Conference Program

2026 10th International Conference on Sustainable Energy Engineering (ICSEE 2026)

Workshop: 2026 International Conference on Environmental Science and Sustainability (ICESS 2026)

January 16-18, 2026 / Sydney, Australia / UTC+11

Venue: View Sydney

Address: 17 Blue Street, North Sydney NSW 2060

Ms. Veronica Reed
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Ms. Rachel Cao
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Table of Content

General Information

Conference Venue: **View Sydney**

Address: **17 Blue Street, North Sydney NSW 2060**

Meeting room information

Activity	Venue	Jan 16	Jan 17	Level
Registration Desk	Hotel Lobby	☆		Ground Level
Keynote Session	Bradfield Room		☆	
Onsite Sessions	Bradfield Room 1-3		☆	
Lunch & Dinner	LB's Restaurant		☆	

Reservations

Booking code has been created "SEC0126"

Booking Link: Room Reservations - View Sydney

Stay Dates: 11-20 January 2026 (inclusive)

Discount: 20% off Best Flexible Rate

Transportation information

By public transport (From Kingsford Smith Airport): Take Line T8 (City Circle via Museum) →T1 (Hornsby via Gordon) to North Sydney Station，then walk for 5mins. Approx. 30-40 mins

By car (From Kingsford Smith Airport): Approx. 15-20 mins.

On foot (From North Sydney Station): Approx. 5 mins.

Google Maps can help you find the route.

Hotel Recommendation

Citadines Walker North Sydney
Vibe Hotel North Sydney
Blues Point Hotel
North Sydney Hotel

1-Onsite Registration

Registration desk (Entrance Hall, Building Graduate School of Engineering) → Inform the staff of your paper ID→ Sign-in→ Claim your conference kit.

2-Devices Provided by the Organizer

Laptops (with MS-Office & Adobe Reader) / Projectors & Screen / Laser Sticks

3-Materials Provided by the Presenter

Oral Session: Slides (PPTX or PDF version. Format 16:9 is preferred. Official language: English); USB Drive

Poster Size: A1

4-Duration of Each Presentation

Keynote Speech: 35min, including Q&A / Oral Session: 12min, including Q&A

5-Online Participation Tips

Zoom Download	Meeting ID	Link
	Room ID: 816 3575 3346	https://us02web.zoom.us/j/81635753346

We recommend that you install the Zoom platform on your computer before the conference starts. New users can participate in the Zoom meeting without registration.

Participants who are going to do an online presentation are required to join the rehearsal in Zoom on Friday, January 16, 2026. Duration: 3min apiece. Feel free to leave after you finish the test.

◆Name Setting

Keynote Speaker: KN-Name

Committee: Position-Name

Author: Paper ID-Name

Delegate: Delegate-Name

◆Useful Links

✧ Conference Banner
✧ Zoom Background

● Notice

※ Please wear your delegate badge (name tag) for all the conference activities. Lending your participant card to others is not allowed.

※ Please take good care of your valuables at any time during the conference. The conference organizer does not assume any responsibility for the loss of personal belongings of the participants during conference day.

※ **UTC+11. Australia Time. Please be aware of time difference between this and your region/country.**

Welcome Message

Dear researchers, delegates of conference,

Welcome to Sydney, Australia to attend 2026 10th International Conference on Sustainable Energy Engineering (ICSEE 2026) and 2026 International Conference on Environmental Science and Sustainability (ICESS 2026) which are co-sponsored by University of Technology Sydney, Australia, University of Tasmania, Australia, etc.

The objective of the conferences is to provide a premium platform to bring together researchers, scientists, engineers, academics and graduate students to share up-to-date research results. We are confident that during this time you will get the theoretical grounding, practical knowledge, and personal contacts that will help you build a long term, profitable and sustainable communication among researchers and practitioners in the related scientific areas.

This year we have 4 Keynote Speeches. They are Prof. Vladimir Strezov, from Macquarie University, Australia; Prof. Zhibin Yu, from University of Liverpool, UK; Prof. Prof. Mohammad Rasul, from Central Queensland University, Australia and Assoc. Prof. Eric Hu, from University of Adelaide, Australia. In the conferences, we have 6 onsite-sessions and 1 online session with topics: Transition and Resilience of High-Renewable Energy Systems; Multi-Source Sustainable Fuels and Hydrogen Systems; Cross-Domain Technologies for Energy-Efficient Thermal Management; Functional Materials for Environmental and Energy Applications, etc.

Meanwhile, we received more than 200 submissions from research institutions, universities and industries. The papers in the proceedings are accepted after being peer-reviewed by conference committee, international reviewers based on the topic and quality. With the keynote speeches, oral sessions, we'll have an exciting program this year, which will allow participants to present and discuss the latest research and industrial developments in these fields.

On behalf of the organizing committee, we would like to deeply express our heartfelt appreciation to all our delegates, keynote speakers, session chairs, as well as all the committee members involved in the technical evaluation of conference papers and in the organization of the conference for their time, effort, and great contributions.

We also wish that this conference will be an unforgettable and wonderful experience for you.

With Warmest Regards,

Conference Organizing Committees

Conference Committee

ICSEE 2026

Conference Advisory Committee Chairs
Vladimir Strezov, Macquarie University, Australia
Zhibin Yu, University of Liverpool, UK

Conference General Chair
Xiaolin Wang, University of Tasmania, Australia

Conference General Co-Chairs
Steven Langford, University of Technology Sydney, Australia
Yinghui Tian, University of Melbourne, Australia
Eric Hu, The University of Adelaide, Australia

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Chitti Babu, Indian Institute of Information Technology, India
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ICESS 2026

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Vladimir Strezov, Macquarie University, Australia
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Erica Ballantyne, University of Sheffield, UK

Agenda Overview (UTC+11)

Friday, January 16, 2026		
Onsite Registration	**10:00-17:00**	**Venue: View Sydney (Lobby)**
Zoom Test for online presenters	**14:00-16:00**	**Zoom ID: 816 3575 3346**

Zoom Test Timetable

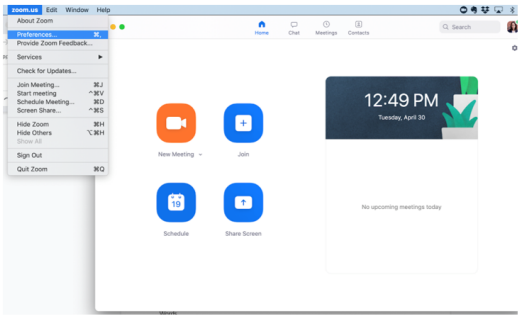
- ✧ Participants who are going to do an online presentation are required to join the rehearsal in Zoom on **Friday, January 16, 2026**. Duration: 3min apiece. Feel free to leave after you finish the test.
- ✧ We will test control panel including screen sharing, audio, video and "Raise Hand" feature, etc. Please get your presentation slides and computer equipment prepared beforehand.

14:00-15:00	SE017, SE050-A, SE088, SE123, SE714, SE072, SE068, SE013, SE772, SE066-A, SE116-A, SE7009-A, SE121
15:00-16:00	Alternative time for participants who are unavailable at allocated time. Other online participants, includes but not limited to keynote speaker, session chair, committee member, delegate.

Zoom Guidance

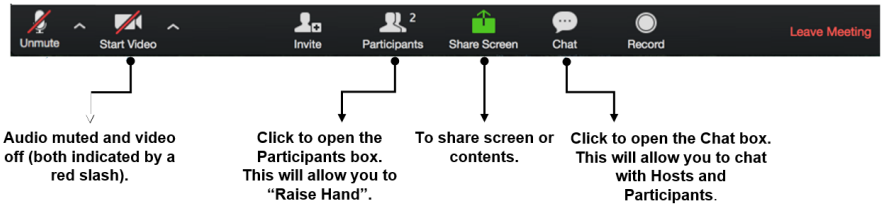
You can join the meeting without sign-in process.
Just put the meeting ID and join us.

URL: https://zoom.us/download



Each meeting has a unique **9, 10, or 11-digit** number called a **meeting ID** that will be required to join a Zoom meeting.

For any questions on the meeting day, you can text privately to "Assistant" for help.



Saturday, January 17, 2026 (Onsite)		
Keynote Speeches <Venue: Bradfield Room>		
Chairman: Prof. Xiaolin Wang, University of Tasmania, Australia <Conference General Chair>		
9:00-9:10	**Opening Remarks**	Prof. Steven Langford, University of Technology Sydney, Australia <Conference General Co-Chair>
9:10-9:45	**Keynote Speech I**	Prof. Vladimir Strezov, Macquarie University, Australia *Speech Title: Biomass integration in sustainable energy transformation and circular economy frameworks*
9:45-10:20	**Keynote Speech II**	Prof. Zhibin Yu, University of Liverpool, UK *Speech Title: The Flexible Heat Pump Technology: Enhanced Efficiency and Broad Applications*
10:20-10:50	Group Photo & Coffee Break	
10:50-11:25	**Keynote Speech III**	Prof. Mohammad Rasul, Central Queensland University, Australia *Speech Title: Hydrogen Production from Syngas Produced through Pyrolysis of Waste Plastics*
11:25-12:00	**Keynote Speech IV**	Assoc. Prof. Eric Hu, University of Adelaide, Australia *Speech Title: Solar Aided Power Generation (SAPG)*
12:00-13:00	Lunch <LB's Restaurant>	
Parallel Session <Onsite, Bradfield Room 1-3>		
13:00-15:24	**Onsite Session 1** <Bradfield Room 1>	Transition and Resilience of High-Renewable Energy Systems SE019, SE063-A, SE104, SE111, SE113, SE115, SE119-A, SE721, SE092, SE110, SE099, SE101
13:00-15:12	**Onsite Session 2** <Bradfield Room 2>	Multi-Source Sustainable Fuels and Hydrogen Systems SE501, SE502, SE016-A, SE040-A, SE054, SE058, SE078, SE769-A, SE052, SE028-A, SE090
13:00-15:36	**Onsite Session 3** <Bradfield Room 3>	Cross-Domain Technologies for Energy-Efficient Thermal Management SE727, SE036, SE039, SE082, SE103, SE056-A, SE062, SE076, SE041-A, SE042-A, SE043-A, SE073-A, SE051
15:20-15:50	Coffee Break	
15:50-17:50	**Onsite Session 4** <Bradfield Room 1>	Functional Materials for Environmental and Energy Applications SE705-A, SE011-A, SE015-A, SE055-A, SE106-A, SE112, SE737, SE117-A, SE118-A, SE734-A
15:50-18:26	**Onsite Session 5** <Bradfield Room 2>	Resource Circulation and Environmental Systems Management SE012, SE093, SE024, SE725, SE711-A, SE710-A, SE724, SE743-A, SE7010-A, SE762-A, SE755-A, SE763-A, SE091-A
15:50-17:50	**Onsite Session 6** <Bradfield Room 3>	Energy Transition and Sustainable Development: Socio-Technical Systems Perspectives SE061, SE761-A, SE715-A, SE723-A, SE7004-A, SE005, SE704-A, SE7007-A, SE7008, SE748-A
13:00-18:00	**Poster Display**	SE014-A, SE053
18:30-20:00	Dinner <LB's Restaurant>	

Saturday, January 17, 2026 (Online)		
Parallel Session <Zoom ID: 816 3575 3346>		
13:00-15:36	**Online Session**	The Decarbonization of Energy Systems: Technologies and Policies SE017, SE050-A, SE088, SE123, SE714, SE072, SE068, SE013, SE772, SE066-A, SE116-A, SE7009-A, SE121
Sunday, January 18, 2026 (One day tour)		
Sydney Blue Mountains & Wildlife Park One Day Tour		
08:30	Depart from View Sydney	
09:30	Arrive at Featherdale Wildlife Park Enjoy close encounters with Australian animals. (Zoo ticket is included with morning tea and time for koala photos.)	
10:30	Depart for the Blue Mountains (about 1 hour drive)	
12:00	Visit Scenic World Take the cableway, enjoy light walking, and explore the rainforest valley. (Cable car ticket is included.)	
13:30	Free time for lunch (at your own expense)	
14:30	Visit Echo Point, Three Sisters, Jamison Valley, and cliff walk viewpoints	
15:30	Arrive at Leura Village Enjoy free time to explore shops, cafés, and local streets.	
18:30	Return to View Sydney. The tour concludes.	

Keynote Speaker (UTC+11)

9:10-9:45, Saturday, January 17, 2026

<Venue: Bradfield Room>

Prof. Vladimir Strezov
Macquarie University, Australia

Speech Title: Biomass integration in sustainable energy transformation and circular economy frameworks

Abstract: Biomass and wastes are one of the fastest growing energy production sources with significant potential to contribute to regional circular economy. Biomass can readily substitute for the use of coal in the established energy production systems with minor technological adoptions. However, energy production from biomass is still facing many challenges with sustainable resourcing of the biomass materials and efficient conversion to biofuel products. This presentation will discuss the challenges and opportunities for the application of biomass in designing systems of engineering solutions for sustainable energy use and production of renewable biofuels. The opportunities for the use of biomass sources in solving a range of environmental problems will also be discussed.

Prof. Vladimir Strezov is professor in environmental science at the School of Natural Sciences, Faculty of Science and Engineering at Macquarie University. He holds degrees in Mechanical and Chemical Engineering with expertise in renewable energy, environmental assessment, air and water quality, and sustainable development. He has published 6 scholarly books and over 300 publications. Prof Strezov is a Fellow of the Institution of Engineers Australia, and Fellow of the Australian Institute of Energy.

9:45-10:20, Saturday, January 17, 2026
<Venue: Bradfield Room>

Prof. Zhibin Yu
University of Liverpool, UK

Speech Title: The Flexible Heat Pump Technology: Enhanced Efficiency and Broad Applications

Abstract: Heat pumps are widely recognised as a key technology for decarbonising heat and achieving net-zero emissions. However, their adoption has been slower than expected. Most commercial heat pumps are based on the conventional Evans-Perkins vapour compression cycle, originally developed for refrigeration. As the temperature lift between the heat source and sink increases, the coefficient of performance (COP) of single-stage heat pumps drops significantly—primarily due to throttling losses, which scale with the square of the temperature lift. To enable widespread deployment, further innovation is needed to improve both the performance and cost-effectiveness of heat pump systems. In this talk, Professor Yu will present an up-to-date overview of recent research advances in heat pump technologies, followed by a discussion of the key challenges and emerging opportunities in the field. He will then introduce his work on the invention and development of Flexible Heat Pump technology, which integrates thermal energy storage into the conventional Evans-Perkins cycle. This approach enables the recovery, storage, and reuse of thermal energy from the warm liquid refrigerant leaving the condenser. Thermodynamically, it resembles a two-stage vapour compression cycle with subcooling and flash gas removal—offering an innovative solution to the persistent issue of throttling losses in high-temperature applications. The integration of in-cycle heat recovery and storage opens up a wide range of new applications, delivering substantial energy savings and enhanced operational flexibility.

Professor Zhibin Yu currently holds the Chair of Energy Engineering in the Department of Mechanical and Aerospace Engineering at the University of Liverpool. He leads the Energy Research Cluster within the School of Engineering and holds a prestigious Royal Society Industrial Fellowship (2023–2027). Prior to this, he held academic positions at the James Watt School of Engineering, University of Glasgow: Lecturer (2012–2017), Senior Lecturer (2017–2019), and Professor of Thermal Energy (2019–2023). His research focuses on thermal energy technologies, with particular interest in the underlying thermodynamic, heat transfer, and fluid-dynamic challenges. He is committed to developing innovative solutions for sustainable heating, cooling, and power generation, with expertise spanning heat pumps, refrigeration, energy storage, district heating and cooling networks, organic Rankine cycle systems, and thermoacoustics. Professor Yu has led or contributed to over 35 research projects with a combined value exceeding £30 million, funded by EPSRC, Innovate UK, and the European Commission. He has published more than 180 research papers and is the inventor of the Flexible Heat Pump Cycle (PCT reference: WO2022069581A1), a technology that enables the next generation of high-efficiency, flexible heat pumps. He currently serves as Associate Editor for Applied Energy (Elsevier) and npj Thermal Science and Engineering (Springer Nature), Subject Editor for Applied Thermal Engineering (Elsevier), and Section Editor-in-Chief for Frontiers in Thermal Engineering. He also sits on the editorial boards of Energy Reports (Elsevier) and the International Journal of Green Energy (Taylor & Francis). Professor Yu is a Board Director of the International Association for Green Energy, and he served as Chair of the 15th International Green Energy Conference, hosted at the University of Glasgow.

10:50-11:25, Saturday, January 17, 2026
<Venue: Bradfield Room>

Prof. Mohammad Rasul
Central Queensland University, Australia

Speech Title: Hydrogen Production from Syngas Produced through Pyrolysis of Waste Plastics

Abstract: Globally plastic production has increased from less than 2 million tons in 1950 to 380 million tons annually today. More than 75% of these plastics are rejected as waste in the environment and end up in landfills or are incinerated, releasing toxic gases to the environment, soil and groundwater. Several Waste to Hydrogen technologies have been evaluated for their techno-economic and environmental impacts assessment to treat waste plastics, pyrolysis process is one of them. Pyrolysis is a well-established thermochemical conversion process that converts waste into energy products such as oil, char and syngas by decomposing them at high temperatures (350°C-600°C) in the absence of oxygen. As global demand of hydrogen rises from 70 to 120 million tons in 2024, a cleaner energy source, can be produced from waste plastic via pyrolysis and Palladium membrane (Pd-membrane) separation process of syngas. This presentation will talk about how to produce pure hydrogen from syngas produced through waste plastic pyrolysis, pyrolysis results of different waste plastics and hydrogen separation efficiency from syngas.

MOHAMMAD RASUL obtained his PhD in Clean Energy from The University of Queensland (Australia). Currently, he is a Professor of Mechanical Engineering at the School of Engineering and Technology, Central Queensland University (CQUniversity). He is the recipient of Vice-Chancellor and Dean's awards for outstanding researchers in the excellence in research category, and awards for research higher degree supervision and good practice in learning and teaching. Professor Rasul is specialised in clean energy. He has over 20 years of research experience in clean energy including pyrolysis, waste-to-energy, and energy and emission analysis for sustainable development. He has made significant contributions in research with over 550 publications, >23,500 citations and H-Index of 75. He has secured over $7M research grants, supervised 41 Research Higher Degree (PhD/Masters) students to completion. He is in the top 2% researchers and number 5 among the highly ranked scholars in the world in Biofuels/Biodiesel research which is within top 0.05% researchers in this area. He is best scientist in the world standing at 1541 in world ranking and 91 in the country (Australia) ranking in the field of Engineering and Technology. He is ranked 815 out of 313,936 (0.26%) researchers in the ENERGY sub-category in the world. He is recognised, both nationally and internationally, through his varied roles and activities, for example, editor of the Australian Journal of Mechanical Engineering, section editor of Encyclopedia of Renewable Energy, Sustainability and The Environment (Elsevier), editorial board member of several and technical and scientific committee member of a couple of dozen conferences. He frequently creates attention of media and community engagement through his expert opinion and interview by different media, such as ABC 7 TV, ABC 7 News, ABC Tropical North, ABC Capricornia FM, Morning Bulletin and News Mail.

11:25-12:00, Saturday, January 17, 2026
<Venue: Bradfield Room>

Assoc. Prof. Eric Hu
University of Adelaide, Australia

Speech Title: Solar Aided Power Generation (SAPG)

Abstract: Fossil fuel based power generation is and will still be the back bone of our world economy, albeit such form of power generation significantly contributes to global CO2 emissions. Solar energy is a clean, environmental friendly energy source for power generation, however solar photovoltaic electricity generation is not practical for large commercial scales due to its cost and high-tech nature. Solar thermal is another way to use solar energy to generate power. Many attempts to establish solar (solo) thermal power stations have been practiced all over the world. Although there are some advantages in solo solar thermal power systems, the efficiencies and costs of these systems are not so attractive. Alternately by modifying, if possible, the existing coal-fired power stations to generate green sustainable power, a much more efficient means of power generation can be reached. This paper presents the concept of solar aided power generation in conventional coal-fired power stations, i.e., integrating solar (thermal) energy into conventional fossil fuelled power generation cycles (termed as solar aided thermal power). The solar aided power generation (SAPG) concept has technically been derived to use the strong points of the two technologies (traditional regenerative Rankine cycle with relatively higher efficiency and solar heating at relatively low temperature range). The SAPG does not only contribute to increase the efficiencies of the conventional power station and reduce its emission of the greenhouse gases, but also provides a better way to use solar heat to generate the power. This paper presents the advantages of the SAPG at conceptual level. In this talk, the R&D of the SAPG carried out by Eric's teams in past will be summarised and reported.

Dr. Eric Hu received his basic professional degree of Bachelor of Engineering (Mechanical) from the Zhejiang University, China in 1984. He was majored in thermal power station technologies. After graduation, he proceeded to Beijing Solar Energy Research Institute for the degree of Master of Engineering (energy technology). Two and a half years later, he started work with the same institute as a research engineer for another three years. In January 1990, Eric was granted a French government scholarship to undertake the Doctor of Engineering program in Energy Technology Division at the Asian Institute of Technology in Bangkok Thailand. He obtained the doctoral degree (D.Eng in Energy Technology) and came to Australia at the end of 1992. Eric worked as a lecturer and senior lecturer in Thermodynamics and Fluid Mechanics at Gippsland School of Engineering, Monash University until 1999 when he joined the School of Engineering and Technology at Deakin University. He was promoted to Associate Professor in 2005 at Deakin University. He starts with the School of Mechanical Engineering at the University of Adelaide, as Associate Professor in Sustainable Energy Engineering, in Feb 2009. Dr. Eric Hu has been working in sustainable energy engineering areas, including energy efficiencies for industrial process, solar thermal applications eg. heating, cooling and power generation, CO2 emission reduction for power stations and low energy desalination etc. He has published over 300 academic papers with H-index of 49 and over 8400 citations.

Onsite Session 1 (UTC+11)

Transition and Resilience of High-Renewable Energy Systems

Chairman: Dr. Alberto Alamia, Aarhus University, Denmark

13:00-15:24, Saturday, January 17, 2026 | **<Venue: Bradfield Room 1>**

SE019 13:00-13:12	Structural Resilience in Electricity Distribution Grids: A Multi Criteria Evaluation of Climate Adaptation Measures Madeleine Jendernalik, TU Dortmund University, Germany
SE063-A 13:12-13:24	Real-Time State Estimation of a Renewable Distribution Network Using Optimally Placed Micro-PMUs Yeuntae Yoo, Myongji University, Republic of Korea
SE104 13:24-13:36	Simulation-Based Performance Evaluation of Agrivoltaic (APV) Systems under Variable Climatic Conditions Ramadas Narayanan, Central Queensland University, Australia
SE111 13:36-13:48	Optimal Operation Strategy for Green DC Microgrids Based on Convex Relaxation Yijing Ren, Central South University, China
SE113 13:48-14:00	Existence Analysis of Frequency Synchronization Equilibrium Points in AC Microgrids Based on the Kuramoto Model Ni Zhu, Central South University, China
SE115 14:00-14:12	A Brouwer Fixed-Point Theorem Approach to Solvability of AC Power Flow Equations Yiping Shen, Central South University, China
SE119-A 14:12-14:24	Cooperative Game-Theoretical Evaluation of Multi-Energy Eco-industrial parks: A case study for behind the meter trading at GreenLab Skive, Denmark Alberto Alamia, Department of Mechanical and Production Engineering, Aarhus University, Denmark
SE721 14:24-14:36	Levelized Tariff Evaluation of Hydrokinetic Energy Project: A Case Study Sunil Kumar Singal, Indian Institute of Technology Roorkee, Roorkee, India
SE092 14:36-14:48	Robust optimal planning of the hydrogen-based integrated energy system considering decarbonization and multiple uncertainties Zichen Li, Zhejiang University, China
SE110 14:48-15:00	A green material for the storage of solar thermal energy and its selection using MCDM method

	Muhammad Ali Zinnah, Central Queensland University, Australia
SE099 15:00-15:12	Waste Heat Recovery Options for an operating Geothermal Flash Power Plant Moses Jeremiah Barasa Kabeyi, Durban University of Technology, South Africa
SE101 15:12-15:24	Performance Analysis of Grid Connected 120 MWe Diesel Power Plant Cogeneration System for a Conventional Moses Jeremiah Barasa Kabeyi, Durban University of Technology, South Africa

Onsite Session 2 (UTC+11)

Multi-Source Sustainable Fuels and Hydrogen Systems

Chairman: Prof. Mohammad Rasul, Central Queensland University, Australia

13:00-15:12, Saturday, January 17, 2026 | **<Venue: Bradfield Room 2>**

SE501 13:00-13:12	Impact of biodiesel engine vehicle penetration on environmental indicator emissions Md Bahar Uddin, Central Queensland University, Australia
SE502 13:12-13:24	SAF Ecosystem in Japan: the current status, technology development, capacity building and future prospectives Yaeko Mitsumori, University of Osaka, Japan
SE016-A 13:24-13:36	Techno-Economic and Environmental Assessment of Plasma Oxy-CO2 Reforming Versus Steam Reforming for Net-Zero Syngas Production Jose Luis Osorio Tejada, University of Warwick, UK
SE040-A 13:36-13:48	Dynamic Response Modeling and Integrated Testing of Precision Air-Supply Blowers in Hydrogen Vehicle Applications Hyeok Kwon, Kongju National University, South Korea
SE054 13:48-14:00	Joule–Thomson Effect in Underground Hydrogen Storage: Thermodynamic Implications for Next Generation Energy Systems Mostafa Montazeri, The University of Adelaide, Australia
SE058 14:00-14:12	Assessing the Potential of Albizia saman (Rain Tree) as a Novel Feedstock for Solid Biofuel Production Kiatkamjon Intani, Department of Farm Mechanics, Faculty of Agriculture, Kasetsart University, Thailand
SE078 14:12-14:24	Fuel characterization and combustion behavior of Hy-drochar Derived from Cassava (Manihot esculenta Crantz) Stems and Peels Alexander Obrero Mosqueda, MSU-Iligan Institute of Technology, Philippines
SE769-A 14:24-14:36	Hydrogen Logistics Network Design for Hydrogen Fuel Cell Electric Long-haul Trucks Mingzhou Jin, University of Tennessee, Knoxville, United States
SE052 14:36-14:48	Value Added Utilization of Agricultural Waste for Green Energy: Development of Long Burning Smokeless Briquettes Donludee Jaisut, Kasetsart University, Thailand

SE028-A 14:48-15:00	Pentanol as a Diesel Fuel Additive: A Short Review of its Performance and Emissions Trade-offs Satsimran Singh Sandhu, B.R. Ambedkar National Institute of Technology, India
SE090 15:00-15:12	Turning Cassava Rhizome Waste into Soil-Improving Biochar: Rural Income and Social Co-Benefits Supakit Sayasoonthorn, Department of Farm Mechanics, Faculty of Agriculture, Kasetsart University, Thailand

Onsite Session 3 (UTC+11)

Cross-Domain Technologies for Energy-Efficient Thermal Management

Chairman: Prof. Bi-Huei Tsai, National Yang Ming Chiao Tung University, Taiwan

13:00-15:36, Saturday, January 17, 2026 | **<Venue: Bradfield Room 3>**

SE727 13:00-13:12	Managerial Assessment of Renewable Energy for Carbon Reduction amid the Russia-Ukraine War Bi-Huei Tsai, National Yang Ming Chiao Tung University, Taiwan
SE036 13:12-13:24	The Potential of Thermal Energy Storage for the Demand Flexibility in Residential Heating and Cooling Jin Zhou, University of Canterbury, New Zealand
SE039 13:24-13:36	Integrated Architectural and Systems Design Framework for Designing Off-Grid Australian Homes: A Case Study from Regional NSW Jena Glover, pic Architecture; School of Engineering and Built Environment, Griffith University, Australia
SE082 13:36-13:48	A Radiant Floor Cooling System Coupled with Pulsating Impinging Jet Ventilation to Improve Comfort and Indoor Air Quality Walid Chakroun, Kuwait University, Kuwait
SE103 13:48-14:00	Evaluation of the Thermal Behaviour of Greenhouse Designs for Ginger Cultivation Ramadas Narayanan, Central Queensland University, Australia
SE056-A 14:00-14:12	A Neural Network-Based Control for Variable Inlet Temperature of Air Conditioning Systems Mohammad Foruzan Nia, The University of Adelaide, Australia
SE062 14:12-14:24	Decision-Oriented Evolution of Building Energy Management Systems: A Causal Loop and KPI Perspective Mahsa Saghaei, University of New South Wales, Australia
SE076 14:24-14:36	Economic and Environmental Assessment of the Integration of PV Systems into Saudi Government Buildings Bader Alharbi, Majmaah University, Saudi Arabia
SE041-A 14:36-14:48	Evaluation of Multi-stack Cooling Efficiency for Light Aircraft Using Exergy Analysis Jihyun Choi, Kongju National University, South Korea

SE042-A 14:48-15:00	Development and Analysis of a High-fidelity Integrated Thermal Management System for Fuel Cell Hybrid Applications in Small Vessel Minwoo An, Kongju National University, South Korea
SE043-A 15:00-15:12	Development and Performance Assessment of an R744 Integrated Thermal Management System Utilizing a Vortex Tube for Electric Vehicles Yebin Lee, Kongju National University, South Korea
SE073-A 15:12-15:24	Development of a Janus Radiative Cooler Using a Versatile Fabrication Process Yu-Bin Chen, National Tsing Hua University, Taiwan
SE051 15:24-15:36	Comparative Evaluation of Drying Performance and Energy Utilization of Refractance Window and Hot Air Tray Dryers for Liquid and Solid Foods Ratiya Thuwapanichayanan, Department of Farm Mechanics, Faculty of Agriculture, Kasetsart University, Thailand

Onsite Session 4 (UTC+11)

Functional Materials for Environmental and Energy Applications

Chairman: Asst. Prof. Donludee Jaisut, Kasetsart University, Thailand; Dr. Mengyang Fan, Sichuan University, China

15:50-17:50, Saturday, January 17, 2026 | **<Venue: Bradfield Room 1>**

SE705-A 15:50-16:02	Dual S-scheme g-C3N4/Fe3O4/In2O3/MoS2 magnetic nanocomposite for enhanced visible-light-driven tetracycline mineralization Xiyang Liu, Xi'an Jiaotong-Liverpool University, China
SE011-A 16:02-16:14	Crystalline-Amorphous Heterostructures with Built-in Electric Fields Enhance the Tandem Electroreduction of Nitrate to Ammonia Yaling Chen, Sichuan University, China
SE015-A 16:14-16:26	Photocatalytic degradation of NO by MnO2 catalyst: The decisive relationship between crystal phase, morphology and activity Lingtong Li, Sichuan University, China
SE055-A 16:26-16:38	Fabrication of Copper–Manganese co-doped Nitrogen–Phosphorus–Boron modified natural graphite as a bifunctional electrocatalyst for oxygen evolution and oxygen reduction reactions in alkaline medium SADIA AFRIN, Edith Cowan University, Australia
SE106-A 16:38-16:50	A Novel Route to Engineer 0.5–1.0 nm Nanoporosity in Borophene Foam/MOF Hybrid Architectures for Enhanced Hydrogen Storage Rajib Nandee, Dhaka University of Engineering & Technology, Bangladesh
SE112 16:50-17:02	Decentralized Robust Stability Condition for "Grey-Box" DC Microgrids Yuze Li, Central South University, China
SE737 17:02-17:14	A Novel Submersible Microbial Fuel Cell with Bubble-Retaining Cover for Long-Term Power Generation Tomoya Yabuzaki, Ritsumeikan University, Japan
SE734-A 17:14-17:26	Design and Characterization of Rare-Earth-Doped ZnO/g-C_3N_4 Nanocomposites for Enhanced Photocatalytic Degradation and Environmental Sensing Kaupa Philip, Papua New Guinea University of Technology, Papua New Guinea
SE117-A 17:26-17:38	Influence of Zr substitution on the microstructure and dielectric behaviour of Ba(Zr,Ti)O3 ceramics for eco-friendly energy systems Jolanta Makowska, University of Silesia, Poland

SE118-A 17:38-17:50	The influence of oxide glass on the ferroelectric properties of lanthanum barium titanate perovskite ceramics for ultracapacitor applications Beata Wodecka-Dus, University of Silesia, Poland

Onsite Session 5 (UTC+11)

Resource Circulation and Environmental Systems Management

Chairman: Dr. M A Parvez Mahmud, University of Technology Sydney, Australia

15:50-18:26, Saturday, January 17, 2026 | **<Venue: Bradfield Room 2>**

SE012 15:50-16:02	A Multi-objective Optimization Model for Solid Waste Collection and Processing: A Case Study of Bangkok, Thailand Chalida U-tapao, King Mongkut's Insititute of Technology Ladkrabang, Thailand
SE093 16:02-16:14	Life Cycle Assessment of a Desalination-Hydroponic Greenhouse system Izza Fatima, Hamad Bin Khalifa University (HBKU), Qatar
SE024 16:14-16:26	Carbon Emission Prediction During Highway Construction: A Planning-Stage Modeling Approach Ming Cai, Sun yat-sen University, China
SE725 16:26-16:38	Classification and Storage of Municipal Solid Waste in Viet Nam: An Evidence of Gaps between Regulations and Practice Anh Nguyen Thi, University of Economics Ho Chi Minh City, Viet Nam
SE711-A 16:38-16:50	Mechanistic Insights into Phosphorus Release from Sediments in a Deep, Large Reservoir under Diverse Environmental Drivers Jue Wang, China Institute of Water Resources and Hydropower Research, China
SE710-A 16:50-17:02	Dominant Environmental Factors on Soil Infiltration in Valley Regions of the Tsurumi River Watershed Yuxin Ouyang, Kyushu University, Japan
SE724 17:02-17:14	Index System of Evaluation of Rural Eco-Environmental Quality: A Review Ge Yu, University of Auckland, New Zealand
SE743-A 17:14-17:26	Study on the Neurotoxic Effects of Cyanotoxin L-BMAA Based on Mitochondrial Damage Tingting Yan, Harbin Institute of Technology (Weihai), China
SE7010-A 17:26-17:38	Unusual Forest Sounds as Indicators of Climate Stress: An Acoustic Analysis Approach Divya Sukumar, University of New England, Australia
SE762-A 17:38-17:50	Optimization of Land-Sea Synergistic Water Ecological Spatial Networks in Megacities A Case Study of Shenzhen Xiaojun Li, Urban Planning & Design Institute of Shenzhen (UPDIS), China

SE755-A 17:50-18:02	Thermal structure and hydrodynamic analysis for a new type of flexible temperature-control curtain Deshen Chen, Harbin Institute of Technology (Weihai), China
SE763-A 18:02-18:14	Research and Practice on Systematic Control Methods for Urban Stormwater Runoff Pollution Lu Yu, Urban Planning & Design Institute of Shenzhen (UPDIS), China
SE091-A 18:14-18:26	Valorization of biomass via hydrothermal liquefaction for sustainable biofuel and value-added applications Hwai Chyuan Ong, Sunway University, Malaysia

Onsite Session 6 (UTC+11)

Energy Transition and Sustainable Development: Socio-Technical Systems Perspectives

Chairman: Dr. Abdullah M Alhomaidan, Arrass College of Technology, Saudi Arabia; Prof. Bhavna Tripathi, Manipal University Jaipur, India

15:50-17:50, Saturday, January 17, 2026 | **<Venue: Bradfield Room 3>**

SE061 15:50-16:02	Decoding Energy Consumption Dynamics of Sectoral and Economic Determinants Dian Rahmawati, University of Indonesia, Indonesia
SE761-A 16:02-16:14	Energy planning and management SIMARJEET KAUR, AMITY UNIVERSITY, INDIA
SE715-A 16:14-16:26	Impact of Mandatory Sustainability Reporting in Indonesia's Energy Sector: Trends and Challenges Iswahyudi Sondi Putra, SKK Migas, Indonesia
SE723-A 16:26-16:38	Analyzing the Impact of Political Polarization on Nuclear Energy Acceptance Seoyong Kim, Ajou University, South Korea
SE7004-A 16:38-16:50	Path to energy transition: Carbon lock-in in Northeast Asia Yao Lixia, Energy Studies Institute, National University of Singapore, Singapore
SE005 16:50-17:02	Integrating Sustainability into ESP for TVET: A Mixed-Methods Study on Language Proficiency and Green Competencies in Saudi Arabia Abdullah M Alhomaidan, Arrass College of Technology, Saudi Arabia
SE704-A 17:02-17:14	Socio-Culturally Sustainable Housing: Addressing Challenges and Opportunities for Low-Income Populations in developing country "Sana'a, Yemen" Hadil Abdulaziz Esmail Al-kuhlani, UTHM- Universiti Tun Hussein Onn Malaysia, Malaysia
SE7007-A 17:14-17:26	Kicking the can down the road – how to incorporate behavioural economics into environmental policy Richard Reeve, Independent Researcher, Australia
SE7008 17:26-17:38	A Fuel-to-Tailpipe Analysis of Ambient Air Quality Degradation in Lucknow: Policy Impact, Fleet Contribution, and Strategic Roadmaps for Sustainable Urban Mobility Tarush Chandra, Malaviya National Institute of Technology, Jaipur, India
SE748-A 17:38-17:50	Enhancing the Mechanical Properties of Recycled Fine Aggregate Concrete by Incorporating Recycled Concrete Powder Bhavna Tripathi, Manipal University Jaipur, India

Poster Display (UTC+11)

13:00-18:00, Saturday, January 17, 2026	<Venue: Ground Level Foyer>

SE014-A	Optimal deployment of distributed PV systems and transmission congestion Yiwei Sheng, City university of Hong Kong, China
SE053	Materials Life Cycle Assessments on LiNi0.5Mn1.5O4 Cathode Materials Jong-Tae Son, Korea National University of Transportation, Korea

Online Session (UTC+11)

The Decarbonization of Energy Systems: Technologies and Policies

Chairman: Prof. Hengyun Zhang, Shanghai University of Engineering Science, China

13:00-15:24, Saturday, January 17, 2026 | **<Zoom ID: 816 3575 3346>**

SE017 13:00-13:12	High-Accuracy Short-Term Load Forecasting for Power Systems Based on VMD-BiLSTM-GNN Integrated Model Chenchao Hu, Jimei University, China
SE050-A 13:12-13:24	Empowering the Intelligent Grid: AI-Driven Synergy Between Energy Storage and Cyber Security in the Era of Decarbonization Md Arifur Rahman, KNS IT BD LTD, Bangladesh
SE088 13:24-13:36	Design and Performance Analysis of a Synchronous Buck Converter Powered Electrolyser R Sathvik Reddy, PES University, India
SE123 13:36-13:48	Comparative Analysis of Artificial Neural Network Online and Metaheuristic PID Controllers for Speed Regulation of a DC Motor Zahraa S. Salim, Southern Technical University, Iraq
SE714 13:48-14:00	Targeted Embodied Energy Mitigation in Ethiopian Housing: A Sensitivity Analysis for Sustainable Material Optimization Getahun Ayele Tessema, Indian Institute of Technology Roorkee (IITR), India
SE072 14:00-14:12	A Low-Cost E-Mobility Blueprint From China's Paradigm: Lessons From Laos's BRI Power Sector And Pathways To Modernize Europe's Energy-Transport Systems Hechu Wang, Geely University of China, China
SE068 14:12-14:24	Pyrolysis of Mixed Plastic Waste (MPW): Experimental Investigation for Maximising Hydrogen-rich Syngas Production Md Bahar Uddin, Central Queensland University, Australia
SE013 14:24-14:36	Energy Consumption Analysis of the Faculty of Engineering Buildings at the Islamic University of Madinah: Summer-Winter Comparison Yahya Ahmed Ali Alashwal, Islamic University of Madinah, Kingdom of Saudi Arabia
SE772 14:36-14:48	Classification Of Mangrove Species Based On Phytoremediation Potential In Heavy Metal-Contaminated Sediments Using Machine Learning Harry Irawan Johari, University of Muhammadiyah Mataram, Indonesia

SE066-A 14:48-15:00	Incentive-Based Demand Response Modeling in Japan's Day-Ahead Electricity Market: Integrating Customer Satisfaction into Social Welfare and Profitability Ladan Malehmirchegini, Kyushu University- International Institute for Carbon-Neutral Energy Research (I2CNER), Japan
SE116-A 15:00-15:12	Selective Hydrogenation of 5-Hydroxymethylfurfural to 5-hydroxymethyltetrahydrofuran: Study of the reaction with commercial Palladium-based catalysts Ramzi Nasser Ahmed Saif, Pisa University, Italy
SE7009-A 15:12-15:24	A Decentralized Solid Waste Management Framework for Coral Archipelagos: A Technical Proposal for Lakshadweep, India Abdur Raoof Khan, VIT Bhopal University, Bhopal, Madhya Pradesh India
SE121 15:24-15:36	CFD-Based Analysis of Double-Swirl-Driven Hot- Air Flow in a Convective Drying Chamber for Fruits and Roots Yanis Alexis Oblitas Huapaya, Peruvian University of Applied Sciences (UPC), Peru

Delegates List

Christian Fong	University of Newcastle, Australia
Jianjun Li	Sichuan University, China
Mengyang Fan	Sichuan University, China
Song Shu	Sichuan University, China
ABDALLA MOHAMED ALI MOHAMED	University of Electronic Science and Technology of China, China
Mathew Breitener	Mist of Miami LLC, DUBAI, UAE
Dongwook Lim	Sejong University, Republic of Korea
Hansung Kim	Sejong University, Republic of Korea
Jihyeon Byun	Sejong University, Republic of Korea
Amanda Ernst	Ernco Environmental, Canada
Derrick (Josh) Ernst	Ernco Environmental, Canada
Adem Sav	Queensland University of Technology, Australia
Radin Maya Saphira Radin Mohamed	Universiti Tun Hussein Onn Malaysia, Malaysia
Che Gaston Azunui	Government, Cameroon
Mbah Clinton Acha	Government, Cameroon

One Day Tour (UTC+11)

(Sunday, January 18, 2026)

8:30	Meeting point: Lobby of the Conference Hotel-**View Sydney** (Departure)	13:30	Free time for lunch (at your own expense)
9:30	Arrive at Featherdale Wildlife Park Enjoy close encounters with Australian animals. (Zoo ticket is included with morning tea and time for koala photos.)	14:30	Visit Echo Point, Three Sisters, Jamison Valley, and cliff walk viewpoints
10:30	Depart for the Blue Mountains (about 1 hour drive)	15:30	Arrive at Leura Village Enjoy free time to explore shops, cafés, and local streets.
12:00	Visit Scenic World Take the cableway, enjoy light walking, and explore the rainforest valley. (Cable car ticket is included.)	18:30	Return to **View Sydney**. The tour concludes.

Note

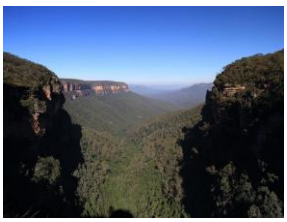
※The tour is not included in the regular registration of author, presenter, delegate.

※The shuttle will depart promptly at **8:30 AM**. Please be ready 5–10 minutes in advance.

※Itinerary Pace: This tour features a compact schedule designed to cover key attractions. Travel times are approximate and subject to change depending on traffic conditions.

※Please take good care of your valuables at any time during the tour. The conference organizer does not assume any responsibility for the loss of personal belongings of the participants during the tour.



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