



# ASEAN AUSTRALIAN ENGINEERING CONGRESS

Engineering Solutions in the Age of Digital Disruption

12<sup>th</sup> - 14<sup>th</sup> JULY 2022  
HYBRID CONGRESS

## CONGRESS PROGRAMME

### Day 1 - 12 July 2022 (Tuesday)

8:30am	Registration/Arrival of Participants & Speakers
9:00am	Welcome Address by Ir. Dennis Ong, Organising Chairman of AAEC2022
<b>Thought Leadership Forum on IR4.0 and 5G in Malaysia</b>	
9:05am	<p><b>Chair: Ir. Prof. Lau Hieng Ho, Pro Vice-Chancellor and Chief Executive of Swinburne University of Technology Sarawak Campus</b></p> <p>Under this forum, the industry leaders will delve into the key prospects of 5G, challenges and issues and how 5G is made possible in Malaysia and Sarawak.</p>
9:10am	<p><b>Implementation of 5G In Malaysia</b> Ts. Amir Irsyad Bin Mohamed Samsudin (Virtual) Deputy Director, 5G Delivery Office, Malaysian Communications &amp; Multimedia Commission (MCMC), Malaysia</p>
9:20am	<p>Mr. Mohd Ridzuan Mohd Nor (Virtual) Head, Digital Operations &amp; Service Management, Digital Nasional Berhad (DNB), Malaysia</p>
9:50am	<p>Mr. Nee Ngie Sing Head of Network Engineering and Operation, Sarawak Digital Economy Corporation (SDEC), Malaysia</p>
10:00am	Questions and Answers session (15 mins)
10:15am	<p>Refreshments (15 mins)   Venue: Maker Lab</p> <p>Video Showcase: Sarawak Digital Economy Corporation (10:20am – 10:26)</p>

<b>Plenary 1: Industry 4.0 and Future Technologies</b>	
10:30am	<p><b>Chair: Ir. Dennis Ong, Organizing Chairman, AAEC2022</b></p> <p>In this plenary, the current state of Industry 4.0 (IR4.0) implementation and its associated benefits and advantages in various industry sectors will be the main discussion. Stories of successful implementations of IR4.0 and how they have shaped the world in terms of creating smart future will be shared by the invited plenary speakers. In addition, the future of IR4.0 and how it is affecting the world in leading to future cut-edge technologies will also be in the discussions.</p>
10:35am	<p><b>Employment Opportunities of University Graduates in the Digital Age</b> Dato' Ir. Dr. Lee Yee Cheong (Virtual) AAEC2022 Congress Advisor, Malaysia</p>
11:00am	<p>Mr. Vincent Wu Senior Manager, Partnership &amp; Ecosystem Development, Digital Nasional Berhad (DNB), Malaysia</p>
11:25am	<p>Mr. Idjarmizuan bin Ibrahim (Virtual) Senior Vice President, Technology Development Division, Malaysian Technology Development Corporation (MTDC), Malaysia</p>
11:50am	<p>Questions and Answers session (15 mins)</p>
12:05pm- 1:05pm	<p>Video showcase: Digital Nasional Berhad (DNB) Lunch   Venue: Pantry Area, Level 1 Livestream by SDEC (12:45pm – 1:00pm)</p>
<b>Plenary 2: The Internet of Things, Network Communication, and Cybersecurity</b>	
1:05pm	<p><b>Chair: Mr. Hazwan Razak, Head of Innovation and Entrepreneurship, Sarawak Digital Economy Corporation</b></p> <p>The internet of things (IoT) has been around for decades. What is the critical role that is played by the IoT in the IR4.0? How can it further enhance IR4.0? One of the major concerns with the IoT is cybersecurity. In general, industries are concerned with how these data are being stored securely and handled over the computing clouds. These questions will be the main focus in this plenary session.</p>
1:10pm	<p><b>Sarawak Digital Community Centre (DCC): Design &amp; Development of Holistic and Inclusive Framework</b> Professor Ir. Ts. Dr. Al-Khalid Bin Othman (Virtual) Deputy Chief Scientist and Deputy Chief Advisor for Sarawak Digital Economy, Sarawak Multimedia Authority (SMA), Malaysia</p>

1:35pm	<b>5G Spectrum Allocation Worldwide: Licensed and Unlicensed Frequency Bands</b> Dr. Ali R. Ebadi Advisor to Board of Directors of MEASAT, Malaysia
1:55pm	<b>IoT – Why We Need to Embrace It</b> Mr. Lavindar Singh Jay Solution Architect, Xperanti IoT Sdn Bhd, Malaysia
2:20pm	Questions and Answers session (15 mins)
2:35pm	Coffee Break   Venue: Maker Lab
<b>Opening Ceremony</b>	
3:00 pm	Arrival of Guests and Media
3:30pm	Arrival of <b>The Right Honourable Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari Bin Tun Datuk Abang Haji Openg, Premier of Sarawak</b>
	Negaraku & Ibu Pertiwiku
	Opening Doa by Ustaz Haji Mohammad Ihsan bin Haji Haidzir
	Welcome Speech by <b>Ir. Dennis Ong, Organising Chairman AAEC2022</b>
	Speech by <b>Prof. Lau Hieng Ho, Pro Vice-Chancellor and Chief Executive of Swinburne University of Technology Sarawak Campus</b>
	Opening Remarks by <b>The Right Honourable Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari Bin Tun Datuk Abang Haji Openg, Premier of Sarawak</b>
	Presentation of Certificates of Appreciation to Partners of AAEC2022
	Souvenir Presentation to <b>The Right Honourable Datuk Patinggi Tan Sri (Dr) Abang Haji Abdul Rahman Zohari Bin Tun Datuk Abang Haji Openg, Premier of Sarawak</b>
<b>Keynote Presentations</b>	
	<b>Growing the ‘Digital Economy’ Agenda in Australia and ASEAN</b> Mr. Paul Sanda, Minister-Counsellor (Commercial) and, Senior Trade & Investment Commissioner, Malaysia & Brunei, Australian Trade & Investment Commission (Austrade), Malaysia (Virtual)
	<b>Engineering Future-fit Solutions: Digital and Beyond</b> Dr. Nick Fleming, National President and Chair of Board Engineers Australia, Australia (Virtual)

	<p><b>Educating Future Engineers in the Age of Digital Disruption</b>  Emeritus Professor Dr Chuah Hean Teik  Past President, ASEAN Academy of Engineering and Technology, Malaysia (Virtual)</p>
5:30pm	Official Exhibition Tour (Maker Lab)
	Refreshments (VIPs Lounge)

**Day 2 – 13 July 2022 (Wednesday)**

8:30am	Arrival of Participants & Speakers
<b>Plenary 3: Artificial Intelligence &amp; Automation in IR4.0</b>	
9.00am	<p><b>Chair: Professor Dr. Patrick Then Hang Hui, Director, Centre for Digital Futures, Head School of Information and Communication Technologies, Faculty of Engineering, Computer &amp; Science, Swinburne University of Technology Sarawak</b></p> <p>What are the current benefits and obstacles in adopting artificial intelligence (AI) for IR4.0? How does AI assist in realizing the full potential of IR4.0? How can it be coupled with automation processes in the industry in the realm of IR4.0? These will be among the questions to be addressed by the invited speakers in the plenary session.</p>
9:05am	<p><b>Towards Humanised AI Technologies</b>  Professor Dr. Narayanan A/L N. Kulathu Ramaiyer  Director, Institute of Social Informatics &amp; Technological Innovations, Universiti Malaysia Sarawak (UNIMAS), Malaysia</p>
9:30am	<p><b>Standardization and Global Robotics Exchange Framework for IR4.0</b>  Dr. Ishkandar Bin Baharin  President, Malaysia Robotics and Automation Society (MyRAS), Malaysia</p>
9:55am	<p><b>Role of AI / ML / Digital Twins in Digital Transformation and Energy Transition</b>  Mr. Yogesh Agarwal (Virtual)  Director, Solution Architecture, GE Digital, Malaysia</p>
10:20am	Questions and Answers session (15 mins)

10.35am	<b>MDEC Digital Jobs Salary Incentive (MYWiT)</b> Mr. Nicholas Tan Manager, MYWiT, Ecosystem Development Division, Malaysia Digital Economy Corporation (MDEC)		
10:40am	Break (20 mins)   Venue: Maker Lab		
<b>Technical Session 1</b>			
	<b>Track: Artificial Intelligence and Machine Learning</b>  <i>Session Chair: Assoc. Prof. Ir. Dr. Basil T. Wong</i>  <i>Venue: Training Room, 1<sup>st</sup> Floor, TEGAS Digital Village</i>	<b>Track: Smart Energy and Cities</b>  <i>Session Chair: Ir. Dr. Choo Chung Siung</i>  <i>Venue: Auditorium, Ground Floor, TEGAS Digital Village</i>	<b>Track: Materials Science and Manufacturing</b>  <i>Session Chair: Dr. Elammaran Jayamani</i>  <i>Venue: Event Room, 1<sup>st</sup> Floor, TEGAS Digital Village</i>
11:00am	<b>The Potential Impact of AI and Automation in collaboration with the workforce: The Human Machine Symbiosis (Virtual)</b>  Dr. Ling Chen Hoe Engineers Australia, Australia	<b>Smart &amp; Sustainability City Ecosystem (Virtual)</b>  Ir. Kesavan Jaganathan Director - Freelance Consultant, Malaysia	<b>Modification of Sulfonated Poly Ether Ether Ketone (SPEEK) Proton Exchange Membrane with Sodium Chloride for Fuel Cell Application (Virtual)</b>  Mr. Mohamed Afizal Bin Mohamed Amin Universiti Malaysia Sarawak, Malaysia
11:20am	<b>Application of Artificial Intelligence Technique and Empirical Formulas for Estimating Evapotranspiration (Virtual)</b>  Mr. Ang Yik Kang Monash University Malaysia, Malaysia	<b>Leveraging BIM for Kuching Urban Transportation System (KUTS) (Virtual)</b>  Mr. Kenny Ley Enteleng, Sarawak Metro Sdn Bhd, Malaysia	<b>Fabrication of Sulphonated Poly(ether ketone) (SPEEK) Calcium Oxide (CaO) Multilayer Membrane for Fuel Cell Application (Virtual)</b>  Dr. Khairul Anwar Mohamad Said Universiti Malaysia Sarawak, Malaysia
11:40am	<b>Early Warning Exposure (Virtual)</b>  Mr. Anderson Kho Ngap Chai  Swinburne University of Technology Sarawak Campus, Malaysia	<b>A Proposed BIM-Based Construction Project Management Framework Integrated with Scheduling and Cost Estimation (Face-to-Face)</b>  Dr. Victor Bong Nee Shin Swinburne University of Technology Sarawak Campus, Malaysia	<b>Performance of Palm Oil Fractions as Rejuvenators in Bitumen (Virtual)</b>  Ms. Sharon Gooi Ai Ping Monash University Malaysia, Malaysia

12:00pm	<b>AgriTech Solutions from SBACE</b> <b>(Face-to-Face)</b>  Mr. Lavindar Singh Jay Satok Bridge Area Consulting Engineers Sdn Bhd, Malaysia	<b>Minimizing Life Cycle Impacts of Construction Waste Through BIM-LCA Integration</b> <b>(Virtual)</b>  Mr. Samwel Abuchi Mrema Swinburne University of Technology Sarawak Campus, Malaysia	
12:20pm	Video Showcase: Sarawak Metro Lunch   Venue: Pantry Area, Level 1		
<b>Technical Session 1 (Cont'd)</b>			
	<b>Track: Artificial Intelligence and Machine Learning</b>  <i>Session Chair: Assoc. Prof. Ir. Dr. Basil T. Wong</i>  <i>Venue: Training Room, 1<sup>st</sup> Floor, TEGAS Digital Village</i>	<b>Track: Smart Energy and Cities</b>  <i>Session Chair: Ir. Dr. Choo Chung Siung</i>  <i>Venue: Auditorium, Ground Floor, TEGAS Digital Village</i>	<b>Track: Engineering Computing</b>  <i>Session Chair: Dr. Elammaran Jayamani</i>  <i>Venue: Event Room, 1<sup>st</sup> Floor, TEGAS Digital Village</i>
1:20pm	<b>Cough Sound Disease Detection with Artificial Intelligence</b> <b>(Face-to-Face)</b>  Ms. Sarah Jane Kho Swinburne University of Technology Sarawak Campus, Malaysia	<b>Development of an easily retro-fitted smart adaptive vent for efficient cooling</b> <b>(Face-to-Face)</b>  Mr. Phil Chan Siew Thong Swinburne University of Technology Sarawak Campus, Malaysia	<b>A PID based Controller for a knee Exoskeleton on employing a Metaheuristic Algorithm to Prevent Stiffness in Bedridden Patients</b> <b>(Virtual)</b>  Dr. Annisa Jamali Universiti Malaysia Sarawak, Malaysia
1:40pm	<b>Feature Reduction of Relational Oil Drilling Data before Propositionalization and Harmonization by Measuring Relational Data Missingness using Ensemble Learning</b> <b>(Face-to-Face)</b>  Mr. Clement Ting Pek Wen Swinburne University of Technology Sarawak Campus, Malaysia	<b>Space Vector Pulse Width Modulation (SVPWM) Technique for Harmonic Reduction Three Phase Inverter System</b> <b>(Face-to-Face)</b>  Dr. Yonis M Buswig Universiti Malaysia Sarawak, Malaysia	<b>Evaluation of Interfacing Shear Strength of Various Codes vs Experimental Results</b> <b>(Virtual)</b>  Ir. Dr. Low Hin Foo OSD Alliance @ OSD Consultants (M) Sdn Bhd, Malaysia

2:00pm	<p><b>Intent and Context Understanding for Improvement of Search Engine Results on Social Networks (Virtual)</b></p> <p>Mr. Abdullah Donanim Haber, Turkey</p>		<p><b>Finite element Analysis of an electrochemical adsorbed monolayers (Virtual)</b></p> <p>Mr. Harunal Rejan Ramji Universiti Malaysia Sarawak, Malaysia</p>
2:20pm	Refreshments   Venue: Maker Lab		
<b>Plenary 4: Smart Energy, Cities, and Factories</b>			
	<p><b>Chair: Dr. Ng Sing Muk, General Manager, Research and Development Department, Sarawak Energy Berhad, Malaysia</b></p> <p>Through the IR4.0 adoption, smart energy consumption can be implemented in various industry devices and systems. The couplings between cyber-physical systems, automation, and IoT can lead to the birth of smart cities and factories. In this plenary session, strategic moves implemented by local governments in building smart energy usage, cities, and factories in Sarawak or Malaysia will be shared by the invited speakers. Discussions on the current preparation towards the adoption of IR4 locally as well as on how the IR4.0 can benefit both local industries and international partners will be the main focus in the session.</p>		
2:40pm	<p>Mdm. Sim Ko Sin Senior Vice President, Information and Communications Technology (ICT), Sarawak Energy Berhad (SEB), Malaysia</p>		
3:05pm	<p><b>Smart Transportation System in Sarawak – The KUTS</b></p> <p>Ts. Mazli Bin Mustaffa (Virtual) Chief Executive Officer, Sarawak Metro Sdn Bhd, Malaysia</p>		
3:30pm	<p>Mr. Mandeshpal Singh Head of Product (Enterprise), Digital Nasional Berhad (DNB), Malaysia</p>		
3:55pm	<p><b>Smart Sustainable Solution on Digitalisation for the Optimization of Building Energy Efficiency Performance</b></p> <p>Mr. Philip Chan Kok Leong Director, Ting Heng Energy Consultancy Pte. Ltd, Singapore</p>		

4:20pm	<b>Digital Resilience in the Face of Disasters for Disaster Risk Reduction</b> Professor Cheryl Desha (Virtual) Industry Engagement Director, School of Engineering and Built Environment Griffith University, Australia
4:45pm	Questions and Answers session
5:15pm	Conclusion of Day 2

### Day 3 – 14 July 2022 (Thursday)

8:30am	Arrival of Participants & Speakers
<b>Plenary 5: Digital Construction for IR4.0</b>	
	<p><b>Chair: Ts. Dr. Chai Chang Saar, Discipline Leader – Built Environment &amp; Senior Lecturer, Faculty of Engineering, Computing and Science, Swinburne University of Technology Sarawak Campus, Malaysia</b></p> <p>In this plenary session, the discussion focuses on how the implementation of digital technologies has improved the construction processes and revolutionized the industry. Digital technologies such as Building Information Modelling (BIM), 3D printing, augmented and virtual reality (AR &amp; VR), laser scanning, robotics, analytics software, blockchain, digital twins, and internet of things are highly sought after for improving efficiencies or capacities of construction processes. Nevertheless, within the construction industry itself, the transformation effects of using these digital technologies are still not fully understood, especially on connectivity of linking up and synchronizing separate activities in the digitized construction processes. The plenary session also delves into the readiness of digital construction for IR4.0 and how it would impact the industry in ASEAN and Australia.</p>
9:00am	<b>Construction In Digital Era</b> Mr. Andy Tiong Meng Chun Professional Services Director, PCSS Consultancy Sdn Bhd, Malaysia
9:25am	<b>IR4.0 Engineering the Twins</b> Mr. Ken Lee (Virtual) Director, Aurecon Group Pty. Ltd., Australia
9:50am	<b>Digital Innovation within a Traditional Industry</b> Ts. John Lim Ji Xiong Executive Director – Digital & Innovation, Gamuda Berhad, Malaysia



10:15am	<b>The Digital Engineering Evolution Has Arrived</b> Mr. Kuthur Sriram Global Manager – Education Program, Bentley Education – Bentley Systems, Australia		
10:40am	Questions and Answers session		
11:00am	Refreshments   Venue: Maker Lab		
<b>Technical Session 2</b>			
	<b>Track: Artificial Intelligence and Machine Learning</b>  <i>Session Chair: Dr. Almon Chai Wei-Yen</i>  <i>Venue: Training Room, 1<sup>st</sup> Floor, TEGAS Digital Village</i>	<b>Track: Smart Energy and Cities</b>  <i>Session Chair: Dr. Daniel Looi Ting Wee</i>  <i>Venue: Auditorium, Ground Floor, TEGAS Digital Village</i>	<b>Track: Education 4.0</b>  <i>Session Chair: Dr. Victor Bong Nee Shin</i>  <i>Venue: Event Room, 1<sup>st</sup> Floor, TEGAS Digital Village</i>
11:20am	<b>Detection of Artificially Generated Facial Images using Ensemble Learning (Face-to-Face)</b> Mr. Khaled Yahya Mohamed Mahmoud ELKarazle Swinburne University of Technology Sarawak Campus, Malaysia	<b>Using Unmanned Aerial Vehicles for Traffic Flow Analysis at Large Multi-Lane Roundabout (Virtual)</b> Dr. Elizabeth Chong Eu Mee Swinburne University of Technology Sarawak Campus, Malaysia	<b>Online Learning: Students' Barriers and Feedback on the Instructional Delivery Methods (Virtual)</b> Dr. Nor Azalina Rosli Universiti Malaysia Sarawak, Malaysia, Malaysia
11:40am	<b>Recent progress on artificial intelligence application for COVID-19 monitoring and mitigation system in Indonesia (Virtual)</b> Dr. Yanuar Zulardiansyah Arief Universiti Malaysia Sarawak, Malaysia	<b>Adoption of modular MEP for the Construction Industry in Singapore (Virtual)</b> Mr. Tan Hee Wee HWT Engineering and Construction Consulting, Malaysia	<b>Geoeducation 4.0 Augmented reality in the new reality (Face-to-Face)</b> Dr. Choo Chung Siung Swinburne University of Technology Sarawak Campus, Malaysia

12:00pm	<p><b>A Systematic Literature Review on Determining the effectiveness of short-term COVID19 prediction models (Virtual)</b></p> <p>Dr. T. Ramraj Coimbatore Institute of Technology, India</p>	<p><b>The influence of weather regimes on Off-grid Peer-to-Peer Energy Trading (Face-to-Face)</b></p> <p>Dr. Alan Ling Sieng Yew Universiti Malaysia Sarawak, Malaysia</p>	<p><b>Rapid Transition from Offline to Online: The Teaching and Learning Experience in Engineering Education (Face-to-Face)</b></p> <p>Dr. Koh Yit Yan Newcastle University Institute of Higher Education Pte. Ltd., Singapore</p>
12:20pm	<p><b>Data Analysis of Fly Ash Geopolymer Compressive Strength Using Machine Learning Method (Face-to-Face)</b></p> <p>Dr. Idawati Ismail Universiti Malaysia Sarawak, Malaysia</p>	<p><b>Investigation of Voltage Profile Variation and Stability of PV-Grid Interconnected System (Virtual)</b></p> <p>Associate Professor Ir. Dr. Yunli Go Heriot-Watt University Malaysia Campus, Malaysia</p>	<p><b>Track: Engineering Computing</b></p> <p><b>Task-Based Multidimensional Data Visualization Framework for Diabetes Management (Virtual)</b></p> <p>Mr. Low Lip Shen Swinburne University of Technology Sarawak Campus, Malaysia</p>
12:40pm	<p><b>The application of deep learning to pipe jacking in highly weathered geology (Face-to-Face)</b></p> <p>Dr. Choo Chung Siung Swinburne University of Technology Sarawak Campus, Malaysia</p>	<p><b>Solar Photovoltaic Thermal Profiles Development and Visualization: Experimental, Numerical Analysis and Validation (Virtual)</b></p> <p>Associate Professor Ir. Dr. Yunli Go Heriot-Watt University Malaysia Campus, Malaysia</p>	<p><b>Track: Engineering Computing</b></p> <p><b>Reverse Drug Discovery Web Portal (RDD) (Virtual)</b></p> <p>Dr. Brian Loh Chung Shiong Swinburne University of Technology Sarawak Campus, Malaysia</p>
1:00pm	<p>Video Showcase: SAINS</p> <p>Lunch   Venue: Pantry Area, Level 1</p>		

**Technical Session 2 (Cont'd)**

<b>Technical Session 2 (Cont'd)</b>			
	<p><b>Track: Automation and Sensors</b></p> <p><i>Session Chair: Dr. Almon Chai Wei-Yen</i></p> <p><i>Venue: Training Room, 1<sup>st</sup> Floor, TEGAS Digital Village</i></p>	<p><b>Track: Smart Energy and Cities</b></p> <p><i>Session Chair: Dr. Daniel Looi Ting Wee</i></p> <p><i>Venue: Auditorium, Ground Floor, TEGAS Digital Village</i></p>	<p><b>Track: Simulation and Optimization</b></p> <p><i>Session Chair: Dr. Victor Bong Nee Shin</i></p> <p><i>Venue: Event Room, 1<sup>st</sup> Floor, TEGAS Digital Village</i></p>
2:00pm	<p><b>An Intelligent Monitoring and Maintenance System for Wind Turbine Foundations (Virtual)</b></p> <p>Mr. Liam Bekir RMIT University Melbourne, Australia</p>	<p><b>Development of smart HVAC thermostat with AI using visual detector for energy saving (Face-to-Face)</b></p> <p>Associate Professor Dr. Basil T. Wong Swinburne University of Technology Sarawak Campus, Malaysia</p>	<p><b>Simulation on Application of EMG Signals for DC Motor Control (Virtual)</b></p> <p>Dr. Evon Lim Wan Ting Swinburne University of Technology Sarawak Campus, Malaysia</p>
2:20pm	<p><b>Temperature Modulation of Metal Oxide Semiconductor Gas Sensors for Black Pepper Geo-tracing (Face-to-Face)</b></p> <p>Associate Professor Dr. Hong Siang Chua Swinburne University of Technology Sarawak Campus, Malaysia</p>	<p><b>UAV-based lane-changing reduction using traffic video analyser (Face-to-Face)</b></p> <p>Ms. Bong Jit Boon Swinburne University of Technology Sarawak Campus, Malaysia</p>	<p><b>Simulating Sensor Data to Inform Digital Twin of an On-Shore Wind Turbine Foundation (Virtual)</b></p> <p>Mr. Christiaan Pietropoli RMIT University Melbourne, Australia</p>
2:40pm	<p><b>Investigation of the Effect of Polyvinyl Acetate Coating on Multiple U-shaped Fibre Optic Sensors in Different Solution Conditions (Virtual)</b></p> <p>Mr. Alfred Jia Yee Tan Swinburne University of Technology Sarawak Campus, Malaysia</p>	<p><b>Development of Intelligent Control for Lower Limb (Virtual)</b></p> <p>Ms. Siti Nur Hanisah binti Zuhari Universiti Malaysia Sarawak, Malaysia</p>	<p><b>On the Impact of the Radio Hub Placement for 10Å—10 mesh-WiNoC Architecture (Virtual)</b></p> <p>Mr. Asrani Lit Universiti Malaysia Sarawak, Malaysia</p>
3:00pm	Break   Venue: Maker Lab		

## Plenary 6: Education 4.0

	<p><b>Chair: Associate Professor Dr. Ida Fatimawati bt Adi Badiozaman, Executive Dean (Research) - Interim &amp; Associate Professor, Faculty of Business, Design and Arts, Swinburne University of Technology Sarawak Campus, Malaysia</b></p> <p>The digital industrial revolution has been brought into the classroom, accelerated by the advent of the COVID-19 pandemic. IR4.0 has not only changed the talents needed by the engineering industry; learning has become democratised and more accessible. This leads to learning innovations incorporating IR4.0 tech, i.e. Education 4.0. The traditional educational approaches indeed need a make-over at making students skill-ready for the ever-evolving industrial revolution. Some of the main questions to be addressed in this plenary session are “How does Industry 4.0 affect the education industry, especially in engineering?”, “How can education institutions equip engineering students for IR4.0?”, and “What innovations are there to enhance learning in a digital engineering world?”</p>
3:20pm	<p><b>Education with Purpose and Impact</b>            Professor Dr. Mou Ling Dennis Wong (Virtual)            Deputy Provost, Heriot-Watt University Malaysia, Malaysia</p>
3:50pm	<p><b>Shifting from Education 3.0 to Education 4.0</b>            Professor Dr. Nor Aziah Alias (Virtual)            Professor of Teaching and Learning, Universiti Teknologi MARA (UiTM) &amp; Member, Malaysian Society for Higher Education Policy and Research Development (PenDaPaT), Malaysia</p>
4:20pm	<p><b>Education Challenges For Society 5.0</b>            Mr. Jamiran bin Salam            Special Administrative Officer, Ministry of Education, Innovation and Talent Development (MEITD) Sarawak, Malaysia</p>
4:50pm	Questions and Answers session
<b>Closing Ceremony</b>	
5:20pm	Closing Speech by <b>The Honourable Datuk Roland Sagah, Minister of Education, Innovation and Talent Development Sarawak, Malaysia</b>
	Closing Remarks by <b>Ir. Dennis Ong, Organising Chairman of AAEC2022</b>
5:50pm	End of AAEC2022