speaker

“Cloud Remote System with AI Chatbot”

Dr. Angie See Tien Ng
AI Principal Engineer/Director
Intel CCG ECG Customer Engineering



Abstract

This session presents a Cloud Remote System integrated with an AI Chatbot to enhance remote debug, monitoring, control, and user interaction. The system utilizes scalable cloud infrastructure to manage distributed resources and employs a chatbot powered by natural language processing (NLP) for intuitive, real-time communication.

The AI Chatbot simplifies tasks such as queries execution and troubleshooting, making the system accessible to both technical and non-technical users. Key features include high availability, secure data access, and cross-platform compatibility. Applications span smart homes, industrial IoT, and enterprise environments, showcasing improved efficiency and user engagement through intelligent automation.

Biodata

Dr. Angie See Tien Ng is an AI Principal Engineer cum Director from Intel CCG ECG Customer Engineering, who is the pioneer for Cloud based Remote Debug (CBRD), spearheaded Gen AI Chat bots and HSDES/IPS AI ETL. She has been in Intel for 16 years and in the industry for 28 years. Her career includes R&D electronics design, RF designer, FPGA IC characterization, Electrical Validation, Functional Safety, IOT Customers Enabling and Design-In. Angie is always passionate in innovation and is honoured with Distinguished Invention Award by Intel. She graduated from Campbell University with BEng in Microelectronics/Physics in 1997, obtained her Master in Engineering from Multimedia University in 2014 and completed her doctorate from University Science Malaysia in 2021 in area of designing Cloud-based virtual learning & testing for industry.

TECHNICAL SESSION ICCCE 2025

Time	Tuesday, 26 August 2025	Wednesday, 27 August 2025
8:30 - 9:00 am	OPENING: OPENING CEREMONY	
9:00 - 10:00 am		Keynote 2 : Cloud Remote System with AI Chatbot
10:00 - 11:00 am	Break and Networking	3A: AI and Machine Learning
11:00 am - 12:00 pm	Keynote 1 : Conjugated Molecule Design and Synthesis for Advanced Organic and Perovskite Photovoltaics	3B: Antenna and Propagation
12:00 - 12:15 pm		3C: (ONLINE): Signal and Image Processing/Wireless or Radio Access Technologies/5G, 6G and Beyond Wireless Communication
12:15 - 2:00 pm	Lunch Break	
2:00 - 3:45 pm	1A: Optical Communications and Photonics/Wireless or Radio Access Technologies/5G, 6G and Beyond Wireless Communication/Sustainable Technologies 1B: Smart Grid and Renewable Energy/Signal and Image Processing 1C: (ONLINE): AI and Machine Learning 1D: (ONLINE): Cyber Security and Privacy/Data Science and Big Data Analytics/ Internet of Things and Big Data	4A: Satellite and Wireless Communication/Smart Cities and Green Technology/Printed Electronics 4B: (ONLINE): Smart Grid and Renewable Energy/Sustainable Technologies//Multimedia and Web Services/ Satellite and Wireless Communication/ 4C: (ONLINE): AI and Machine Learning
3:45 - 4:00 pm	Break and Networking	
4:00 - 5:30 pm	2A: Cyber Security and Privacy/Data Science and Big Data Analytics 2B: Instrumentation and Control/ Internet of Things and Big Data/Multiple Access Techniques/VLSI and MEMS Design 2C: (ONLINE): Augmented Reality and Virtual Reality/Bioinformatics Engineering/Computer Network and Protocol	

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

Tuesday, 26 August 2025

Tuesday, 26 August 2025 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

Room: E2-1-4

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), Ellessaid 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 Ramadhani, 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 Siriwong (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, Daninsh 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 Thermoelectric 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 Faruque 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 ONAN Transformer Based on IEC 60076-7

Mohd Fahmi Hussin (International Islamic University Malaysia, Malaysia), Najiyah 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 Notalapati (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 Notalapati (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), Farisya 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)

4:15 [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)

4:30 [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)

4:45 *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)

5:00 *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

Room: E2-1-4

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 Fariah 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-Mahrri (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 Elkhoully 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 Elkhoully, 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, Muhamad 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 Asmelash (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 (Univesitat 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 Abdulmawaly, Mohammed, Mona Hafeed 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 Sophiah 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 Hafeed ELfsay, Awatif Mohammed Abdulmawaly, 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)

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