



7th International Conference on Engineering Professional Ethics and Education (ICEPEE'25)

*“Ethical AI and Engineering
Education: Transforming Society for a
Sustainable Future”*

Sponsored by:



MESSAGE FROM THE CHAIRMAN ICEPEE'25



It is my pleasure to welcome you to the *7th International Conference on Engineering Professional Ethics and Education (ICEPEE 2025)*!

ICEPEE 2025 is hosted by the Integrative Engineering Education and Ethics for Sustainability Research Group (INTEGRATES), a research group in the Kulliyyah of Engineering (KOE), at the International Islamic University Malaysia (IIUM). This year's theme, "*Ethical AI and Engineering Education: Transforming Society for a Sustainable Future*", challenges us to reflect deeply on how ethics and education must guide technology advancements in shaping our collective future.

Engineering, at its heart, is not only about solving technical problems but also about serving humanity. Technology is never neutral. Together with the rapid advances of artificial intelligence (AI), it also brings major ethical issues about bias, fairness, responsibility, and trust and has negative impacts on humanity. This increases the need for educators to anchor engineering in values that uphold human dignity and protect the environment.

At IIUM, our approach is to frame knowledge within broader spiritual and cultural contexts. From the Tawhidic perspective, engineering is not simply a profession, but it is a part of a greater amanah (trust), and it translates into acts of professionalism, which include 'adl (justice), rahmah (compassion), and maslahah (benefit). By embedding these principles into curricula, research, and professional practice, we aim to nurture engineers who are not only technically skilled but also ethically conscious and spiritually grounded.

We hope that ICEPEE 2025 will excite new ideas and fresh collaborations in curricula, research, and professional practices and help to shape not only competent professionals but also ethical leaders for the future. On behalf of the organizing committee, I want to extend our sincere gratitude for your participation and contributions. May this conference be a source of collaborations and wisdom for us all.

"Engineering Ethics with a greater purpose"

Regards,
Siti Noorjannah Ibrahim
Conference Chair



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TECHNICAL SESSION ICEPEE'25

Day 1: Tuesday, 26th August 2025

8:00 am - 9:00 am	<p>REGISTRATION OF ICEPEE'25</p> <p>Venue: Auditorium A, Kulliyah of Engineering</p> <p>Online Platform: Zoom (LINK) / Youtube (LINK)</p>
9:00 am - 10:00 am	<p>OPENING CEREMONY OF THE IIUM ENGINEERING CONGRESS 2025</p> <p>Welcoming Remarks by The Rector, The Dean, and The Chairman of MQA</p>
10:15 am - 11:00 am	<p>CONGRESS KEYNOTE SPEECH SESSION:</p> <p>Prof. Dr. Ma'an Fahmi Rashid Al-Khatib (ICESCO Chair in Sustainable Engineering IIUM)</p> <p>Title:</p> <p>Master of Ceremony: Ir. Dr. Nadiyah Md Husain</p>
11:00 am - 11:15 am	<p>BREAK & NETWORKING</p> <p>Venue: ICEPEE'25 Zoom Platform (LINK) / Youtube (LINK)</p> <p>Master of Ceremony: Assoc. Prof. Ir. Dr. Hazrin Hany Mohamad Hanif</p>
11:15 am - 11:25 am	<p>WELCOMING REMARKS BY ICEPEE'25 CHAIRMAN</p> <p>Assoc. Prof. Dr. Siti Noorjannah Ibrahim</p>
11:30 am - 12:30 pm	<p>ICEPEE'25 KEYNOTE SPEECH SESSION 1:</p> <p>Dr. Musab Alrawi (Director of ICESCO Chair for Artificial Intelligence (AI) Ethics, University of Technology and Applied Science, Sultanate of Oman)</p> <p>Title: Ethical AI in Education and Engineering: Guiding Principles for a Sustainable Future</p> <p>Chair: Prof. Dr. Zuraida Ahmad</p>
12:30 pm - 2:00 pm	<p>Lunch Break</p>

TECHNICAL SESSION ICEPEE'25

Day 1: Tuesday, 26th August 2025

SESSION 1 (Theme: Entrepreneurship and Innovation in Engineering Education & Community, Industry, Academia, Governance and Environment (Pentahelix)

Collaborations in Engineering

Chair: Assoc. Prof. Dr. Ali Sophian

Co-Chair: Dr. Nur Khairiyah Basri

2:00 pm - 2:15 pm	ID1	KHALIFAH IN ACTION: STUDENT ENTREPRENEURSHIP THROUGH ISLAMIC VALUES IN STINGLESS BEEKEEPING Adibah Amir *; Azmir Ahmad; Mohd Syahmi Salleh; Che Razi Jusoh; Muhammad Ab Rahman; Ahmad Suhairi Mat Jebah; Mohd Yazid Ahmad; Yusni Yusop
2:20 pm - 2:35 pm	ID3	PENTAHHELIX COLLABORATION IN AQUAGREEN SUSTAINABLE ENGINEERING Adibah Amir*; Ahmad Zahirani Ahmad Azhar; 'Atiah Abdullah Sidek; Shafie Kamaruddin; Sharifah Imihezri Syed Shaharuddin; Aishah Najiah Dahnel; Alya Naili Rozhan; Muhammad Mukhtar Noor Awalludin; Yang Chuan Choong
2:40 pm - 2:55 pm	ID33	ADDRESSING ENERGY CHALLENGERS LOW-INCOME COMMUNITIES VIA SOLAR PV AND THERMAL MANAGEMENT APPROACH Mohamedelkhair, Mohamed*; Khalifa, Othman Hassan, Hashim, Aisha Hassan Abdalla

SESSION 2 (Theme: New Technologies & Challenges in Engineering Education)

Chair: Assoc. Prof. Dr. Ani Liza Asnawi

Co-Chair: Dr. Nurul Arfah Che Mustapha

3:00 pm - 3:15 pm	ID7	A SYSTEMATIC LITERATURE REVIEW ON THE ROLE OF ENGINEERING EDUCATION IN AN EVOLVING EDUCATIONAL LANDSCAPE Zuraida Ahmad *; Ali Sophian; Adibah Amir; Nor Fadhillah Mohamed Azmin
3:20 pm - 3:35 pm	ID13	CHIPERQUEST: AN EDUCATIONAL CAPTURE-THE-FLAG PLATROM FOR CYBERSECURITY SKILL DEVELOPMENT Abd Rasid, Muhammad Aliff Iman ; Mohd Razmi, Muhammad Alif Haziq; Sakka, Oula ; Attar Bashi, Zainab*; Mohd Aman, Azana Hafizah



TECHNICAL SESSION ICEPEE'25

Day 1: Tuesday, 26th August 2025

3:40 pm - 3:55 pm	ID24	IMPLEMENTING TRAFFIC GENERATOR FOR A PROTOTYPE OF CYBER RANGE LAB USING OPEN-SOURCE TOOLS Saniza, Auni Fatini; Shafudin, Nazihah; Sakka, Oula; Attar Bashi, Zainab*; Basri, Atikah Balqis
SESSION 3 (Theme: Professionalism & Ethics in Engineering and Engineering Education) Chair: Assoc. Prof. Ir. Dr. Hazrin Hany Mohamad Hanif Co-Chair: Dr. Wan Nur Firdaus Wan Hassan		
4:00 pm - 4:15 pm	ID8	EVALUATING PROFESSIONAL DEVELOPMENT THROUGH MECHTRONICS ENGINEERING INTERNSHIP: A FEEDBACK-BASED ANALYSIS Azmi, Nur Liyana*; Wahid, Azni Nabela; Mokhtar, Suhaily
4:20 pm - 4:35 pm	ID14	EMBEDDING TAWHIDIC EPISTEMOLOGY IN ENGINEERING EDUCATION ALIGNED WITH IEA 2021 GRADUATE ATTRIBUTES Gunawan, Teddy Surya*
4:40 pm - 4:55 pm	ID27	REFLECTIONS ON INDUSTRIAL: A CASE STUDY OF IIUM MECHTRONICS ENGINEERING STUDENTS Wahid, Azni Nabela*; Azmi, Nur Liyana; Mokhtar, Suhaily
5:00 pm - 5:15 pm	ID12	MEASURING STUDENTS' IMPACT OF LEVEL OF INTEREST TO LEARN EMBEDDED SYSTEMS COURSE: INSTRUMENT DEVELOPMENT AND VALIDATION USING RASCH ANALYSIS Ridwan, Intisar Ibrahim *; Hashim, Aisha; Mohamed, Izzeldin; Radin Salim, Kamilah; Mohamed, Nazar

END OF DAY 1



TECHNICAL SESSION ICPEE'25

Day 2: Wednesday, 27th August 2025

SESSION 4 (Theme: Ethical Artificial Intelligence (AI): Framework to Practice)

Chair: Assoc. Prof. Dr. Nurul Fariza Zulkurnain

Co-Chair: Dr. Hasmawati Antong

9:00 am - 9:15 am	ID10	STUDENTS' PERCEPTIONS OF ETHICAL AI AND AI TOOLS: A SYSTEMATIC LITERATURE REVIEW Ibrahim, Siti*; Salleh, Norsaremah; Asnawi, AniLiza; Mohd Azmin, Norfadhillah
9:20 am - 9:35 am	ID19	COPING WITH AI: ISLAMIC PRINCIPLES FOR NEW EDUCATION POLICY BRIEF Al-Jayyousi, Odeh; Rashid Al-khatib, Ma An Fahmi *
9:40 am - 9:55 am	ID17	REVOLUTIONIZING EMERGENCY CARE: A REVIEW OF AI DRIVEN OPTIMIZATION IN EMERGENCY DEPARTMENTS E. Ahmed, Zeinab; A. Elsmay, Eyman F. ; Hassan, Aisha; Saeed, Mamoon; Suleiman, Mohammed; Saeed, Rashid*
10:00 am - 10:15 am	ID34	RELIGION AND CULTURAL INFLUENCE IN AI ETHICS FRAMEWORK: A BIBLIOMETRIC ANALYSIS Ibrahim, Siti*; Salleh, Norsaremah; Harun, Noor Hasmiza; Johari, Shazlina

SESSION 5 (Theme: Artificial Intelligence (AI) in Engineering Education)

Chair: Assoc. Prof. Dr Norazlina Saidin

Co-Chair: Assoc Prof. Dr Ahmad Zamani Jusoh

10:20 am - 10:35 am	ID4	ENHANCING SAFETY AND HEALTH RISK MANAGEMENT EDUCATION WITH AI-POWERED TOOLS: INNOVATIVE TOOLS FOR ENGINEERING STUDENTS AND PROFESSIONALS Sum, Lee Min*
10:40 am - 10:55 am	ID18	AI-POWERED AND CONVENTIOANL MALWARE DETECTION APPROACHES: CHALLENGES AND FUTURE TRENDS F. A. Elsmay, Eyman ; E. Ahmed, Zeinab; Hassan, Aisha; Suleiman, Mohammed; A. Altahir, Altahir; Saeed, Rashid*
11:00 am - 11:15 am	ID29	ARTIFICIAL INTELLEGEENCE TOOLS IN ARABIC LEARNING CONTENT CREATION: EVALUATING THE BENEFITS AND OVERCOMING THE CHALLENGES Attar Bashi, Zainab*; Sakka, Oula; Abdul Rahim, Elin Eliana



TECHNICAL SESSION ICPEE'25

Day 2: Wednesday, 27th August 2025

11:20 am - 11:35 am	ID30	PROMPT QUALITY ANALYSIS IN AI-ASSISTED LEARNING OF DATABASE PROGRAMMING: PEDAGOGICAL INSIGHTS FROM A UNIVERSITY-LEVEL INTERVENTION Kartiwi, Mira*; Gunawan, Teddy Surya
SESSION 6 (Theme: Accreditation and Evaluation of Outcome-Based Engineering Education & Humanising Engineering Education) Chair: Ir. Dr. Nadiah Md Husain Co-Chair: Dr. Afifah Mohd Ali		
11:40 am - 11:55 am	ID15	ENHANCING STATISTICAL AND NUMERICAL TECHNIQUES IN ELECTRICAL ENGINEERING EDUCATION WITH JULIA ALIGNED TO EAC STANDARD 2024 Gunawan, Teddy Surya*
12:00 pm - 12:15 pm	ID31	RESPONSIBLE AI USE IN ACADEMIC RESEARCH: STRATEGIES FOR ENSURING SCIENTIFIC INTEGRITY AND QUALITY Ahmed, Iman Osman Mukhtar*; Tadjine, Farida ; Hashim, Aisha Hassan Abdalla ; Ahmed, Iman
12:20 pm - 12:35 pm	ID11	USING NEAR-FIELD COMMUNICATION TECHNOLOGY TO ENCOURAGE STUDENT PARTICIPATION IN COCURRICULAR ACTIVITIES Kamarudin, Kay Aiman Fitri; Mohamad Rafaii, Ikmal Ikhwan; Sakka, Oula; Attar Bashi, Zainab*; Mohd Aman, Azana Hafizah
12:40 pm - 12:55 pm	ID39	INFLUENCE OF DEMOGRAPHIC FACTORS ON SECONDARY SCHOOL STUDENTS' INTEREST, EDUCATIONAL INTENTIONS, AND CAREER ASPIRATIONS IN STEM Hussien, Suhailah; Ibrahim, Hasniza; Ab. Rahim, Rosminazuin; Basri, Nur Khairiyah*; Deraman, Siti Noratikah Che; Ahmad Zabidi, Suriza; Wan Hassan, Wan Nur Firdaus; Md Husain, Nadiah; Rashid Al-khatib, Ma An Fahmi
12:55 pm - 2:00 pm	Lunch Break	
2:10 pm - 3:10 pm	ICEPEE'25 KEYNOTE SPEECH SESSION 2: Prof. Dr. Ir. Che Maznah Associate Director(Civil), Engineering Accreditation Department (AED), Board of Engineers Malaysia (BEM) Title: Bridging Accreditation and SDGs Through Outcome-Based Education: Pathway for Transforming Engineering Curricula Master of Ceremony: Prof. Aisha Hassan Abdalla Hashim	

TECHNICAL SESSION ICPEE'25

Day 2: Wednesday, 27th August 2025

SESSION 7 (Theme: Engineering Education Policies and Practice)

Chair: Assoc. Prof. Dr. Nor Fadhillah Mohamed Azmin

Co-Chair: Dr. Siti Noratikah Che Deraman

3:15 pm - 3:30 pm	ID40	A BIBLIOMETRIC STUDY ON ETHICS IN STRESS DATA COLLECTION FOR CHILDREN UTILIZING SPEECH OR VIDEO RECORDINGS: A FOCUS ON ISLAMIC PERSPECTIVE AND MAQASID AL-SHARIAH Ani Liza Asnawi*, Nur Aishah Zainal; Noorjannah Ibrahim; Adibah Amir; Fadhillah Mohamed Azmin; Ahmad Zamani Jusoh; Norun Fariyah Abdul Malek
3:35 pm - 3:50 pm	ID22	REIMAGINING CONSTRUCTIVE ALIGNMENT FOR ARTIFICIAL INTEGRATED LEARNING-LOOKING INTO AGENCY Ibrahim, Siti Fatimah*; Ibrahim, Siti Noorjannah; Qumer, Zeeshan
3:55 pm - 4:10 pm	ID26	A THEORETICAL GUIDE TO DEVELOPING LEARNER AGENCY IN CHEMICAL ENGINEERING CURRICULA Qumer, Zeeshan*; Ibrahim, Siti Fatimah
4:15 pm - 4:30 pm	ID28	ON THE OPERATIONALISATION OF VALUES, FLEXIBILITY AND SUSTAINABILITY IN CURRICULA ADHERING TO MQF 2.0 2024 Gunawan, Teddy Surya*; Kartiwi, Mira
4:35 pm - 4:50 pm	ID38	ENGINEERING EDUCATION FOR THE FUTURE: A SYSTEMATIC REVIEW OF CURRICULUM REVIEW STRATEGIES CONSIDERING EAC MANUAL 2024 Ahmad, Zuraida*; Azman, Amelia Wong
4:55 pm - 5:10 pm	ICEPEE'25 Closing and Award Ceremony	

Conference Adjournment

