



International Symposium on Recent Innovation for Sustainable Development

Programme Book

Date: 18th – 19th November 2025

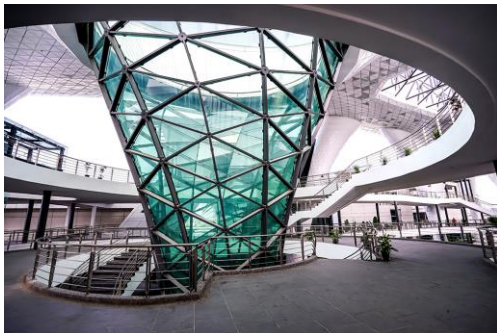
Venue: Tun Abdul Taib Mahmud Chancellor Hall, UTS, Sibul, Sarawak

Theme: Empowering Sustainable Solutions Through Innovation



About the Symposium

RISD25 is envisioned as an international symposium aimed at fostering global collaboration and knowledge exchange. The event will bring together leading experts, academics, industry professionals, and policymakers to share recent innovations and promote interdisciplinary dialogue in support of sustainable development.

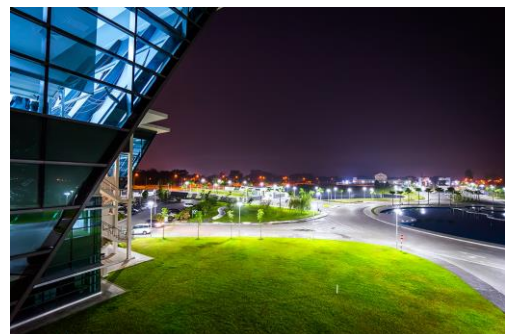


In an era of rapid technological advancement and growing environmental challenges, RISD25 will serve as a strategic platform to explore transformative solutions, bridge research and practice, and advance collective progress aligned with the United Nations Sustainable Development Goals (SDGs).

About the Organizer

The Centre for Research of Innovation and Sustainable Development (CRISD) is a newly established research centre at the School of Engineering and Technology (SET), the University of Technology Sarawak (UTS). It serves as a dynamic hub for gathering research expertise, students, and industry partners in collaborative multidisciplinary projects.

At CRISD, we aim to cultivate cutting-edge research and technological advancements through an interdisciplinary approach, fostering innovation and progress. Our focus is on developing pioneering process technologies that aim to enhance future industry standards and improve the quality of life.



Staff at SET work in four multidisciplinary areas: Civil Engineering, Mechanical Engineering, Electrical Engineering, and Food Technology. Each staff member conducts research within their respective clusters. Research grants foster collaboration among staff, students, and industries.

We are dedicated to sustainable development, creating technologies that minimize environmental impact, conserve natural resources, and promote economic efficiency.

Welcome Message from the Organizing Chairman



Assoc. Prof. Ir. Dr. Ling Jen Hua

Chairman

International Symposium on Recent Innovation for
Sustainable Development 2025 (RISD25)

On behalf of the Organising Committee, I extend a warm welcome to all participants of the International Symposium on Recent Innovation for Sustainable Development (RISD25). Hosted by the University of Technology Sarawak, this two-day event brings together experts, researchers, and professionals from academia, the public sector, and industry who share a commitment to advancing knowledge and innovation in sustainability. RISD25 provides a timely platform for connecting ideas, disciplines, and regions in pursuit of a more resilient and responsible future.

Through a series of keynote presentations and Q&A sessions, the symposium offers opportunities to exchange ideas, share experiences, and explore collaborative approaches to sustainability challenges. Covering diverse themes such as sustainable infrastructure, materials innovation, energy, healthcare, and construction management, RISD25 aims to generate practical, science-based, and socially relevant solutions. By linking academic research with real-world applications, it highlights pathways for growth that combine innovation, resilience, and resource efficiency.

We are honoured to welcome nine distinguished keynote speakers from Malaysia, Singapore, and Brunei, representing varied fields of expertise. Their insights into public infrastructure, green materials, clean energy, healthcare innovation, and urban development promise to enrich discussions and inspire new perspectives. Their participation underscores the importance of regional and international cooperation in advancing sustainable development.

This event would not have been possible without the dedication of the Organising Committee, technical team, and volunteers, whose professionalism ensured its success. I also extend sincere appreciation to our institutional partners, sponsors, and supporters for their confidence and contribution.

I encourage all participants to engage actively in the sessions, exchange ideas, and build meaningful connections that continue beyond this symposium. May RISD25 serve as a catalyst for innovation and collaboration toward a sustainable and inclusive future. I wish everyone a productive and inspiring experience throughout the symposium.

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Organizing Committee

Chairman

Assoc. Prof. Ir. Dr. Ling Jen Hua

Deputy Chairman

Dr. Mastura Bujang

Secretariat

Mdm. Nur Raihan Zapry
Ms. Keren John

Head of Finance

Dr. Zalikha Raman

Head of Programme

Assoc. Prof. Ts. Dr. Yong Ching Yee

Head of Souvenir

Dr. Irina Wong Ming Ming

Head of Sponsorship & Exhibition

Dr. Qurratu Aini Sirat@Siat

Head of Publicity

Ts. Nuramalina Bohari

Head of Food & Beverage

Ts. Dr. Nurhayatie Sajali

Head of Performance

Mdm. Syazie Nordzaima

Head of Protocol

Mr. Lim Yong Tat

Committee Member

Mr. Ting Kee Chuong
Mr. Nicky Sharif
Dr. Tiong Meng Chung
Mdm. Asmaa Muniera
Ms. Dyg Noor Azie
Mr. Wong Chee Chung
Ms. Hasfiza Mohd Ikhwan
Mdm. Afizah Razali

Invited Speakers



Ir. Ts. Gs. Br. PMr. Dr. Cassidy anak Morris
Director of Public Works,
JKR Sarawak



Ir. Dr. Denni Kurniawan
Assistant Professor,
Mechanical Engineering
Programme,
Universiti Teknologi Brunei



Dr. Du Hongjian
Director (MSc Civil
Engineering Programme),
National University of
Singapore



Prof. Ts. Dr. Mohd Rosli bin Hainin
Dean,
Faculty of Civil Engineering,
Universiti Teknologi Malaysia



Ir. Dr. Kasumawati bt. Lias
Department of Electrical &
Electronics Engineering,
Universiti Malaysia Sarawak,
UNIMAS



Dr. Ng Sing Muk
General Manager, R&D,
Sarawak Energy Berhad



Ms. Jessica Jong Tit Ka
Head of Sustainability,
Quality, Environment, Safety
and Health
Sunway Malls, Malaysia



Dr. Ts. Nor Anisa Binti Arifin
Research Executive,
TNB Research Sdn Bhd



Mr. Mohd Azimie Ahmad
School Safety and Health
Coordinator
University of Technology
Sarawak

Programme Overview

Day 1 – 18 November 2025

TIME	DURATION (MIN)	AGENDA	VENUE
0800 – 1200		Registration	
0830 – 0900	30	Arrival of Guest of Honour	
0900 – 1100	120	National and State Anthem Doa Recitation	
		Welcoming speech Officiating Speech Symbolic Launching Souvenirs Presentation Photo Session Tour to Exhibition Booth	
		Tea Break	
1100 – 1200	60	Keynote Session 1 Ir. Ts. Gs. Br. PMr. Dr. Cassidy anak Morris Director of Public Works	
1200 – 1330	90	Lunch Break	
1330 – 1430	60	Keynote Session 2 Ir. Dr. Denni Kurniawan Universiti Teknologi Brunei	
1430 – 1530	60	Keynote Session 3 Dr. Du Hongjian National University of Singapore	
1530 – 1600	30	Tea Break	
1600 – 1700	60	Keynote Session 4 Prof. Ts. Dr. Mohd Rosli bin Hainin Universiti Teknologi Malaysia	
End of Day 1			

Day 2 – 19 November 2025

TIME	DURATION (MIN)	AGENDA	VENUE
0800 – 1000		Registration	
0900 – 1000	60	Keynote Session 5 Ir. Dr. Kasumawati bt. Lias UNIMAS	
1000 – 1030	30	Tea Break	
1030 – 1130	60	Invited Session 6 Dr. Ng Sing Muk Sarawak Energy Berhad	
1130 – 1300	90	Lunch Break	
1300 – 1400	60	Invited Session 7 Ms. Jessica Jong Tit Ka Sunway Malls, Malaysia	
1400 – 1500	60	Invited Session 8 Dr. Ts. Nor Anisa Binti Arifin TNB Research Sdn Bhd	
1500 – 1530	30	Tea Break	
1530 – 1630	60	Invited Session 9 Mr. Mohd Azimie Ahmad University of Technology Sarawak	
End of Symposium			

Key Topics



1. Sustainable Development Goals (SDGs)

- Innovations supporting the UN SDGs
- Technologies for poverty alleviation and food security
- Sustainable solutions for clean water, sanitation and affordable energy
- Sustainable development policies and framework



2. Environmental Sustainability

- Climate change mitigation and adaptation strategies
- Renewable energy technologies (solar, wind, hydro, etc.)
- Waste management and circular economy initiatives
- Conservation of biodiversity and ecosystems
- Innovations in carbon capture and storage (CCS)



6. Health and Well-being

- Innovations for global health and well-being
- Sustainable healthcare systems and practices



5. Education and Social Innovation

- Innovative approaches to sustainability education
- Social entrepreneurship for sustainable development
- Community-driven sustainable development projects



3. Sustainable Urbanization and Infrastructure

- Smart cities and urban planning
- Sustainable transportation system
- Green construction materials and technologies
- Resilient infrastructure for climate adaptation



4. Advanced Technologies for Sustainability

- Artificial Intelligence (AI) and big data for sustainability
- Internet of Things (IoT) applications in environmental monitoring
- Block chain for sustainable supply chains
- Biotechnologies for agriculture and healthcare

Abstracts of Session (100-150 words, Secretariat, please help)

Session 1

Vision for Sustainable Public Infrastructure Development

Session 2

Manufacturing Engineering Approach to Sustainability

Session 3

Materials Innovation to Reduce Carbon Emission in the Built Environment

Concrete, affordable, versatile, and incredibly strong, is the most widely used manmade material on Earth. Yet, it carries a heavy environmental burden, contributing nearly 8% of global greenhouse gas emissions. Reducing this footprint has long been a grand challenge for the construction industry. This keynote will highlight recent advances at the National University of Singapore in developing low-carbon and circular building materials. By upcycling locally available resources such as industrial by-products and waste materials, our research aims to transform how concrete is produced and used, closing the loop on waste and moving decisively toward a net-zero built environment. Importantly, these innovations have progressed beyond the laboratory. Pilot implementations using calcined marine clay or recycled glass waste have demonstrated the potential of these materials to meet structural and durability requirements while significantly lowering embodied carbon. These successful field applications mark a promising step toward sustainable, scalable construction solutions.

- Dr. Du Hongjian, NUS -

Session 4

Utilizing Recent Pavement Technology for Sustainable Road

Session 5

Biomedical Engineering and Sustainable Healthcare Solutions

Session 6

Innovation in the Power Utility Sector

This presentation highlights the urgent need for transitioning to renewable energy in response to climate change driven by fossil fuel emissions. A staged approach is essential, beginning with low carbon options and progressing to clean renewable sources, guided by deliberate design rather than chance. Solutions must be tailored to local contexts, using available resources and technologies rather than replicating foreign models. Innovation is key to harnessing abundant but low-capacity renewable sources and ensuring efficient energy use. Hybrid technologies offer advantages by integrating multiple functions with fewer resources, and cross-sector collaboration, especially with digital and robotic systems, can enhance energy management. However, the transition faces major challenges including large-scale implementation, limited infrastructure, high initial costs, and a shortage of expertise. Overcoming these barriers through strategic planning and collective effort is vital to achieving a sustainable energy future.

- Dr. Ng Sing Muk, SEB -

Session 7

Innovating for a Sustainable Future: Leading Change in Urban Development and Retail

This keynote will explore how innovation can revolutionize urban development and retail to build a truly sustainable future. Drawing from my 15 years' experience at Sunway Malls, I will share powerful stories and bold strategies that harness technology, green design, and circular economy principles to transform cities into thriving, resilient ecosystems. Together, we will explore how visionary leadership and collective action can break barriers, empowering communities and businesses to create lasting environmental and social impact. This talk will inspire all stakeholders to embrace innovation as a catalyst for change—turning sustainability from a goal into a movement that shapes the cities and retail spaces of tomorrow.

- Jessica Jong Tit Ka, Sunway Malls -

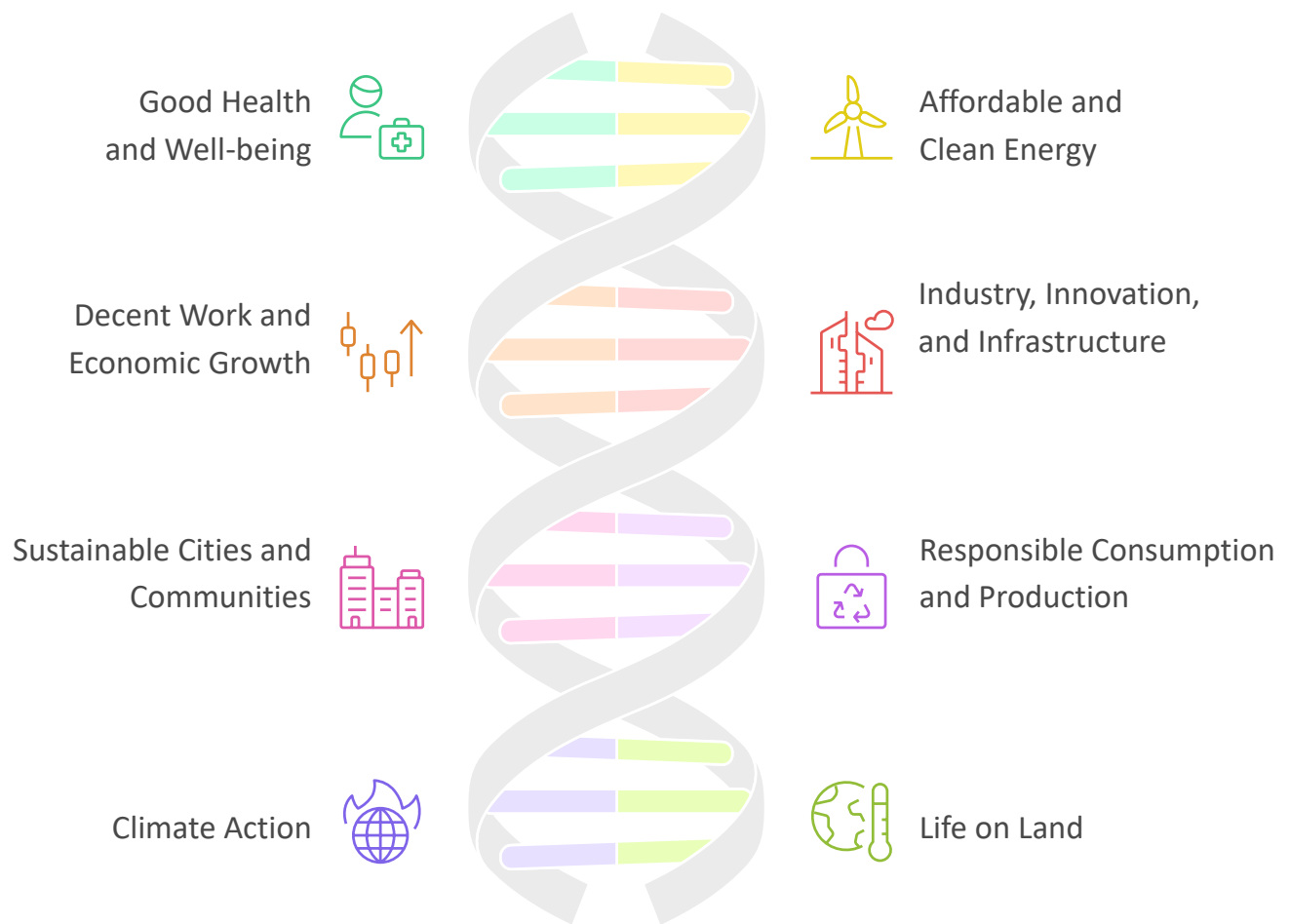
Session 8

Pathways Towards Net-Zero 2050: The Role of Green Hydrogen in Decarbonizing Power and Industry

Session 9

Integrating Safety and Sustainability in Construction Management through Innovations

Sustainable Development Goals (SDGs)



Sponsorship & Exhibition Booth

In Collaboration with:



IEM

The Institution of Engineers, Malaysia

Platinum

Sponsor

Gold

Sponsor

Silver

Sponsor

Bronze

Sponsor

*Thank
You*





RECENT INNOVATION FOR
SUSTAINABLE DEVELOPMENT 2025

Practical Information

University of Technology Sarawak



Welcome to University of Technology Sarawak (UTS), one of the new breed of technological based universities in the country. Founded in 2013, UTS is the only university which is wholly owned by the Sarawak State Government.

Located in the heart of Borneo, UTS offers a broad range of professional and industry-linked academic programmes that are relevant to the unique requirements of Sarawak in particular and Malaysia in general. Therefore, we are proud to be recognized as the only “home-grown” TVET university in Sarawak with the aim to produce an educated and highly skilled human capital for the new and emerging industries.

UTS also prides itself as the only university in the world being awarded the prestigious Platinum ratings in Green Building Index (GBI) for its campus design in promoting sustainability in the built environment and energy utilization. The campus design is very impressive, stunningly beautiful and remarkably spectacular. This modern setting within the enclosure of the rainforest and nature will provide the most conducive learning environment for our students.

The University has invested heavily in teaching-learning facilities, especially state-of-the-art laboratories equipment, ICT infrastructure and services, and other resources for research and development (R&D). Our R&D activities are very closely linked and collaborated with industry partners and government agencies.

In recent years we have been embarking on our internationalization programmes to include student mobility, staff exchange, academic articulation arrangement and joint research projects with universities from United Kingdom, Australia, Europe, Japan, China, Korea, Taiwan, India and ASEAN countries.

We would like to welcome you and to be part of this energetic and highly motivated campus community that will unleash your full potential to realize your dreams.

I am delighted to be part of this promising new university. I wish to work closely with all staff and students in making UTS a great institution of academic excellence with dignified character and values.

Prof Datuk Dr Khairuddin Ab Hamid

Vice Chancellor

Thank You for Participating

We look forward to seeing you at our next event.



More info:

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 <https://www.uts.edu.my>