



MEKANIKUM
2026

PROGRAMME BOOK

MEKANIKUM

2026

**International Conference on Mechanical
Engineering Advances**

**Connexion Conference & Event Centre (The Vertical)
Bangsar South, Kuala Lumpur
2–3 September 2026**

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WELCOMING REMARKS



Professor Ir. Dr. Nik Nazri Nik Ghazali

Dean (Faculty of Engineering)

Universiti Malaya, Kuala Lumpur, Malaysia

BISMILLAHIRRAHMANIRRAHIM

ASSALAMUALAIKUM W.B.T. & SALAM SEJAHTERA

Distinguished Keynotes, Honoured Guests, Industry Leaders, and Esteemed Delegates,

It is a profound honour to welcome you to **International Conference on Mechanical Engineering Advances (MEKANIKUM 2026)** on behalf of the Faculty of Engineering at Universiti Malaya. In an era defined by rapid technological shifts and pressing sustainability goals, the engineering discipline stands as the cornerstone of meaningful societal transformation. This conference serves as a vital platform to unite international researchers, industry pioneers, and emerging scholars under a shared vision—bridging cutting-edge research, semiconductor innovation, and sustainable manufacturing. The extraordinary response to this year's conference, reflected in both our diverse registration numbers and the high caliber of submissions, underscores the global importance of these discussions. We are deeply grateful to our keynote speakers, corporate partners, and international delegates whose support makes this gathering possible. May your engagement over these two days inspire new collaborations and drive impactful technological breakthroughs. I wish you all an enriching and memorable experience at MEKANIKUM 2026.

WELCOMING REMARKS



Assoc. Prof. Dr. Raja Ariffin Raja Ghazilla

Chairman (MEKANIKUM)

Universiti Malaya, Kuala Lumpur, Malaysia

BISMILLAHIRRAHMANIRRAHIM

ASSALAMUALAIKUM W.B.T. & SALAM SEJAHTERA

Distinguished Guests, Keynote Speakers, Session Chairs, and Conference Participants,

On behalf of the MEKANIKUM 2026 Organizing Committee, it gives me great pleasure to extend our warmest welcome to all of you gathered here at The Zenith for the **International Conference on Mechanical Engineering Advances (MEKANIKUM 2026)**. Organizing an international conference of this scale requires tremendous effort, and seeing the overwhelming turnout today is incredibly rewarding. The volume and exceptional quality of the papers submitted have exceeded our expectations, spanning vital topics from EV battery circular economies to digital transformation in manufacturing. This strong turnout reflects our collective dedication to advancing engineering research and industrial applications. I would like to express my sincere gratitude to our co-organizers, industrial sponsors, session chairs, and dedicated student volunteers whose hard work brought this event to fruition. Most importantly, thank you to all our presenters and participants for bringing your expertise and enthusiasm to this forum. I encourage you to participate actively in our keynote addresses, industrial forum, and parallel sessions. Welcome to MEKANIKUM 2026, and I hope you enjoy a fruitful exchange of ideas.

ORGANIZING COMMITTEE

Conference Chair

Assoc. Prof. Dr. Raja Ariffin Raja Ghazilla

Conference Co-Chair

Assoc. Prof. Dr. Mohd Sayuti Ab Karim
Dr. Goh Yingxin

Treasurer

Dr. Nazatul Liana Sukiman
Ir. Dr. Chew Bee Teng

Secretary

Assoc. Prof. Dr. Salwa Hanim Abdul Rashid
Dr. Chanthiriga Ramasindarum
Dr. Cheah Mei Yee

Distinguished Guest and Keynote

Prof. Dato' Ir. Dr. Mohd Hamdi Abd Shukor

Program

Dr. Khairi Faiz Ahmad Hairuddin (CAM)
Dr. Gan Woun Yoong (CSSM)
Dr. Mohd Fadzil Jamaluddin (AMMP)
Dr. Sabariah Julai @ Julaihi
Prof. Dr. Kazi Md. Salim Newaz
Dr. Mahmoud Zakaria Alsayed
Abdalfattah Ibrahim

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Professor Dr. Hendrik Simon Cornelis Metselaar
Prof. Ir. Dr. Mohd Faizul Mohd Sabri
Dr. Tuan Zaharinie Tuan Zahari
Assoc. Prof. Dr. Mohd Nashrul Mohd Zubir

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Prof. Datin Ir. Dr. Bushroa Abdul Razak

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Dr. Mohd Adeeb Mohd Arif Kor
Dr. Zhou Ding

KEYNOTE SPEAKERS



**SPEAKER 1: Professor Kamal Youcef-Toumi
Mechatronics Research Laboratory (MRL)
Massachusetts Institute of Technology
(MIT), USA**

Professor Kamal Youcef-Toumi is a Professor of Mechanical Engineering at MIT, where he joined the faculty in 1986. He earned his M.S. in 1981 and Sc.D. in 1985 in Mechanical Engineering from MIT, and his B.S. in Mechanical Engineering from the University of Cincinnati in 1979.

He currently serves as Director of the Mechatronics Research Laboratory at MIT, a position he has held since 1986. He is also Director of the Ibn Khaldun Fellowship for Saudi Arabian Women (since 2011) and Co-Director of the Center for Complex Engineering Systems (since 2017). As of November 2024, he became Director of the Global MIT At-Risk Fellows Palestine program.

His research and teaching interests focus on design, modelling, simulation, instrumentation, and automatic control systems. Applications include manufacturing, robotics, automation, metrology, and nano/biotechnology. He developed an atomic force microscope that enables scientists to watch nanoscale chemical processes in near-real time.



**SPEAKER 2: Professor Shaligram Pokharel
Department of Mechanical and Industrial
Engineering, College of Engineering, Qatar
University, Qatar**

Prof. Shaligram Pokharel is a Professor in the Industrial and Systems Engineering program at Qatar University, with over 20 years of international experience in systems engineering, engineering management, and energy planning, holding a PhD and master's in systems design engineering from the University of Waterloo. He has published over 100 papers and is recognized among the Top 2% World Researchers in a Stanford University report.

He serves as Professor at Qatar University and Director of the Global Accreditation Center at the Project Management Institute, while also acting as a Registered Reviewer for Qatar's National Committee for Qualification and Academic Accreditation and a Visiting Professor at Kathmandu University, Nepal. His leadership portfolio includes foundational and senior volunteer roles in the PMI Singapore Chapter and global PMI bodies such as the Chapter Member Advisory Group and Academic Insight Team.

His research centers on systems engineering and engineering management, particularly energy planning, humanitarian logistics, reverse logistics, and supply chain resilience. He develops models and decision-support tools that help design and manage robust, sustainable industrial and supply chain systems under uncertainty and disruption.



**SPEAKER 3: Professor Benny E. Tjahjono
Centre for E-Mobility and Clean Growth,
Coventry University, UK**

Prof. Benny Tjahjono is a Professor of Sustainability and Supply Chain Management at Coventry University, specialising in sustainable operations and the Circular Economy.

Prof. Tjahjono leads the Clean Growth research theme at the Centre for E-Mobility and Clean Growth, Coventry University. He previously held progressive academic posts at Cranfield University, including Lecturer, Senior Lecturer and Reader at Cranfield School of Management. He serves as Director of Research Engagement (Indonesia), building strategic collaborations with Indonesian ministries and more than 30 universities, and was Leader of the Sustainable Production & Consumption Cluster at Coventry University. Earlier, he directed the Manufacturing Masters Programme and key MSc programmes in manufacturing systems at Cranfield and sat on the Senior Management Team of its Manufacturing and Materials Department. His leadership has been recognised through awards such as the Research Excellence Award (Coventry University) and Research Award (Cranfield School of Management), as well as appointments as World Class Professor (Indonesia) and International Fellow of JSPS.

His research centres on sustainable operations and supply chain management, with a strong focus on the transition to a Circular Economy in industrial and supply chain contexts. He has secured approximately £12 million in research and contract funding from bodies including EPSRC, ESRC, InnovateUK, the European Commission, UKRI and Indonesian agencies. Key topics in his portfolio include electric vehicle component recovery and battery supply chains, second-life batteries, bioplastic and coffee supply chains, reverse logistics, and science diplomacy for tackling plastic pollution. He has over 140 publications and an h-index of 28 on Scopus and has supervised 19 PhD and more than 120 master's students, often linking research with industrial collaborations involving companies such as Jaguar Land Rover, Mercedes-Benz, Unipart and Coca-Cola Enterprises.

INDUSTRIAL FORUM PANELISTS



Dr. Eu Poh Leng is an accomplished Malaysian engineer and semiconductor packaging specialist with 29 years of professional experience in Motorola, Freescale, and NXP Semiconductors in Sungai Way, Petaling Jaya. She currently serves as Senior Director of External Package Innovation, where she leads engineers and site managers responsible for new technology and new product introduction activities involving NXP products across 18 outsourced semiconductor assembly and test sites worldwide. Her work focuses on the

development, qualification, implementation, and continuous improvement of semiconductor packaging technologies, processes, and materials.

Dr. Eu holds a PhD in Engineering, specialising in Electrical, Electronics and Systems, from Universiti Kebangsaan Malaysia. She also obtained a Master of Engineering in Design and Manufacturing from the University of Malaya, where her research examined the energetic requirements, muscle fatigue, and musculoskeletal risks associated with prolonged standing among Malaysian female operators. She earned her Bachelor of Engineering in Chemical Engineering, with Second Class Upper Honours, from the University of Malaya, completing a final-year project on the design of a palm oil refinery plant.

Throughout her career, Dr. Eu has made significant contributions to semiconductor packaging research and innovation. She has published 88 technical papers and four journal articles and holds 28 filed patents and 12 issued patents. Her professional achievements include the Freescale Author Champion Award in 2011, recognition as one of the Top Three Innovators in 2012, and the IEEE Malaysia Women in Engineering Award in July 2024. She also served as Chairwoman of the IEEE Electronic Packaging Society Malaysia Chapter from 2023 to 2024, reflecting her leadership and standing within the engineering and semiconductor communities.



Professor Ir. Dr. Ghazali bin Omar is a distinguished academic and researcher in advanced materials, materials science, and engineering at Universiti Teknikal Malaysia Melaka (UTeM). He currently serves as the Head of the Advanced Materials Characterization Laboratory (AMCHAL), Faculty of Manufacturing Engineering, where he contributes to research, teaching, laboratory development, and postgraduate supervision. He has also held leadership positions in research and advanced

manufacturing, including Director of Advanced Manufacturing Centre and Manager of the Centre of Excellence for Advanced Research in Energy (CARE).

Professor Ghazali obtained his PhD in Physics, specialising in Solid-State Diffusion, from the University of Malaya, following a Master of Technology in Material Sciences from the same institution. He also holds a Bachelor of Engineering in Mechanical Engineering from Victoria University of Technology, Melbourne, Australia. His areas of expertise include advanced materials characterisation, materials science and metallurgy, solid-state diffusion, semiconductor packaging and failure analysis, non-destructive testing, engineering materials, microelectronics materials engineering, advanced manufacturing, and energy research.

With more than 90 journal articles, conference proceedings, industry publications, book chapters, and manuscripts, Professor Ghazali has made significant contributions to materials and manufacturing research. His work includes studies on conductive inks, polymer composites, electrically conductive adhesives, environmental durability, and material compatibility. He has also undertaken consultancy and industrial projects involving smart technology, biological industrial assessments, material characterisation, failure analysis, and cone-laying system development, while contributing to intellectual property in areas such as conductive inks, flexible and stretchable systems, and automated manufacturing equipment.



Ahmad Fuzli Fuad currently serves as the Vice President of Defence & Manufacturing at SME Aerospace, bringing more than three decades of leadership and technical expertise in Malaysia's aerospace and defence industry. He previously held the positions of Chief Executive Officer and Chief Operating Officer at SME Aerospace, where he played a pivotal role in advancing the company's manufacturing and maintenance capabilities.

He began his career in 1988 with AIROD as a Systems Research Engineer, gaining extensive experience in aircraft maintenance, production planning, strategic planning, and commercial maintenance, repair and overhaul (MRO) operations before leading the company's Commercial MRO division. He has also held key leadership positions within the National Aerospace & Defence Industries (NADI) Group and currently serves as Treasurer and Board Member of the Malaysia Aerospace Industry Association (MAIA).

Mr. Ahmad Fuzli holds a Master of Business Administration (MBA) in Aviation Management and Operations from Embry-Riddle Aeronautical University. Beyond his corporate leadership, he is an Honorary Major in the Royal Malaysian Air Force Reserve Unit, a licensed pilot, and an avid adventure enthusiast.

CONFERENCE PROGRAM

DAY 1: WEDNESDAY, 2ND SEPTEMBER 2026

TIME	EVENT	LOCATION
0800 - 0900	Registration and Welcoming coffee/tea	Foyer, The Zenith
0900 - 0930	Opening Ceremony • Welcoming remarks from Emcee • Opening address by Chairman MEKANIKUM 2026 (Associate Professor Dr. Raja Ariffin Raja Ghazilla) • Officiating Speech from Dean of the Faculty of Engineering Universiti Malaya (Professor Ir. Dr. Nik Nazri Nik Ghazali) • Opening performance • Video presentation and industry sponsor recognition • Group Photo session	The Zenith
0930 - 0940	Tea break	Foyer, The Zenith
0940 - 1040	Keynote Session 1 Professor Kamal Youcef-Toumi Massachusetts Institute of Technology (MIT) <i>Research that Moves the Nation</i>	The Zenith
1040 - 1200	Industrial Forum Panels: 1. Dr. Eu Poh Leng (NXP Semiconductors) 2. Mr. Ahmad Fuzli Fuad (National Aerospace & Defence Industries Sdn. Bhd.) 3. Professor Ir. Dr. Ghazali Omar (Universiti Teknikal Malaysia Melaka, UTEM) Moderator: Professor Dato' Ir. Dr. Mohd Hamdi Bin Abd Shukor <i>Can Malaysia Engineer the Next Industrial Revolution: Bridging Research,</i>	The Zenith

	<i>Semiconductor, Innovation, Digital Transformation and Sustainable Manufacturing</i>	
1200 - 1300	Parallel Session 1	The Zenith/Pinnacle 3/ Pinnacle 4
1300 - 1400	Lunch	Pinnacle 1 & 2
1400 - 1500	Keynote Session 2 Professor Benny E. Tjahjono Coventry University <i>Is There Life After EV? The Second Life of EV Batteries and Future Research Opportunities</i>	The Zenith
1500 - 1510	Tea break	Foyer, The Zenith
1510 - 1730	Parallel Session 2	The Zenith/Pinnacle 3/ Pinnacle 4
1730	End of Day 1	

DAY 2: THURSDAY, 3rd SEPTEMBER 2026

TIME	EVENT	LOCATION
0800 - 0850	Registration and Welcoming coffee/tea	Foyer, The Zenith
0850 - 1030	Parallel session 3	The Zenith/Pinnacle 3
1030 - 1040	Tea break	Foyer, The Zenith
1040 - 1300	Parallel session 4	The Zenith/Pinnacle 3
1300 - 1400	Lunch	Pinnacle 1 & 2
1400 - 1500	Keynote Session 3 (Online) Professor Shaligram Pokharel Qatar University <i>Additive Manufacturing of Spares and Logistics</i>	The Zenith

1500 - 1510	Tea break	Foyer, The Zenith
1510 - 1630	Parallel session 5	The Zenith/Pinnacle 3
1630 - 1700	Awards and Closing Ceremony • Closing remark from Co-Chair (Dr. Goh Yingxin) • Lucky Draw • Best presenter awards for: ICSAM, NEXMAT, SSIEC	The Zenith
1700	End of Conference	

ORAL PRESENTATION SESSIONS

DAY 1: WEDNESDAY, 2ND SEPTEMBER 2026

PARALLEL SESSION 1 (TIME: 1200 – 1300)

TIME	PAPER ID	TITLE	PRESENTER
Venue: The Zenith (ICSAM) Session Chair: 1. Associate Professor Ir. Dr. Mohd Sayuti Bin Ab Karim 2. Mr. Norhafizan Bin Ahmad			
1200 – 1220	ICSAM-006	Pressureless Induction Sintering Route for Fe-Based Metallic Glasses Fabricated by Lithography-Based Additive Manufacturing: Densification, Amorphous Phase Retention and Mechanical Response	A K Jamil Shajib
1220 – 1240	ICSAM-007	Spatial Electric-Field Evaluation in Multiplane Electrospinning Using Symmetric Reconstruction and Mesh-Convergence Analysis	Somanaathan Muthusamy
1240 – 1300	ICSAM-018	Grain Refinement of Wire Arc Additive Manufactured Duplex Stainless Steel Through Tin Inoculation	Md. Habib Ullah Rasel
Venue: Pinnacle 3 (NEXMAT) Session Chair: 1. Professor Dr. Hendrik Simon Cornelis Metselaar 2. Dr. Cheah Mei Yee			
1200 – 1220	NEXMAT-008	Optimizing Workability in Waste-Derived Cementitious Blends: A Response Surface Study of Rice Husk Ash-Snail Shell Ash Concrete	Isyaka Abdulkadir
1220 – 1240	NEXMAT-013	A Bibliometric Analysis of Bimetallic Catalysts for Sustainable Hydrogen Production Through Ammonia Decomposition	Md Abu Hurayra
1240 – 1300	NEXMAT-012	M ³ A-REE: Enhanced Characterization of Matrix Masking Effects in Boron-rich Rare Earth Materials Using Interpretable Machine Learning	Mohd Farhan
Venue: Pinnacle 4 (SSIEC) Session Chair: 1. Associate Professor Dr. Salwa Hanim Binti Abdul Rashid 2. Dr. Chanthiriga Ramasindarum			

1200 – 1220	SSIEC05	Experimental Characterization of Liquid Film Thickness During Direct Contact Condensation in High-energy Steam–water Flow	Mohd Zamri Zainon
1220 – 1240	SSIEC18	Characterization And Thermal Decomposition Performance of Ammonium Perchlorate Incorporated with Carbohydrate Binders in Solid Rocket Propellants	Muhammad Zakwan Azizi
1240 – 1300	SSIEC04	Comparative Evaluation of Waste Vegetable Oil-derived Biodiesel and Green Diesel Via Hydrogen-free Catalytic Deoxygenation	Jyothy Mondal

PARALLEL SESSION 2 (TIME: 1510 – 1730)

TIME	PAPER ID	TITLE	PRESENTER
Venue: The Zenith (ICSAM)			
Session Chair: 1. Dr. Tuan Zaharinie Binti Tuan Zahari			
2. Mr. Norhafizan Bin Ahmad			
1510 – 1530	ICSAM-022	Effect of Additives on Wollastonite-based Filaments for Fused Filament Fabrication	Siti Asma Binti Azmi Mas'ud
1530 – 1550	ICSAM-025	Performance Comparison of Yolo Models in Detecting and Classifying Defects in Gayo Arabica Green Coffee Beans	Teuku Firsia
1550 – 1610	ICSAM-026	Detection Transformers for Road Damage Detection: A Comparative Benchmark of DETR Variants Across Heterogeneous Datasets	Aulia Rahman
1610 – 1630	ICSAM-002	Innovative DMLS-AM Of Super-Duplex Stainless-steel to Improve Its Corrosion Resistance with Excellent Mechanical and Microstructure Properties for Oil And Gas Applications	Mahmoud Zakaria Ibrahim
1630 – 1650	ICSAM-003	Electro-tribological Behavior of Laser-cladded Fecrmocb Coatings on AISI 52100 Bearing Steels Under DC Current-carrying Sliding Conditions	Mohamad Firdaus Bin Saharudin
1650 – 1710	ICSAM-005	A Non-Traditional Magnetorheological Fluid Utilizing Ferrous-Based Amorphous Particles in Deep Eutectic Solvents a With Enhanced Yield Stress	Rami Yazeed Khaleel Mousa
Venue: Pinnacle 3 (NEXMAT)			
Session Chair: 1. Dr. Goh Yingxin			

2. Dr. Cheah Mei Yee

1510 – 1530	NEXMAT-001	Cellulose Nanocrystal-based Composite Films Enabling Passive Daytime Radiative Cooling Under Real-world Conditions	Md Mahadi Hasan
1530 – 1550	NEXMAT-002	Design And Structural Performance of Auxetic Core Peek Sternal Implants Under Physiological Loading	Divassgar P Manimutthu
1550 – 1610	NEXMAT-004	Nanofluids For Heat Exchange Efficiency in a Closed-conduit Flow Using Bio-based Carbon Nanotube Nanofluids: Experimental and Numerical Analyses	Debie Devisser Gerijih
1610 – 1630	NEXMAT-005	Heavy Metal Mitigation in Vegetable Oils and Oilseed Processing: Current Removal Strategies, Analytical Evidence, and Future Perspectives	Vasi Uddin Siddiqui
1630 – 1650	NEXMAT-006	Europium-Doped Calcium Silicate for Biomedical Applications: A Comprehensive Review	Loh Eugne
1650 – 1710	NEXMAT-007	Where Battery-free Indoor IoT Nodes Stay Powered, A Viability Model Driven by Multi-Year Measured Indoor Harvest Data	Mohammad Ghadimimehr
1710 – 1730	NEXMAT-010	Towards A User-Friendly Python Interface for FE _{NI} CS _X -FUS	Mohd Adeeb Mohd Arif Kor

Venue: Pinnacle 4 (SSIEC)

Session Chair: 1. Dr. Mohd Adeeb Bin Mohd Arif Kor

2. Dr. Chanthiriga Ramasindarum

1510 – 1530	SSIEC06	Design And Evaluation of Automated Bidet Nozzle Geometry With CFD-Based New Nozzle Channel Optimization	Zhanglin
1530 – 1550	SSIEC07	A Multi-Reflective-Mirror-Based Autonomous Robotic System for Railway Track Defect Inspection	Shuaibo Xiang
1550 – 1610	SSIEC08	Toward a Culturally Responsive IR 4.0 Sustainability Readiness Index: Framework and Application Development	Ihwan Ghazali
1610 – 1630	SSIEC11	Design Strategies for Age-Friendly Park Facility Products in Malaysia	Haoxin Wang
1630 – 1650	SSIEC13	AI-Assisted Design Innovation Based on Cultural Gene Theory: A Case Study of Yiwulü Mountain Manchu Papercut	Ning Jiadong
1650 – 1710	SSIEC25	Bio-inspired Lattice Topologies in Spherical Sports Equipment: Experimental Evaluation of	Norhafizan bin Ahmad

Energy Dissipation in Additively Manufactured
Sepak Takraw Balls.

1710 –
1730

SSIEC01

Practices, Drivers and Challenges in Eco-
design Adoption in Malaysia's Plastic

Salwa Hanim
Abdul Rashid

DAY 2: THURSDAY, 3RD SEPTEMBER 2026

PARALLEL SESSION 3 (TIME: 0850 – 1030)

TIME	PAPER ID	TITLE	PRESENTER
Venue: The Zenith (ICSAM) Session Chair: 1. Dr. Mohd Fadzil Bin Jamaludin 2. Dr. Chanthiriga Ramasindarum			
0850 – 0910	ICSAM-004	Optimization Of Wax Based 3D Printing Process of Fe-based Amorphous Material Using Taguchi's Method and Grey Relational Analysis.	Azib Azamuddin Juri
0910 – 0930	ICSAM-008	Microstructure And Chloride Stress Corrosion Cracking Resistance of Direct Hot-rolled Recycled AA6063-T4 For Refinery Instrument Tubing	Roselyn Gubal
0930 – 0950	ICSAM-009	Gallium Nitride Thin Films Prepared by MOCVD Epitaxial Technology for High-performance Radiation Detectors	Wang Huameng
0950 – 1010	ICSAM-011	Machining Performance of Modified Malaysian Tropical Wood for High-value Application Material	Muhammad Shuhaimi Ibrahim
1010 – 1030	ICSAM-014	A Data-driven Framework for the Identification and Evaluation of Human–robot Collaboration Parameters in End of Life Vehicle Disassembly	Saifuddin Mohd Isa
Venue: Pinnacle 3 (SSIEC) Session Chair: 1. Ir. Dr. Tan Chin Joo 2. Dr. Cheah Mei Yee			
0850 – 0910	SSIEC02	Evaluating Customer Readiness for Artificial Intelligence Adoption in Physical Retail Store across Malaysia	Marini Nurbanum Mohamad
0910 – 0930	SSIEC14	Thermal Performance Assessment of High Reflectance Roof Coatings using Building Energy Modelling	Teh Ren Xuan
0930 – 0950	SSIEC15	Growth Responses of <i>Chlorella</i> and <i>Navicula</i> to Supplemental CO ₂ Feed and Irradiance	Syed Mohammad Hamza
0950 – 1010	SSIEC16	Development of a Machine Learning-Based Task Classification Model for Optimizing	Gan Woun Yoong

		Human–Robot Collaboration in End-Of-Life Vehicle (ELV) Disassembly	
1010–1030	SSIEC24	Investigation of Ergonomic Challenges Associated with Dental Visual Aids and Work-related Musculoskeletal Disorders Among Dentists	Rahmah Abdulsalam Attallah

PARALLEL SESSION 4 (TIME: 1040 – 1300)

TIME	PAPER ID	TITLE	PRESENTER
Venue: The Zenith (ICSAM & SSIEC) Session Chair: 1. Dr. Mahmoud Zakaria Alsayed Abdalfattah Ibrahim 2. Dr. Chanthiriga Ramasindarum			
1040 – 1100	ICSAM-015	Statistical Characterization of Bubble Size Distribution in a Venturi Bubble Generator Under Varying Flow Conditions and Air Inlet Diameters	Md Abu Hasan Al Askary
1100 – 1120	ICSAM-017	Characterisation Of Direct Laser Writing Parameters for the Development of a Pegda-based Flexible Glucose Biosensor	Addisesan Nair Vasu Davan
1120 – 1140	ICSAM-021	Mechanical Integrity Assessment of Shell-and-tube Heat Exchangers Considering Baffle Cut Configuration Using Finite Element and Analytical Methods	Krisdiyanto
1140 – 1200	ICSAM-023	Multimodal Warning Signals as Cognitive Support in Automated Driving: A Review of Situation-aware Adaptation Mechanisms	Wu Jian
1200 – 1220	SSIEC27	Fostering Inclusivity in Adaptive Sports: Design and Preliminary Validation of an Embedded Aiming Prototype for Visually Impaired Archers	Norhafizan Ahmad
1220 – 1300	ICSAM-024	Machine-learning Based Predictive Maintenance for Semiconductor Probe Card Failure Prediction Using Wear and Operational Behaviour Features	Tsen Bao Xuen
Venue: Pinnacle 3 (SSIEC) Session Chair: 1. Professor Datin Ir. Dr. Bushroa Binti Abdul Razak 2. Dr. Cheah Mei Yee			

1040 – 1100	SSIEC03	Design And Development of a Solar-Assisted Dryer for Organic Waste Treatment in Waste-To-Energy Plant	Mohamed Harris Shariff Mohamed Rafiq Shariff
1100 – 1120	SSIEC19	Coupled Aero-hydrodynamic Modelling and Stability Analysis of a Multi-Source Floating Renewable Energy Harvester	Norhafizan Ahmad
1120 – 1140	SSIEC20	Effect Of BHT Antioxidant on the Thermo-oxidative Stability and Tribological Performance of Waste Cooking Oil-derived TMP Ester Biolubricant	Nurul Farhanah Azman
1140 – 1200	SSIEC21	Decarbonization Strategies for Electric Vehicle Batteries Production	Novita Sakundarini
1200 – 1220	SSIEC22	Operational Readiness of Small and Medium Enterprise (SME) Automotive Workshops in Implementing Recovery Activities for Second-life Electric Vehicle (EV) Batteries	Nurhasyimah Abd Aziz
1220 – 1240	SSIEC23	Material Screening of Reusable High-temperature Masking Systems for Hvf-based Aerospace Repair Processes	Rabiatuladawiah Abu Hanifah
1240 – 1300	SSIEC26	Sustainable Infrastructure for Outdoor Sports: CFD-Driven Airflow Control and Cost Feasibility in Air Badminton Arenas	Norhafizan Ahmad

PARALLEL SESSION 5 (TIME: 1510 – 1630)

TIME	PAPER ID	TITLE	PRESENTER
Venue: The Zenith (Online)			
Session Chair: 1. Associate Professor Dr. Raja Ariffin Bin Raja Ghazilla 2. Dr. Chanthiriga Ramasindarum			
1510 – 1525	SSIEC09	Designing an IoT-Enabled Lightweight Digital Twin APP Prototype for Sustainable Agri-Product Systems	Yuan He
1525 – 1540	SSIEC10	Design of an Intelligent Medical Accompaniment Service System Based on the Double Diamond	He Huiqian
1540 – 1555	SSIEC12	A Preliminary System Dynamics-Based Recovery Model for Spent Coffee Grounds Recycling in a Sustainable Industrial Ecosystem	Huang Fan

1550 – 1610	NEXMAT-003	Process Parameter Optimization and Forming Quality Analysis of LPBF-Fabricated Y-Modified Al–Mg–Si alloy	Luyong Cai
1610 – 1625	ICSAM-016	Influence Of Mechanical and Thermal Forming Histories on Hydrogen Embrittlement (HE) Resistance of Deep-Drawn SUS304 Cups	Tan Chin Joo
Venue: Pinnacle 3 (Special Session) Session Chair: 1. Ir. Dr. Chew Bee Teng 2. Dr. Tuan Zaharinie Binti Tuan Zahari			
1400 – 1440	NEXMAT-009	Geometry Optimisation and Process Characterisation for Shear-mode Testing of Sintered Copper Nanoparticle Interconnects: A Finite Element and Microstructural Study	Mohammad Shan
1440 – 1520	ICSAM-027	Effect of Multi-Plane Angular Nozzle Configuration on Deposition Size, Shape, and Spatial Uniformity in Electrospinning	Somanaathan Muthusamy
1520 – 1600	ICSAM-013	Catalytic Infrared Curing of Thermosetting Powder Coatings: Curing Mechanism, Quality Prediction, and Optimization Control	Yindong Yuan
1600 – 1640	SSIEC17	Human-Factors Effects and Parameter Configuration of Haptic Takeover Warnings under True and False Alarms in Level 3 Conditional Automated Driving	Wu Jian

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