

DAY 1: 13 AUGUST 2024			
8:00 - 9:00	Registration Kulliyah of Engineering, Auditorium A, Block E2 (Level 1)		
9:00 - 10:00	Opening Ceremony of the IIUM Engineering Congress 2024 Welcoming Remarks by the Chairman of IEC'24 Assoc. Prof. Dr. Khairul Azami Sidek Opening Speech and Launching Ceremony by the IIUM President YBhg. Tan Sri Samsudin Osman		
10:00 - 11:00	IEC'24 Keynote Speaker Session Tn. Hj. Muhtar Suhaili <i>Sustainable Engineering for Humanity</i>		
11.00 - 11.30	Welcoming Session by Chairman of ICAMME'24 Ts. Dr. Ahmad Zahirani Ahmad Azhar (Venue: E2-2-3) https://iium.zoom.us/my/icamme		
11:30-12:30	ICAMME'24 Keynote Speaker Session 1 Assoc. Prof. Dr. Mahdi Bodaghi <i>4D Materials and Printing for a Sustainable Future</i> Chairperson: Prof. Dr. Md Abdul Maleque		
12:30-2:00	Lunch Break		
	Parallel Session 1 (E2-2-1)	Parallel Session 2 (E2-2-3)	Parallel Session 3 (E2-2-2)
2:00-2:20	3	4	13
2:20-2:40	14	11	18
2:40-3:00	20	16	19
3:00-3:20	22	21	26
3:20-3:40	35	51	29
3:40-4:00	43	60	
4:00	Disperse		

DAY 2: 14 AUGUST 2024			
9:00-10:00	Breakfast		
10:00 - 11:00	ICAMME'24 Keynote Speaker Session 2 Prof. Ir. Ts. Dr. Suraya Abdul Rashid <i>Advancing Sustainable Engineering with Green Nanotechnology: Innovations and Future Prospects</i> Chairperson: Prof. Ts. Dr. Hazleen Anuar (Venue: E2-2-3) https://ium.zoom.us/my/icamme		
	Parallel Session 4 (E2-2-1)	Parallel Session 5 (E2-2-3)	Parallel Session 6 (E2-2-2)
11:00-11:20	34	15	17
11:20-11:40	66	23	45
11:40-12:00	47	37	49
12:00-12:20	52	56	55
12:20-12:40	61	57	62
12:40-1:00	41	31	
1.00 - 2.30	Lunch Break		
	Parallel Session 7 (E2-2-1)	Parallel Session 8 (E2-2-3)	Parallel Session 9 (E2-2-2)
2:30-2:50	44	25	32
2:50-3:10	46	7	38
3:10-3:30	48	33	58
3:30-3:50	24	36	67
3:50-4:10	27	39	
4:15 - 4:30	Closing Ceremony		

*physical presentation

CONTEMPORARY MATERIALS

Chairperson: Prof. Ir. Dr. Zuraida Ahmad

Co-Chairperson: Dr. Syazwani Mohd Zaki

13 AUGUST 2024

PARALLEL SESSION 1 (Venue: E2-2-1)

TIME	ID	TITLE
2.00 - 2.20	3	Machine Learning-Assisted Robust Design of Hybrid Polymer Composite Materials for Advanced Product Manufacturing <i>Christian Emeka Okafor</i>
2.20 - 2.40	14	Evaluation on Tensile and Morphological Properties of Chitosan as Filler in PBAT Bio-composite <i>Haikal Hamdan, Noorbaini Sarmin, Noorshashillawati Azura Mohammad, Ahmad Safwan Ismail, Nurjannah Salim, Mohammad Jawaid</i>
2.40 - 3.00	20	Breakdown Strength and Fire Retardancy Performance of LLDPE/NR/SiO ₂ Nanocomposite as High Voltage Insulation Materials <i>Malvin Michael, Mohamad Zul Hilmey Makmud, Nurul Shafiqah Amirah Badi, Zuhair Jamain, Khairatun Najwa Mohd. Amin, Hazlee Azil Illias</i>
3.00 - 3.20	22	Comparison of Thermal, Chemical, and Acoustic Treatment Techniques on SiO ₂ Nanoparticles as Nanofluid Electrical Insulation <i>Dayang Hamizah Ahlip, Mohamad Zul Hilmey Makmud, Farizah Kisno, Yan Yan Farm</i>
3.20 - 3.40	35	Effect of Potassium Salt Variation and Ion Exchange Temperature on Annealed Soda Lime Silica Glass <i>Nur Hidayah Yaakob, Norfadhilah Ibrahim, Muhammad Azwadi Sulaiman, Juliewatty Juliewatty</i>
3.40 - 4.00	43	The Performance of Tapioca Starch as Green Binder for Electrochemical Double Layer Capacitors (EDLCs) in Water-In-Salt Electrolyte <i>Yan Yan Farm, Jaclyn Ingu @ Jublee</i>

GREEN ENERGY AND SUSTAINABLE MANUFACTURING

Chairperson: Assoc. Prof. Dr. Mohamed Abdul Rahman Co-Chairperson: Dr. 'Atiah Sidek

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PARALLEL SESSION 2 (Venue: E2-2-3)

TIME	ID	TITLE
2.00 - 2.20	4	Modelling of a Variable Pressure Proton Exchange Membrane Electrolyser Chika Mgbemena
2.20 - 2.40	11	Study on Potential Anthocyanin Pigment as Natural Dye Sensitizers Using Ethanol and Deionized Water Hidayani Jaafar
2.40 - 3.00	16	Preliminary Assessment of Recycling Peanut Shell Waste as Pore Forming Agent for Sustainable Clay-based Porous Ceramic Production <i>Muhammad Fauzan Mohd Nasir, Afnan Azzahra Ahmad Kamal, Mardawani Mohamad, Arlina Ali, Mustaffa Ali Azhar Taib, Pao Ter Teo</i>
3.00 - 3.20	21	Investigation of Aqueous Sea Salt Thermochemical Power Generation Using Graphene Nanoplatelet Additive <i>Muhammad Irsyad Iskandar Mohamed Idris, Chieng Neng Teik, Nurul Fathini Julhaji, Danielson Jain, Nathaniel Wallace Kenneth Mosusi, Nur Fadzilah Basri, Megat Muhammad Ikhsan Megat Hasnan</i>
3.20 - 3.40	51	The Need for Alternative Metallization in c-Si Solar Cells and a Revisit on Laser-fired Contact: A review Siti Fazlina Abdul Hamid, Nur Fairuz Rostan, Ahmad Nazeer Che Mat, Ahmad Rujhan Mohd Rais
3.40 - 4.00	60	CFD Analysis of Aerodynamic Performance for Sustainable Manufacturing of a Morphing Wing Yasir Rashid Ahmed Al Rubai, Mohammad Sayeed Hossain

MACHINING, ADDITIVE AND SMART MANUFACTURING
Chairperson: Dr. Shafie Kamaruddin Co-Chairperson: Dr. Adibah Amir
13 AUGUST 2024
PARALLEL SESSION 3 (Venue: E2-2-2)

TIME	ID	TITLE
2.00 - 2.20	13	Prototype of Smart 4-Wheel Garbage Bin using Arduino Microcontroller and Ultrasonic Sensor <i>Tengku Nur Azila Raja Mamat, Muhammad Farid Shaari, Nur Sabrina Mustaffa</i>
2.20 - 2.40	18	Optimizing Laser Micromachining Parameters for PMMA Microchannels: Experimental and Predictive Analysis of Depth, Width and Heat Affected Zone <i>Roshaliza Hamidon, Nasima Begum</i>
2.40 - 3.00	19	Review of Modelling of Deposition of Conductive Ink on Multiple Substrates with Different Substrate Surface Energy and Ink Surface Tension <i>Loo Yuen Hern, Rd Khairilhijra' Bin Khirotdin</i>
3.00 - 3.20	26	Effect of Inclination Angle and Motor's Speed on an Archimedean Screw Pump's Output Volume Flow Rate for Pumping Stagnant Water <i>Nuranisa Abd Rahim, Chuan Choong Yang, Muhammad Haniff Ishak</i>
3.20 - 3.40	29	Assessment of Aluminium Damage Initiation Model and Post Buckling Response of Stringer Stiffener Panel <i>Mohd Shahrom Ismail, Jamaluddin Mahmud, Azrol Jailani, Azizul Hakim</i>

**CONTEMPORARY MATERIALS
SMART AND FUNCTIONAL MATERIALS**

Chairperson: Assoc. Prof. Dr. Noor Azlina Hassan Co-Chairperson: Dr. Hafizah Hanim Mohd Zaki

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PARALLEL SESSION 4 (Venue: E-2-2-1)

TIME	ID	TITLE
11.00 - 11.20	34	Sustainable Hybrid Coating on Ti-Alloy: Synthesize and Characterization <i>Md. Abdul Maleque, Adam Nuqman, Masjuki Hassan, İhsan Efeoglu</i>
11.20 - 11.40	66	Niobium-Doped Diamond-Like Carbon Coatings on Metallic Alloy and Their Tribological Performance in Biodiesel Environment <i>Md. Abdul Maleque</i>
11.40 - 12.00	47	The Comparison of Hard and Soft Silicone Biocomposite Under Compressive Force Utilising Linear Elastic and Hypereleastic Constitutive Material Model <i>Nurul Azmi, Nur Anis Adlina Syafiah Aidil Safri, Jamaluddin Mahmud</i>
12.00 - 12.20	52	Cigarette and Human Blood: A Preliminary Review <i>Siti Amira Othman</i>
12.20 - 12.40	61	Effects of Heat Input on the Morphology and Hardness of LAM-Processed eSiC-GO Hybrid Coating <i>Md. Abdul Maleque, Rosmia Naping, Norshahida Sarifuddin, H H Masjuki, Nurin Wahidah Mohd Zulkifli</i>
12.40 - 1.00	41	Parametric and Non-parametric Approach of MR Damper Modelling: A Review <i>Siti Nurul Jannah Mohd Yatim, Mohd Syahril Ramadhan Mohd Saufi, Mat Hussin Ab Talib, Muhammad Firdaus Isham, Muhammad Danial Abu Hasan, Wan Aliff Abdul Saad</i>

**GREEN ENERGY AND SUSTAINABLE MANUFACTURING
INDUSTRIAL DESIGN AND ENGINEERING MANAGEMENT**

Chairperson: Assoc. Prof. Dr. Mohd Radzi Che Daud Co-Chairperson: Dr. Siti Haryani Tomadi

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PARALLEL SESSION 5 (Venue: E2-2-3)

TIME	ID	TITLE
11.00 - 11.20	15	Carbon Quantum Dots Derived from Spent Local Liberica Coffee Ground for Application in EDLC <i>Grishika Arora, HK Jun</i>
11.20 - 11.40	23	Optimizing An Archimedean Screw Turbine (AST) at Low Water Flow Velocity for Clean Energy Generation <i>Nuranisa Abd Rahim, Chuan Choong Yang, Nur Fathin Najwa Mamat</i>
11.40 - 12.00	37	Supply Chain Resilience: Challenges for Small-Medium Wholesale Companies in Saudi Arabia <i>Adibah Amir, Mohammed Khaled Bashanfar</i>
12.00 - 12.20	56	A Review on Cross-machine Diagnosis for Rotating Machinery Applications <i>Muhammad Harith Mohd Kamal, Muhammad Firdaus Isham, Amirulaminnur Raheimi, Mohd Syahril Ramadhan Mohd Saufi, Wan Aliff Abdul Saad, Nur Fathiah Waziralilah</i>
12.20 - 12.40	57	An Integration of Extreme Learning Machine and Geometric Mean Optimizer for Gear Fault Diagnosis <i>Muhammad Firdaus Isham, Amirulaminnur Raheimi, Muhammad Harith Mohd Kamal, Mohd Syahril Ramadhan Mohd Saufi, Kuan Yew Wong, Mat Hussin Ab Talib, Muhammad Danial Abu Hasan</i>
12.40 - 1.00	31	Utilizing Microwave Assisted Extraction to Derive Extract from Pandanus Amaryllifolius and Exploring Its Prospective Application As a Natural Antioxidant in Edible Oils <i>Noorazwani Zainol, Harisun Yaakob, Vijeyh Balakrishnan, Fitrien Husin, Norfatihah Norhisham</i>

MACHINING, ADDITIVE & SMART MANUFACTURING

Chairperson: Dr. Afifah Mohd. Ali Co-Chairperson: Dr. Aishah Najiah Dahnel

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PARALLEL SESSION 6 (Venue: E2-2-2)

TIME	ID	TITLE
11.00 - 11.20	17	Study on Thermal Characteristics of Melt Blend Polylactic Acid (PLA) / Thermoplastic Polyurethane (TPU) with Different Blend Ratio <i>Muhammad Nafiz Hamidi, Jamaluddin Abdullah, Ahmad Yasier Zainoddin, Muhammad Hafiz Hassan, Abdus Samad Mahmud</i>
11.20 - 11.40	45	Mechanical Properties, Morphology and Chemical Interactions of 3D Printed Polylactic Acid / Bio-Based Thermoplastic Polyurethane Blends <i>Fatin Nurafiqah Mohd Nazeri, Hazleen Anuar</i>
11.40 - 12.00	49	4D Printing of Shape Memory Alloy with Selective Laser Melting (SLM): A Brief Review <i>Farhana Mohd Foudzi, Fathin Jamhari, Abu Bakar Sulong, Nabilah Afiqah Radzuan, Norhamidi Muhamad, Nashrah Hani Jamadon, Minhalina Ahmad Buhairi</i>
12.00 - 12.20	55	Feasibility of Multi-material Additive Manufacturing (MMAM) with Laser Powder Bed Fusion (LPBF): An Introduction Review <i>Farhana Mohd Foudzi, Fathin Jamhari, Abu Bakar Sulong, Nabilah Afiqah Radzuan, Norhamidi Muhamad, Nashrah Hani Jamadon, Minhalina Ahmad Buhairi, Kim Seah Tan</i>
12.20 - 12.40	62	An Automated Printed Circuit Board (PCB) Defects Detection System <i>Shafie Kamaruddin, Nor Aiman Sukindar, Ahmad Zahirani Ahmad Azhar, Muhamad Ariff Othmani Mohamad, Muhammad Harith Ikhmal Bin Suhaimi Suhaimi, Muhammad Haziq Fakhri Sharwazi, Saiffaqrullah Shamsulamri</i>

**SMART AND FUNCTIONAL MATERIALS
GREEN HERITAGE**

Chairperson: Assoc. Prof. Dr. Farah Diana Mohd Daud Co-Chairperson: Dr. Nur Ayuni Jamal

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PARALLEL SESSION 7 (Venue: E2-2-1)

TIME	ID	TITLE
2.30 - 2.50	44	The Effects of Fibre Angle Orientation to The Failure Behaviour and Natural Frequencies of Graphite/Epoxy Laminates Under Uniaxial Tension <i>Mohd Nor Azmi Ab Patar, Jamaluddin Mahmud</i>
2.50 - 3.10	46	Structural Response Prediction of Carbon-fiber Reinforced Polymer Composite Laminate on Low-velocity Impact Event <i>Mohd Suhairil Meon</i>
3.10 - 3.30	48	Decolorization of Essential Oil as Natural Antioxidant Using the Adsorption Method <i>Noorazwani Zainol, Harisun Yaakob, Effaliza Misran, Yiyen Chen</i>
3.30 - 3.50	24	Low Grade Heat Waste Energy Harvesting Using 2D MXene Ti ₂ CTX Additive in Thermochemical Cell <i>Danielson Jain, Chieng Neng Teik, Muhammad Irsyad Iskandar Mohamed Idris, Nurul Fathini Julhaji, Nathaniel Wallace Kenneth Mosusi, Nur Fadzilah Basri, Megat Muhammad Ikhsan Megat Hasnan</i>
3.50 - 4.10	27	Experimental Study on Strength Development and Self-healing of Concrete Using Subtilis Bacteria <i>Md. Rakib Uddin, Kazi Shariar, Chowdhury Zubayer Bin Zahid, Md. Alamin Talukdar, Moumita Roy, Sayka Banu</i>

INDUSTRIAL DESIGN AND ENGINEERING MANAGEMENT

Chairperson: Ir. Dr. Yang Chuan Choong Co-Chairperson: Ts. Dr. Muhammad Mukhtar Noor Awalludin

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PARALLEL SESSION 8 (Venue: E2-2-3)

TIME	ID	TITLE
2.30 - 2.50	25	Influence of Water Content in HV Insulator Oil to Thermo-Electrochemical Seebeck Coefficient Trend Towards HV Oil Insulator Condition Monitoring <i>Nurul Fathini Julhaji, Muhammad Irsyad Iskandar Mohamed Idris, Chieng Neng Teik, Nathaniel Wallace Kenneth Mosusi, Danielson Jain, Nur Fadzilah Basri,</i> Megat Muhammad Ikhsan Megat Hasnan
2.50 - 3.10	7	A Decision Methodology for Six-Sigma Implementation in the Nigerian Small and Medium Enterprise (SME) Chukwuebuka U-Dominic, Nkemakonam Igbokwe
3.10 - 3.30	33	Examining the Obstacles in Adopting Sustainable Pro-curement Practices in Construction Projects Muataz Hazza Al Hazza
3.30 - 3.50	36	Study on the Challenges of Transitioning from Traditional to Remote Work in Procurement and Contract Management for Public Projects in UAE Muataz Hazza Al Hazza
3.50 - 4.10	39	Sequencing and Simulation of Production Orders in a Job Shop Manufacturing Company with Stochastic Machine Breakdown Time and Setup Time Che Ying Lee, Kuan Yew Wong

MACHINING, ADDITIVE & SMART MANUFACTURING

Chairperson: Dr. Suhaily Mokhtar

Co-Chairperson: Dr. Nor Farah Huda Abd Halim

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PARALLEL SESSION 9 (Venue: E-2-2-2)

TIME	ID	TITLE
2.30 - 2.50	32	Navigating the Landscape of Smart Manufacturing: A Comprehensive Review and Analysis <i>Koon Tan, Seng Fea Andy Lee, Teng Yeow Ong, Peng Chow Teoh</i>
2.50 - 3.10	38	Dynamic Analysis of Half Car Semi-Active Suspension System using Magnetorheological Damper <i>Mat Hussin Ab Talib, Ahmad Syahmi Abd Wahid, Hanim Mohd Yatim, Muhamad Sukri Hadi, Mohd Syahril Ramadhan Mohd Saufi, Wan Aliff Abdul Saad, Muhammad Danial Abu Hasan, Muhammad Firdaus Isham</i>
3.10 - 3.30	58	Analysis of Rain-Induced Vibration on a Plate Structure Using Operational Modal Analysis <i>Muhammad Danial Abu Hasan, Muhammad Firdaus Isham, Mohd Syahril Ramadhan Mohd Saufi, Mat Hussin Ab Talib, Wan Aliff Abdul Saad</i>
3.30 - 3.50	67	Optimization of CNC Lathe Turning Parameters for Super Duplex 2507 Stainless Steel Using Taguchi Method Under Dry and Wet Cutting Conditions <i>Mohammad Y Ali</i>