



**International Conference of Sustainability Systems
Engineering, Natural Resources and Energy**

30 Sept - 1 Oct 2026

Virtual Conference

Program Schedule

Day 1: 30 September 2026 (Wednesday)

Time	Activity
8:30 - 9:00 am	Camera ready & Conference House Keeping
9:00 - 9:15 am	Opening speech from the Conference Chair Assoc. Prof. Dr. Zarina binti Ab Muis (Live) (Advancing System Engineering for Sustainable Energy and Resourcing)
9:15 - 9:35 am	Officiating ceremony by UTM Vice Chansellor. Professor Ts. Dr. Mohd Shafry bin Mohd Rahim
9:35 - 9:45 am	<i>Coffee break</i>
9:45 - 10:20 am	PLENARY SPEECH 1 Assoc. Prof. Dr. Chong Cheng Tung <i>Title: The Roles of Renewable Synthetic Fuels in Decarbonizing the Energy Sector</i>
10:20 - 10:50 am	KEYNOTE SPEAKER 1 ACE speaker : Dr. Zulfikar Yurnaidi <i>Theme: Sustainable energy and system engineering</i>
10:50 - 11:20 am	KEYNOTE SPEAKER 2 Prof. Dr.-Ing. Silviana <i>Title: Advanced Process and Material Engineering for Sustainable Energy Systems : Harnessing Geothermal Streams and Biomass Resources</i>
11:20 am - 1:00 pm	INDUSTRIAL FORUM Title: Managing Climate Risk in the Age of Sustainability: Finance, Resilience and Long-Term Value Creation Moderator: Dr. Lim Jeng Shiun Industrial panel: Dr. Ho Wai Shin, Dr Chin, Mr. Saravanan
1:00 - 2:00 pm	<i>Lunch break</i>
2:00 - 2:30 pm	PLENARY SPEECH 2 Prof. Ing. Dr. Habil. Petar Sabev Varbanov <i>Title : Process Systems Engineering Tools for Industrial and Energy and Resource Optimisation and Footprint Reduction</i>
2:30 - 3:00 pm	Industry networking session Chair: Dr. Aishah binti Mahpudz Industrial speaker Mr. Yadi Hj Maryon Assistant Vice President Title: Maybank MyImpact
3:00 - 3:40 pm	Parallel 1
	Session 1 <i>Theme: Sustainable System Engineering & Energy Transition</i> Chair: Dr. Izzat Naim bin Shamsul Kahar Co-Chair: Sherena Binti Saree Session 2 <i>Theme: Process Integration, Energy Efficiency & Decarbonization</i> Chair: Dr. Nur Farzana binti Ahmad Sanadi Co-Chair: Nur Aina Najwa Binti Mohd Nor Azman

3:00 - 3:20 pm	Paper ID: 7 Title: Operationalising Responsible Generative AI in Sustainable Research Data Systems: A Malaysian Policy-Informed Lifecycle Framework Authors: Nenny Ruthfalydia Rosli, Shazwin Mat Taib, Nurul Azwa Mohd Yunus	Paper ID: 10 Title: Domestic or Cross-Border CO ₂ Storage? A Review of Climate and Cost Trade-Offs in Asia-Pacific Authors: John Ting Zhi Zhang , Lim Jeng Shiun
3:20 - 3:40 pm	Paper ID: 8 Title: Integrated Renewable Energy Optimization For Rural Sites In Sarawak Authors: Muhammad Ikhwan Nurkhairulnizam, Zarina Ab Muis, Nur Syahadatul Iman Razali , Ho Wai Shin, Nur Haninah Harun, Nor Alafiza Yunus	Paper ID: 16 Title: An Optimization Model of Integrated Power Generation Carbon Capture via Methanation Authors: Muhammad Rizal Abdul Rahim , Zarina Ab. Muis
3:40 - 3:50 pm	Coffee break	
3:50 - 4:10 pm	KEYNOTE SPEAKER 3 Prof Dr Shanti Faridah Salleh <i>Theme: Energy resources, environment & Sustainable Management</i> <i>Title: From Bubbles to Systems: Rethinking Sustainable Energy, Resources and Governance for a Connected Future</i>	
4:10 - 4:50 pm	Parallel 2	
	Session 3 <i>Theme: Renewable Energy Resources & Bioenergy Systems</i> Chair: Dr. Izzat Naim bin Shamsul Kahar Co-Chair: Muhammad Arief Haikal bin Ezaidin	Session 4 <i>Theme: Natural Resources Management</i> Chair: Dr. Nur Farzana binti Ahmad Sanadi Co-Chair: Nur Aina Najwa Mohd Nor Azman
4:10 - 4:30 pm	Paper ID: 9 Title: Feasibility and Pre-treatment Study On Conversion Of Empty Fruit Bunches To Biogas Authors: Noor Ayuni Amira Binti Ariffin , Wan Nor Nadyaini Wan Omar, Zarina Ab Muis, Ho Wai Shin, Nurul Syaza Adriana Norimran, Nur Haninah Harun	Paper ID: 2 Title: Formulation and Performance of Spent Coffee Waste – Horse Manure Compost on Vegetable Growth Authors: Syaza Zuhaili Mohamad Mazli , Norfhaima Baharulrazi, Nor Alafiza Yunus
4:30 - 4:50 pm	Paper ID: 11 Title: Integration of Hydrogen, Biogas, and Natural Gas for Low-Carbon Energy Transition: A Review of Interchangeability Constraints Authors: Sherena Saree , Ho Wai Shin, Nur Aina Najwa Mohd Nor Azman	Paper ID: 13 Title: A Sustainable Bilingual Database Management Framework for English–Malay Translation: The MyTranslate Case Study Authors: Nenny Ruthfalydia Rosli , Sohailah Safie, Sapiah Sulaiman, Hadina Habil
Day 2: 1 October 2026 (Thursday)		
Time	Activity	
8:30 - 9:00 am	Camera ready & Conference House Keeping	
9:00 - 9:30 am	PLENARY SPEECH 3 Prof. Ir. Ts. Dr. Zainuddin bin Abd Manan <i>Title: Adaptive Mitigation: An Energy Transition Pathway to Net Zero</i>	
09:30 - 9:50 am	KEYNOTE SPEAKER 4 Assoc. Prof. Ir Dr.-Ing. Mohamad Rizza bin Othman <i>Theme: Digitalization, Smart energy, & Sustainable Infrastructure</i> <i>Title : Advancing Process Industries through Digitalization: Driving Sustainability with Modelling, Simulation, and Intelligent Systems</i>	

9:50 - 10:20 am	Industry networking session Chair: Wan Nor Nadyaini Wan Omar Industrial speaker Ms. Kelly Tan Kai Li Manager Testo SMI	
10:20 - 10:30 am	Coffee break	
10:30 - 11:10 am	Parallel 3	
	Session 5 <i>Theme: Digitalization, Modeling & Simulation</i> Chair: Dr. Zulhilmi bin Ahmad Co-Chair: Sherena binti Saree	Session 6 <i>Theme: Smart Cities & Sustainable Infrastructure</i> Chair: Dr. Shuhada Atika binti Idrus Saidi Co-Chair: Muhammad Arieff Haikal bin Ezaidin
10:30 - 10:50 am	Paper ID: 3 Title: Performance Analysis of Riblet-Blade Savonius Turbines using Taguchi and ANOVA Authors: <i>Mahir Irtiza Mashi, Mohd Badrul Salleh</i>	Paper ID: 14 Title: Peak Shaving Optimization for Malaysia's Medium Voltage Non-Domestic Consumer with the Integration of Renewable Energy System Authors: <i>Zhen Quan Wong, Laxmanvin Rao, Wai Shin Ho</i>
10:50 - 11:10 am	Paper ID: 5 Title: Building an AI-Ready Tropical Wood Image Database: A Data Quality and Preparation Framework Presenter: <i>Nenny Ruthfalydia Rosli, Uswah Khairuddina, Mohd Ibrahim Shapiai@Abd Razak, Anis Salwa Mohd Khairuddin</i>	Paper ID: 15 Title: Field Assessment of Radiative Cooling Paint for Reducing HVAC Energy Consumption in an Industrial Substation Authors: <i>Wai Shin Ho, Xinyou Ho, Aaron Seak Zhang-Qin, Haslenda Hashim, Zarina Ab Muis, Muhammad Afiq Zubir, Mas Arman Sugindi</i>
11:10 - 11:40 am	KEYNOTE SPEAKER 5 Prof. Dr. Norasikin Ahmad Ludin <i>Theme: Industry 4.0, Green energy Technologies & Sustainability Governance</i> <i>Title : Engineering the Energy Transition: Lessons from Malaysia and ASEAN Towards a Sustainable Future</i>	
11:40 am - 12:10 pm	KEYNOTE SPEAKER 6 SRMIST Assoc. Prof. Dr. Tamlarasan K. <i>Title : Integrated Process Development for Sustainable Biochemicals Production from Biowaste</i>	
12:10 - 12:50 pm	Parallel 4	
	Session 7 Theme: Energy Policy, Governance & Sustainable Development Chair: Dr. Zulhilmi bin Ahmad Co-Chair: Sherena binti Saree	Session 8 Theme: Industry 4.0 & Green Technologies Chair: Dr. Shuhada Atika binti Idrus Saidi Co-Chair: Muhammad Arieff Haikal bin Ezaidin
12:10 - 12:30 pm	Paper ID: 1 Title: Sensitivity and Interdependency Analysis of Operational Parameters Affecting Greenhouse Gas Generation in Decentralized Imhoff Systems Authors: <i>Fadzlin Md Sairan, Mohd. Fadhil. Md Din</i>	Paper ID: 4 Title: High-Output Lateral Sliding Triboelectric Nanogenerator Using TiO ₂ -Embedded PTFE for Energy Harvesting: Electrical Performance Optimization and Characterization Authors: <i>Nur Farahana Mat Isa</i>
12:30 - 12:50 pm	Paper ID: 6 Title: From Carbon Accounting to Climate Action: A Practical Framework for Institutional Sustainability Planning Authors: <i>Mahal B. Rosel, Raquel B. Sodoso</i>	Paper ID: 12 Title: Pilot-Scale Development and Optimization of Aerobic Granular Sludge for Municipal Wastewater Treatment in Malaysia Authors: <i>Noor Atiqah binti Sharani, Aznah Nor Anuar, Hazlami Fikri bin Basri, Alijah binti Mohd Aris, Khor Bee Chin</i>
12:50 - 2:00 pm	Lunch break	
2:00 - 4:00 pm	Closing Ceremony Best Paper Award & Best Presenter	