



ICBS 2025

# INTERNATIONAL CONFERENCE ON BORNEO SUSTAINABILITY 2025

Programme Book

EMPOWERING BORNEO, INSPIRING THE WORLD

9-11 SEPTEMBER 2025  
UNIVERSITI MALAYSIA SABAH

ORGANIZED BY:



**UMS**  
UNIVERSITI MALAYSIA SABAH



KONSORTIUM UNIVERSITI  
UNIVERSITAS BORNEO (KUUB)



**ASEAN  
MALAYSIA 2025**  
SUSTAINABILITY AND DEVELOPMENT

[www.icbsborneoums.com](http://www.icbsborneoums.com)

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*Leading Towards Innovative Societies*



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**ICBS 2025**

Empowering Borneo, Inspiring The World

# Welcome Message

## Conference Chair

Assalamualaikum and warm greetings,

On behalf of the Organizing Committee, it is my pleasure to welcome you to the International Conference on Borneo Sustainability 2025 (ICBS 2025).

With the theme “*Advancing Science, Arts, and Health for a Resilient Future*” and the tagline “*Empowering Borneo, Inspiring the World,*” this conference reflects our collective commitment to building a more sustainable future.

ICBS is unique because it grows from the heart of Borneo; a region rich in biodiversity, cultural heritage, and resilient communities. It is not only a platform to share research but also a meeting ground where academia, industry, government, and communities come together to shape solutions that matter locally and globally.

Over the two days, you will experience inspiring keynote talks, engaging sessions, creative poster presentations, and a special tour of UMS’s green campus—our living laboratory for sustainability. ICBS 2025 has received an encouraging response, with a total of 152 submissions. Of these, 43 percent come from Cluster 1: Science, Technology and Engineering, 31 percent from Cluster 2: Medicine and Natural Sciences, and 26 percent from Cluster 3: Arts and Social Sciences.

We are also proud to welcome international contributions from participants representing Indonesia, China, India, Nigeria, Sri Lanka, and Pakistan — a true reflection of the global interest in Borneo’s sustainability journey. To further strengthen the impact of this conference, selected works will be published in indexed proceedings, ensuring that the knowledge created and shared here will reach a wider global audience and leave a lasting mark in the field of sustainability.

This gathering is more than an academic event. It is a chance to build collaborations, strengthen networks, and inspire one another to act with urgency and responsibility. I encourage you to take full advantage of this opportunity—share your ideas, listen with openness, and let new partnerships grow.

A conference of this scale is never the work of one, but of many. My heartfelt thanks go to Universiti Malaysia Sabah (UMS), KUUB member universities and partners, our keynote and plenary speakers, paper presenters, reviewers, the hardworking organising committees, technical teams, volunteers, and sponsors. Your dedication and support have made this event possible.

May ICBS 2025 ignite meaningful dialogue, foster enduring collaborations, and open new pathways of innovation.

Together, let us make ICBS 2025 a milestone in shaping a sustainable and resilient future for Borneo and beyond.



**Professor Ir. Dr. Nurmin Bolong**

Conference Chair

ICBS 2025



ICBS 2025

Empowering Borneo, Inspiring The World

# Opening Message

## Vice Chancellor, Universiti Malaysia Sabah

Assalamualaikum and warm greetings,

On behalf of Universiti Malaysia Sabah (UMS), it is my great honor to welcome all distinguished guests, scholars, and participants to the International Conference on Borneo Sustainability 2025 (ICBS 2025).

With the theme “Advancing Science, Arts, and Health for a Resilient Future” and the tagline “Empowering Borneo, Inspiring the World,” this conference is a platform where knowledge meets action.



ICBS 2025 brings together three clusters of knowledge — Engineering, Science & Technology; Arts & Social Sciences; and Medical & Health Sciences — to enhance sustainability awareness, promote impactful research, foster cross-sector collaboration, and connect researchers with stakeholders to translate innovation into practice.

This conference reflects our unwavering commitment to environmental stewardship, community empowerment, and regional development. Borneo’s rich heritage, biodiversity, and cultural wisdom remind us that sustainability is not a choice, but a shared responsibility.

May ICBS 2025 inspire new ideas, strengthen partnerships, and guide us all toward a more sustainable and resilient future.

Welcome to ICBS 2025, and thank you for being part of this journey.

**Professor Datuk Dr. Kasim Hj. Mansor**

Vice Chancellor

Universiti Malaysia Sabah



# About ICBS 2025

As one of the flagship activities under the Consortium of Universities of Borneo (KUUB), Universiti Malaysia Sabah (UMS) is proud to host the International Conference on Borneo Sustainability 2025 (ICBS 2025). The conference will take place over four days, from 9 to 12 September 2025, in Kota Kinabalu, Sabah.

ICBS 2025 aims to provide a strategic academic platform that brings together researchers, scholars, industry professionals, and policymakers to exchange knowledge and explore innovative pathways for sustainability. The conference will feature three main clusters:

- Science, Technology & Engineering
- Arts & Social Sciences
- Medicine & Natural Sciences

By spanning diverse disciplines, ICBS 2025 underscores the importance of cross-sectoral collaboration in tackling increasingly complex global challenges such as climate change, resource management, digital transformation, and community resilience.

The conference also serves as a catalyst for regional and global cooperation, strengthening academic and research collaboration among KUUB member universities and beyond. Through keynote addresses, plenary sessions, parallel paper presentations, poster sessions, workshops, and networking activities, ICBS 2025 will highlight innovative solutions that integrate sustainability principles into research, education, and industry practices.

Ultimately, ICBS 2025 aspires to position Borneo as a hub of sustainable innovation, while showcasing the role of UMS and KUUB in advancing the global sustainability agenda.

To learn more about ICBS 2025, visit our website: [www.icbsborneoums.com](http://www.icbsborneoums.com)





# Organising Committee

## Honorary Chairperson

**Professor Datuk Dr. Kasim Hj. Mansor**  
Vice Chancellor, Universiti Malaysia Sabah

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## Advisor

**Professor Dr. Mohammad Saffree Jeffree**  
Assistant Vice-Chancellor (Strategy), Universiti Malaysia Sabah

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## Chairman

**Professor Ir. Dr. Nurmin Bolong**  
Director, Strategic Management Center, Universiti Malaysia Sabah

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## Co-Chairman

**Ts. Dr. Suhali Mustafa**  
Secretariat (Innovation), Konsortium Universiti Universitas Borneo (KUUB)

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## Secretary I

**Dr. Tan Soo Fun**  
Deputy Director (Data Analytics and Performance Quality)  
Strategic Management Center, Universiti Malaysia Sabah

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## Secretary II

**Associate Professor Dr. Wardatul Akmam Din**  
Director, Center for Internationalization and Global Engagement  
Universiti Malaysia Sabah

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## Secretary III

**Tn Haji Fakhzan Haji Buang**  
Honorary Chief Secretariat, Konsortium Universiti Universitas Borneo (KUUB)

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**Joyce Morris Kapong**  
Secretariat (Cluster Community), Konsortium Universiti Universitas Borneo (KUUB)

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**Hajjah Siti Rajanah Abdul Aziz**  
Secretariat(Cluster Governance and International Relations)  
Konsortium Universiti Universitas Borneo (KUUB)

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## Secretariat committee (Publicity & Outreach)

**Dr. Tan Soo Fun**  
Deputy Director (Data Analytics and Performance Quality)  
Strategic Management Center,Universiti Malaysia Sabah

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**Associate Professor Dr. Wardatul Akmam Din**  
Director, Center for Internationalization and Global Engagement  
Universiti Malaysia Sabah

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**Tn Haji Fakhzan Haji Buang**  
Honorary Chief Secretariat, Konsortium Universiti Universitas Borneo (KUUB)

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Head of Administration, Strategic Management Center  
Universiti Malaysia Sabah

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## Protocol, Media, Publicity

**Dr. Rizal Zamani Idris**  
Director, Corporate Communication Centre  
Universiti Malaysia Sabah



**Technical Program  
Committee**

**Science Technology and Engineering Cluster Coordinator**

Leader:

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Senior Lecturer, Faculty of Engineering

**Ts. Dr. Mohamad Zul Hilmey bin Makmud**

Senior Lecturer, Faculty of Science and Technology

**Dr. Lai Po Hung**

Senior Lecturer, Faculty of Computing and Informatics

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**Medical and Science Cluster Coordinator**

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Postgraduate Programme Coordinator, Faculty of Medicine and Health Sciences

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Head of Department of Medical Education, Faculty of Medicine and Health Sciences

**Associate Professor Dr. Mohammad Tamrin Mohamad Lal**

Deputy Director (Research and Innovation)

Borneo Marine Research Institute

**Assoc. Prof. Dr. Abdul Rahman Bin Ramdzan**

Associate Professor, Faculty of Medicine and Health Sciences

**Dr. Julia A/P Joseph**

Senior Lecturer, Faculty of Medicine and Health Sciences

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Leader:

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Director, Borneo Institute For Indigenous Studies

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Deputy Dean (Research and Innovation)

Academy of Creative Arts and Technology

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Borneo Institute For Indigenous Studies

**Dr. Mohd Juhar Harun**

Borneo Institute For Indigenous Studies

**Dr. Nor-Ina Binti Kanyo**

Borneo Institute For Indigenous Studies



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Deputy Director (Risk and Global Strategic), Strategic Management Centre,  
Universiti Malaysia Sabah

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Director, Development and Maintenance Office,  
Universiti Malaysia Sabah

**Stella @ Nurul Martini Gontol**

Director, Centre for NR Management and Student Residential Management  
Universiti Malaysia Sabah

**Head of Health  
and Safety**

**Professor Dr. Khamisah Awang Lukman**

Director, Center for Occupational Safety and Health, Universiti Malaysia Sabah

**Tour Program**

**Professor Dr. Awangku Hassanal Bahar Pengiran Bagul**

Director, EcoCampus Management Centre, Universiti Malaysia Sabah

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Dr. Jodin Makinda  
Dr. Borhan Bin Abdullah  
Dr. Khairul Hanim Bt Pazim @ Fadzim  
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Alexie Edwin Henry  
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Fidelia Hilda Rolland  
Fifi Fharidah Binti Roslan  
Intan Suhaila Nabila Binti Hanifa Maswan  
Mardhiahtul Izzaty Binti Mahmood  
Matjin Bin Hj Rasah  
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Mohamad Adam Sabri Bin Magi

Mohd Fazle Jahani  
Mohd Noor Fitri Bin Norbik  
Mohd Nuh Bin Lamjin  
Mohd Shukri Bin Sapsanih  
Mohd Sophian Junit  
Mohd Zulkarnain Bin Salim Ali  
Musa Bin Usop  
Nichelle Marie Donny  
Nurul Atiqah Amirah Binti Norhak  
Patrick Bin Bangson  
Ritchiericco Christopher Toidis  
Roslinah Bt Mahmud  
Rowena Ismai  
Salim Bin Saida  
Shariff Luqman Abd Kadir  
Suraidah Binti Punimin  
Suziemira Binti Taha  
Valerie Mabel Lopan  
Wan Kamarudin Abdullah



# Advisory Board

|  |  |
|--|--|
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| <b>University of Technology Sarawak</b>                      | <b>Professor Datuk Dr. Khairuddin Ab Hamid</b><br>Vice Chancellor                      |



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- Dr. Lai Po Hung
- Dr. Lilian Lee Shiau Gee
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- Dr. Saturi Baco
- Dr. Siti Nor Farhana Zakaria
- Dr. Suhaini Sudi
- Dr. Syed Umar Faruq Syed Najmuddin
- Dr. Tan Soo Fun
- Dr. Teo Siow Hwa
- Dr. Zulkhairul Naim Sidek Ahmad



# Plenary Keynote Speakers

## Economic Development Sustainability in Borneo

### **Professor Datuk Dr. Kasim Hj. Mansor**

Vice Chancellor

Universiti Malaysia Sabah



Economic development sustainability in Sabah is pursued through an integrated framework that balances economic, social, and environmental priorities. Since the launch of the Sabah Development Corridor (SDC) in 2008, the state has focused on enhancing competitiveness across agriculture, manufacturing, logistics, education, and tourism, while addressing human capital development and socioeconomic disparities. Under the 13th Malaysia Plan (2026–2030), these efforts are reinforced by commitments to green growth, poverty reduction, sustainable infrastructure, and alignment with the

Sustainable Development Goals (SDGs). Sabah also seeks to position itself as a regional green energy hub through the 2024 Biomass Policy, SOGIP, and clean electrification initiatives such as SabahRE2 and SE-RAMP 2040. Complementing this, the Blue Economy promotes marine biodiversity conservation and economic opportunities through protected areas management, while community and eco-tourism strengthen rural livelihoods and social inclusion. Enhanced connectivity via the Pan-Borneo Highway further supports regional integration and economic resilience. Collectively, these initiatives demonstrate Sabah's strategic trajectory towards inclusive, balanced, and sustainable economic development in Borneo.

Professor Datuk Dr. Kasim Hj. Mansor, JP, is a Professor of Economics and has served as the 7<sup>th</sup> Vice-Chancellor of Universiti Malaysia Sabah (UMS) since 2022. He has held various positions, including Deputy Vice-Chancellor (Student Affairs and Alumni) from 2009 to 2014, Dean of the Faculty of Business, Economics, and Accounting from 2020 to 2021, Dean of the School of Business and Economics from 2004 to 2009, Deputy Dean of the Postgraduate Centre from 2002 to 2004, and Head of the HE11 Program (Human Resource Economics) from 2001 to 2002. He holds a Bachelor of Business Administration and a Master of Economics from Indiana State University, Terre Haute, USA, and a Doctor of Philosophy (PhD) in Economics from the University of Wisconsin, Milwaukee, USA. He is a member of the Sabah Economic Advisory Council (SEAC) appointed by the Chief Minister of Sabah and is also the Vice-President of the United Sabah Islamic Association (USIA). Professor Kasim's areas of expertise include Labor Economics, Economic Development, and Poverty Studies.



# Keynote Speakers

## Borneo's Water-Energy-Food Nexus in achieving the UN-SDGs through the Material and Membranes Technology

### **Professor Ir. Dr. Muthia Elma**

Professor in Chemical Engineering  
Universitas Lambung Mangkura, Indonesia



This study investigates the Water-Energy-Food (WEF) nexus in Borneo through the application of sustainable materials and membrane technologies, in alignment with the United Nations Sustainable Development Goals (UN-SDGs). The research focuses on integrating green technologies to address regional challenges in water treatment, renewable energy production, and sustainable food systems. Various water sources—including wetland saline water, peat water, seawater, river water, and industrial effluents such as textile wastewater, palm oil mill effluent, and tofu/noodle wastewater—were treated using membranes synthesized from organosilica, pectin, peat clay, polymers, and carbon from *Nypa fruticans*. These membranes demonstrated effective rejection of contaminants and high water flux. For instance, silica-pectin ultrafiltration membranes achieved over 84%  $UV_{(254)}$  rejection in peat water, while organosilica multichannel membranes showed 99.8% salt rejection in brackish water. In the energy sector, reverse electro dialysis (RED) membranes were employed to generate electricity from natural salinity gradients between wetland saline water and seawater, offering a sustainable pathway for localized energy production. This approach has been supported by reactor designed by M2ReG that enhance RED performance and energy recovery. For food applications, biodegradable films were developed using hydrogen-rich extracts from water hyacinth, edible starch from sweet potatoes, and mulch films derived from ubi nagara. These materials were tested for mechanical stability and biodegradability, supporting sustainable food packaging and agricultural practices. Overall, this work presents a regional strategy integrating material and membrane innovations to enhance water security, promote renewable energy, and support sustainable agriculture. The findings contribute to a circular economy model that aligns with multiple UN-SDG targets, demonstrating the potential of local resources and green technologies in achieving sustainable development in Borneo.

Muthia received her master's degree from Ecole Des Mines De Nantes – France and her PhD from School of Chemical Engineering, the University of Queensland- Australia. During her PhD, Muthia worked with two research topics (diffusivity in Coal Seams Gas and Water Desalination). She's currently focusing on Membrane Technology and Derived Silica Membranes for Waste, Water and Wetland Water Treatment to develop her expertise in research and publication. She has secured \$2.222 M USD for completing her projects including fabrication many varieties of membrane types and modules performed for many applications, such as waste water, acid mine drainage, wetland and wetland saline water and other water treatment and gas separation in accordance with her expertise. As a professor, she has several experiences in teaching (national and international), a researcher in LNG Company as well as a researcher in the University of Queensland. At present, she likes learning something new, work hard, teamwork and friendly as her character.



# Keynote Speakers

## Borneo Sustainability and Infectious Diseases: A One Health Perspect

### **Professor Dr. Kamruddin Ahmed**

Director

Borneo Medical and Health Research Centre (BMHRC)

Universiti Malaysia Sabah, Malaysia

Borneo's ecological richness presents both unparalleled conservation opportunities and significant public health challenges. As environmental pressures intensify through climate change, deforestation, and urban expansion, the emergence and transmission of infectious diseases are increasingly shaped by human-environment interactions. We have been applying a One Health framework to explore the links between sustainability and infectious disease risks notably zoonotic malaria, emphasizing the interconnectedness of human, animal, and ecosystem health. From recent studies in Sabah, here we highlight how integrating ecological stewardship with public health strategy can build resilience. Based on interdisciplinary research and local insights, we propose collaboration that bridges science, policy, and education to protect both the health of communities and the biodiversity of Borneo.



Professor Dr. Kamruddin Ahmed is a distinguished academic and researcher in the field of infectious diseases, microbiology, and public health. He earned his MBBS from the University of Dhaka in 1986, followed by a Diploma in Tropical Medicine (DTM) from the Institute of Tropical Medicine, Nagasaki University in 1988. He later completed his Ph.D. at Nagasaki University in 1992. Currently, Professor Ahmed serves as a Professor at the Faculty of Medicine and Health Sciences (since 2016) and as the Director of the Borneo Medical and Health Research Centre (since 2017) at Universiti Malaysia Sabah, Malaysia. His prior appointments include Associate Professor at the Faculty of Medicine, Oita University, Japan (2006–2016), Visiting Associate Professor at the Faculty of Science, Bilkent University, Turkey (2001–2004), and Assistant Professor at the Faculty of Medicine, Kuwait University (1995–1997). He also held various research and teaching positions at Nagasaki University, Japan, between 1992 and 2006. Professor Ahmed has extensive teaching experience, having taught microbiology, immunology, and infectious diseases to medical students; infectious diseases to Master in Tropical Medicine students; and biology, microbiology, and immunology to science students. He also teaches the epidemiology of tropical diseases to Doctor of Public Health students. Over his career, he has supervised seven PhD candidates, nine Master's students, and thirty-seven undergraduate students. His research focuses on molecular epidemiology, emerging infectious diseases and zoonoses, and diagnostics for infectious diseases. He has authored 168 peer-reviewed publications and contributed chapters to six academic books. His work has received 4,679 citations, with an h-index of 38 and an i10-index of 125, according to Google Scholar. A sought-after speaker, Professor Ahmed has delivered 14 invited talks at international conferences and 15 invited lectures at universities and institutes across Japan, Turkey, Malaysia, Bhutan, Brunei, Finland, and the USA. In addition to his academic and research contributions, Professor Ahmed serves as the Editor-in-Chief of the Borneo Journal of Medical Sciences (BJMS) since 2021. He has also served on the editorial boards of Journal of Physiological Anthropology, Tropical Medicine and Health (TMH), and previously for BJMS from 2018 to 2020. He is a Councilor of the Japanese Society of Tropical Medicine and an active peer reviewer for high-impact journals, including PLOS ONE, PLOS Neglected Tropical Diseases, Emerging Infectious Diseases, Vaccine, and others. He currently holds visiting professorships at Nagasaki University (since December 2019) and Oita University (since July 2022).



# Keynote Speakers

## Integrating Maqāṣid al-Sharī'ah and Sustainable Development Goals (SDGs): UNISSA's Initiatives

### **Dr. Awang Haji Hambali Jaili Bin Haji Awang Jalil**

Director of Centre of the Promotion Knowledge and Language  
Universiti Islam Sultan Sharif Ali, Brunei

Maqāṣid al-Sharī'ah (the higher objectives of Islamic law) provide a comprehensive ethical foundation for sustainability, aligning directly with the framework of the Sustainable Development Goals (SDGs). The maqāṣid emphasize the protection of dīn (faith), nafs (life), 'aql (intellect), nasl (lineage/community), māl (wealth/resources), and bi'ah (environment), which parallel SDG priorities such as justice, health, education, poverty eradication, and environmental stewardship. Anchored in Qur'ānic principles and prophetic traditions, sustainability is not a foreign construct but deeply rooted in Islam through stewardship (khilāfah), balance (mīzān), justice ('adl), and the prevention of harm (lā ḍarar). Universiti Islam Sultan Sharif Ali (UNISSA) demonstrates this integration by embedding sustainability across its curriculum, promoting research and knowledge transfer, enhancing co-curricular and student life, and advancing campus-community initiatives. By situating the SDGs within an Islamic legal-ethical framework, UNISSA underscores sustainability as a faith-driven obligation, positioning itself as a model institution that harmonizes global development goals with Sharī'ah principles for societal well-being and environmental preservation.



Dr. Hambali Jaili is the Director of the Centre for the Promotion of Knowledge and Language at Universiti Islam Sultan Sharif Ali (UNISSA), Brunei Darussalam. He began his career as a Religious Education Officer in 2002 before serving at Kolej Universiti Perguruan Ugama Seri Begawan KUPU SB (2010–2018) in various leadership roles, including Deputy Dean of the Faculty of Usuluddin, Dean of Students, and Director of the Language Centre. Since joining UNISSA in 2018, he has held several senior positions, among them Director of the Centre for Public and International Relations and Assistant Rector (International and Research). An active scholar and speaker, Dr. Hambali is frequently invited as a keynote speaker, facilitator, and panelist at conferences and seminars in Brunei and abroad, including Qatar, Malaysia, Indonesia, and Thailand. His contributions span both academic and community engagement, with involvement in humanitarian and educational projects such as Hamlah Khairiyah and the long-running Back to School: Infaq for Orphans initiative in Brunei, Malaysia, Indonesia and Cambodia.



# Conference Program

9 SEPTEMBER 2025 Tuesday

## PRE-CONFERENCE 1

Title: **TRANSDISCIPLINARY RESEARCH WORKSHOP**

| TIME  | PROGRAMME  |
|-------|--|
| 07:40 | <b>Registration</b>  |
| 08:00 | <b>Opening Remarks</b>   |
| 08:10 | <b>Transdisciplinary Research Workshop</b><br>Speaker: <ul style="list-style-type: none"><li>• Dr. Zulkhairul Naim Sidek Ahmad</li><li>• Dr. Praneetha Palasuberniam</li></ul> |
| 10:00 | Refreshment Break  |
| 10:20 | <b>Pre-Conference Workshop (Cont.)</b><br>Photo Session  |

## PRE-CONFERENCE 2

Title: **ENHANCING ACADEMIC PRODUCTIVITY AND SUSTAINABILITY THROUGH GENERATIVE AI**

| TIME  | PROGRAMME   |
|-------|---|
| 08:50 | <b>Registration</b>   |
| 09:00 | <b>Opening Remarks</b>  |
| 09:10 | <b>Enhancing Academic Productivity and Sustainability Through Generative AI</b><br>Speaker: <ul style="list-style-type: none"><li>• Associate Professor Dr. Azali Saudi</li></ul> |
| 10:00 | Refreshment Break   |
| 10:20 | <b>Pre-Conference Workshop (Cont.)</b><br>Photo Session   |



## **PRE-CONFERENCE: UMS TOUR ECOCAMPUS**

### **TIME**

### **PROGRAMME**

|       |                                    |
|-------|------------------------------------|
| 13:30 | Registration                       |
| 14:00 | Pick up from Library, UMS          |
| 14:10 | Tour at UMS Mosque                 |
| 14:30 | Tour at Azman Hashim UMS Gallery   |
| 15:00 | Tour at Aquarium and Marine Museum |
| 15:30 | Tour at Borneensis Gallery         |
| 16:00 | UMS ODEC Beach                     |
| 16:30 | End of Tour / Back to Library, UMS |



## DAY 1 CONFERENCE 10 SEPTEMBER 2025 (Wednesday)

### TIME

### PROGRAMME

|       |  |
|-------|--|
| 08:00 | Participant Registration   |
| 08:45 | Arrival of Invited Guests<br>Arrival of Principial and Senior Office Universiti Malaysia Sabah<br>Arrival of Distinguished KUUB Members<br>Arrival of YBhg. Professor Datuk Dr. Kasim Hj. Mansor, JP<br>Vice Chancellor, Universiti Malaysia Sabah |
| 09:00 | National Anthem "Negaraku"<br>Prayer Recital   |
| 09:10 | <b>Welcoming Remarks</b><br><b>Professor Ir. Dr. Nurmin Bolong</b><br>Conference Chair   |
| 09:25 | <b>Opening Address</b><br><b>YBhg. Professor Datuk Dr. Kasim Hj. Mansor, JP</b><br>Vice Chancellor, Universiti Malaysia Sabah  |
| 09:40 | UMS Corporate Video Presentation   |
| 09:45 | <b>Plenary Keynote Speaker</b><br><b>YBhg. Professor Datuk Dr. Kasim Hj. Mansor, JP</b><br>Vice Chancellor, Universiti Malaysia Sabah  |
| 10:15 | Official Photo Session   |
| 10:20 | Morning Tea Break  |
| 10:45 | <b>Parallel Sessions</b> <ul style="list-style-type: none"><li>• Cluster Science, Technology &amp; Engineering</li><li>• Cluster Medicine and Natural Sciences</li><li>• Cluster Arts and Social Sciences</li></ul>                                |
| 13:00 | Lunch Break  |
| 14:00 | <b>Keynote Speaker 1</b><br><b>YBhg. Professor Ir. Dr. Muthia Elma</b><br>Universitas Lambung Mangkura, Indonesia  |
| 14:40 | Afternoon Tea Break  |
| 15:00 | <b>Parallel Sessions</b> <ul style="list-style-type: none"><li>• Cluster Science, Technology &amp; Engineering</li><li>• Cluster Medicine and Natural Sciences</li><li>• Cluster Arts and Social Sciences</li></ul>                                |
| 17:00 | <b>End of Day 1</b>  |



# DAY 2 CONFERENCE

## 11 SEPTEMBER 2025 (Thursday)

**TIME****PROGRAMME**

08:30 Participant Registration

09:00 **Keynote Speaker 2**  
**YBhg. Professor Dr. Kamruddin Ahmed**  
Director, Borneo Medical and Health Research Center (BMHRC)  
Universiti Malaysia Sabah, Malaysia

09:40 Morning Tea Break

10:00 **Parallel Sessions**

- Cluster Science, Technology & Engineering
- Cluster Medicine and Natural Sciences
- Cluster Arts and Social Sciences

**Poster Presentation & Evaluation**

13:00 **Lunch Break**

14:00 **Keynote Speaker 3**  
**YBhg. Dr. Awang Haji Hambali Jaili Haji Awang Jalil**  
Director of Centre of the Promotion Knowledge and Language  
Universiti Islam Sultan Sharif Ali, Brunei Darussalam

14:40 **Afternoon Tea Break**

15:00 Arrival of Invited Guests  
Arrival of Senior and Principal Officers of the University  
Arrival of **YBhg. Professor Dr. Mohammad Saffree bin Jeffree**  
Assistant Vice-Chancellor (Strategy), Universiti Malaysia Sabah  
Arrival of **YBhg. Professor Dr. Shahrul Razid Sarbini**  
President, Konsortium Universiti Universitas Borneo (KUUB)

**Commencement of Ceremony**

National Anthem “Negaraku” and State Anthem “Sabah Tanah Airku”  
Prayer Recital

**UMS Host Closing Remarks**

Professor Dr. Mohammad Saffree bin Jeffree  
Assistant Vice-Chancellor (Strategy), Universiti Malaysia Sabah

**Official Closing Address**

YBhg. Professor Dr. Shahrul Razid Sarbini  
President, Konsortium Universiti Universitas Borneo (KUUB)

**Prize Presentation**

Best Oral Presentation  
Best Poster Presentation

**Telaah: Professor Dr. Justin Sentian**

Book Title: Kembara Antartika Pengalaman Melalui Penyelidikan

17:00 Adjournment



# Paper Tracks and Schedule

**DAY 1: 10 SEPTEMBER 2025** Wednesday

**Renewable Energy Technology**

**Venue: Presentation Room 1**

Cluster 1 : **SCIENCE, TECHNOLOGY & ENGINEERING**  
 Session Chair : **PROFESSOR IR. DR. WILLEY LIEW YUN HSIEN**

| TIME  | PAPER ID:  | PAPER TITLE & AUTHORS   |
|-------|------------|---|
| 10:45 | <b>136</b> | Techno-Economic Feasibility of Decentralized and Centralized Off-Grid Solar PV Systems: A Case Study in Lok Dangkaan Pitas Sabah Malaysia<br><i>Presenter: Muhammad Usman Ibrahim</i> |
| 11:00 | <b>137</b> | Partial Discharge Diagnostics in Transformer Oil-Paper Insulation Systems: Advances, Challenges, and Future Prospects<br><i>Presenter: Mohd Asmawi Jali</i>                           |
| 11:15 | <b>49</b>  | Water Cooled Solar Photovoltaic System for Enhanced Energy Harvesting<br><i>Presenter: Abdul Ismail Abdul Rani</i>  |
| 11:30 | <b>77</b>  | Conversion of Used Plastic to Filament for Fused Filament Fabrication Process<br><i>Presenter: Syazwie Adam Sapihi</i>  |
| 11:45 | <b>108</b> | Advancing Net-Zero Goals through Biochar: Characterisation and Performance in Binary Blends with Biomass and Coal<br><i>Presenter: Ahmad Faizal Ahmad Zamli</i>                       |
| 12:00 | <b>128</b> | Performance Investigation of an Air Evaporative Cooler Integrated with Air Dehumidifier System<br><i>Presenter: Mohd Suffian Misaran</i>  |
| 12:15 | <b>61</b>  | Renewable Hybrid Energy System Optimization (Wind-PV-Genset) for Rural Tourism Electricity Demand Using OEMOF: A Case Study<br><i>Presenter: Eva Hertnacahyani Herraprastanti</i>     |
| 12:30 | <b>152</b> | Drying Efficiency of Banana and Potato in a Low-Cost Rainproof Solar Chimney<br><i>Presenter: Chu Chi Ming</i>  |



**DAY 1: 10 SEPTEMBER 2025** Wednesday

**Natural Science**

**Venue: Presentation Room 2**

Cluster 2 : **MEDICINE AND NATURAL SCIENCES**  
 Session Chair : **DR. M TANVEER HOSSAIN PARASH**

| TIME  | PAPER ID:  | PAPER TITLE & AUTHORS   |
|-------|------------|---|
| 10:45 | <b>1</b>   | Yield and Physicochemical Properties of Pili ( <i>Canarium ovatum</i> ) Pulp Oil<br><i>Presenter: Nur Ainani Zuyyin Jinin</i>   |
| 11:00 | <b>7</b>   | Comparative Plastome Analysis Reveals Genetic Diversity in Durian Species<br><i>Presenter: Wee Ching Ching</i>  |
| 11:15 | <b>10</b>  | Sago Fiber Mycelium Composites: Transforming Natural Waste into Sustainable, Biodegradable Materials<br><i>Presenter: Ann Anthony</i>   |
| 11:30 | <b>36</b>  | Emerging Diseases in Mesopredator Sharks: Implications for Marine Conservation and Ecosystem Resilience in Borneo Waters<br><i>Presenter: B. Mabel Manjaji-Matsumoto</i>  |
| 11:45 | <b>45</b>  | Sustainable aluminium ion removal using agro-waste-derived activated carbon for river preservation: from lab-scale towards upscaling study<br><i>Presenter: Lee Hui Tze</i>   |
| 12:15 | <b>69</b>  | Assessment of Chalcone Synthase Gene (CHS) as molecular marker for <i>Labisia pumila</i><br><i>Presenter: Ahmad Asnawi Mus</i>  |
| 12:30 | <b>70</b>  | Mitochondrial gene marker identification for a targeted hornbill eDNA assay<br><i>Presenter: Thien Choi Yi</i>  |
| 12:45 | <b>85</b>  | Survey of freshwater fish in lowland forest streams of Kinabalu Park, Sabah<br><i>Presenter: Nurfaezah Adam</i>   |
| 13:00 | <b>130</b> | Assessing Psychosocial Risk: Association Between Occupational and Sociodemographic Factors with Depression, Anxiety, Stress among Kota Kinabalu Government Tertiary Hospital Employees<br><i>Presenter: Aaron Tsen Siong Fatt</i> |
| 13:15 | <b>135</b> | Antioxidant, Antimicrobial and Phytochemical Composition of Zingiberaceae <i>cassumunar</i> Used by Penan People of Ulu Jelalong, Sarawak.<br><i>Presenter: Rachel Nasha Elen</i>   |



**DAY 1: 10 SEPTEMBER 2025** Wednesday  
**Arts, Language & Cultural Heritage**

**Venue: Presentation Room 3**

**Cluster 3 : ARTS AND SOCIAL SCIENCES**  
**Session Chair : PROFESSOR DR. JACQUELINE PUGH-KITINGAN**

| <b>TIME</b> | <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>  |
|-------------|------------------|---|
| 10:45       | <b>5</b>         | Environmental Theatre Elements in The Sawah Padi Musical Uda Dan Dara<br><i>(Analisis Elemen Teater Environmental Dalam Lakonan Presentasi Pementasan Teater Di Sawah Padi Muzikal Uda Dan Dara)</i><br>Presenter: <i>Ismaliza Ishak</i>                                    |
| 11:00       | <b>59</b>        | Preserving Cultural Identity Through Local Film: A Preliminary Review<br>Presenter: <i>Cyril Modili</i>   |
| 11:15       | <b>124</b>       | Exploring Local Wisdom in Community Development: A Preliminary Study in Kampung Darau, Kota Kinabalu, Sabah<br><i>(Menelusuri Kearifan Tempatan dalam Pembangunan Komuniti: Satu Kajian Awal di Kampung Darau, Kota Kinabalu, Sabah)</i><br>Presenter: <i>Rahmah Rashid</i> |
| 11:30       | <b>31</b>        | Echoes of Globalization in the Dayak Harvest Festival: The Transformation of Belief and Commodity into the Resilience of Tradition in Rural West Kalimantan<br>Presenter: <i>Ardana Kusumawanto</i>   |
| 11:45       | <b>84</b>        | Ace-Ing Leadership: A Study on How Language Empowers Youth to Lead with Confidence and Purpose<br>Presenter: <i>Albert anak Bruce</i>   |
| 12:00       | <b>53</b>        | Eco-Conscious Values in Indian Religious and Cultural Practices<br>Presenter: <i>Ratna Singh</i>  |
| 12:15       |                  | <b>Session Q&amp;A / Discussion (general)</b>   |
| 12:30       |                  | <b>Buffer / networking / overflow (if needed)</b>   |



**DAY 1: 10 SEPTEMBER 2025** Wednesday

**Socio-Economic Development, Governance & Globalization**

**Venue: Presentation Room 5**

Cluster 3 : **ARTS AND SOCIAL SCIENCES**  
 Session Chair : **ASSOCIATE PROFESSOR DR. SUDDIN LADA**

| <b>TIME</b> | <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>  |
|-------------|------------------|---|
| 10:45       | <b>104</b>       | How Does the Dual Governance Model Affect Village Fund Policy Implementation in Nagari?<br><i>Presenter: Jayanti Armida Sari</i>                            |
| 11:00       | <b>152</b>       | Youth Sustainable Development: Interlocking Crises of Poverty, Education and Early Marriage in Northeast Borneo<br><i>Presenter: Sharifah Rahama Amirul</i> |
| 11:15       | <b>37</b>        | The Dayak Basap and the Politics of Sustainability on the Periphery<br><i>Presenter: Manarul Hidayat</i>  |
| 11:30       | <b>34</b>        | Groundwater Quality and Human Health in Kamrup District, Assam<br><i>Presenter: Tirthankar Sarma</i>  |
| 11:45       | <b>15</b>        | Life in the midst of hardship: Socioeconomic Development of Communities in Sebatik Island, North of Borneo<br><i>Presenter: Ahmad Fauzan Baihaqi, M.Hum</i> |
| 12:00       |                  | <b>Session Q&amp;A / Discussion (general)</b>   |
| 12:15       |                  | <b>Buffer / networking / overflow (if needed)</b>   |



**DAY 1: 10 SEPTEMBER 2025** Wednesday  
**Biotechnology And Eco-Materials**

**Venue: Presentation Room 1**

Cluster 1 : **SCIENCE, TECHNOLOGY & ENGINEERING**  
 Session Chair : **ASSOCIATE PROFESSOR DR. RAHMATH ABDULLA**

| <b>TIME</b> | <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>  |
|-------------|------------------|---|
| 15:00       | <b>20</b>        | Phosphate and Potassium Solubilization Potential of Fungal Endophytes Isolated from Sabah Orchid Roots<br><i>Presenter: Jerry Junior Rama</i>                                       |
| 15:15       | <b>88</b>        | Sustainable Valorization of Oil Palm Empty Fruit Bunches: Role of Temperature and Aging in Biochar Production<br><i>Presenter: Khim Phin Chong</i>                                  |
| 15:45       | <b>126</b>       | Bacterial Identification Along the Upstream and Downstream of Murum River, Sarawak<br><i>Presenter: Sabrina Rancang</i>   |
| 16:00       | <b>138</b>       | Variation in Dipterocarp Flowering Across Three Forest Types During the 2019 General Flowering Event in Kabili-Sepilok Forest Reserve<br><i>Presenter: Sasikumar A/L Tanggaraju</i> |
| 16:15       | <b>71</b>        | CRISPR/Cas9-Mediated Inhibition of Malaysian Cytomegalovirus Using Plasmid and RNP Delivery Systems<br><i>Presenter: Krishnan Nair Balakrishnan</i>                                 |
| 16:30       | <b>89</b>        | N-doped graphene nanoplatelet/ reduced graphene oxide (GNP/rGO) aerogel for enhanced antibiotics adsorption<br><i>Presenter: Alvin Lim Teik Zheng</i>                               |
| 16:45       | <b>47</b>        | Immortalizing Stromal Cells for Sustainable In Vitro Gastric Research<br><i>Presenter: Carlos Silvester</i>   |



**DAY 1: 10 SEPTEMBER 2025** Wednesday

## Environmental Treatment And Resource Recovery Technologies

**Venue: Presentation Room 4**

Cluster 1 : **SCIENCE, TECHNOLOGY & ENGINEERING**  
Session Chair : **PROFESSOR IR. DR. CHU CHI MING**

| TIME  | PAPER ID:  | PAPER TITLE & AUTHORS   |
|-------|------------|---|
| 15:00 | <b>95</b>  | Recovery Of Oil and Grease from Palm Oil Mill Effluent Using Foam-Based Adsorbent<br><i>Presenter: Nur Fahtin Nabilah Rosman</i>  |
| 15:15 | <b>104</b> | Wastewater Treatment Through Water Hyacinth Phytoremediation for Irrigation Water Source<br><i>Presenter: Siti Nurfadilah Jaini</i>   |
| 15:30 | <b>107</b> | Effect Of Slow Vacuum Pyrolysed Palm Kernel Shell Wood Vinegar Formulations on Repelling Mosquitoes<br><i>Presenter: Rachel Fran Mansa</i>  |
| 15:45 | <b>113</b> | Impact Of Temperature and Volume Concentration of Nanoparticle in Electrolyte Solution on Hydrogen Yield Rate of A PVT Based Hydrogen Production System – An Experimental Study<br><i>Presenter: S.Senthil Raja</i> |
| 16:00 | <b>124</b> | Preparation Of Alumina Hollow Fiber Membrane Coated Silicone for Microplastic Separation<br><i>Presenter: Norfazliana Abdullah</i>  |
| 16:15 | <b>30</b>  | Hybrid cultivation of immobilised microalgae in recirculating aquaculture system<br><i>Presenter: Jessica Ling Siew Kiong</i>   |



**DAY 1: 10 SEPTEMBER 2025** Wednesday

**Medicine**

**Venue: Presentation Room 2**

Cluster 2 : **MEDICINE AND NATURAL SCIENCES**  
 Session Chair : **DR. DATU AGASI MOHD KAMAL**

| <b>TIME</b> | <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>   |
|-------------|------------------|--|
| 15:00       | <b>3</b>         | Prevalence of Medication Errors and its Associated Factor in District Hospital in Sabah<br><i>Presenter: Dhinagar Selgal Raddy</i>   |
| 15:15       | <b>6</b>         | Benefits of Targeted Healthcare Subsidies: A Scoping Review<br><i>Presenter: Nik Dewi Delina Nik Mohd Kamil</i>  |
| 15:30       | <b>9</b>         | Prevalence of liver complications and its associated factors among hepatitis B-infected adults in Sabah<br><i>Presenter: Zainib Amirah Anwar</i>   |
| 15:45       | <b>16</b>        | The Acute Effects of Resisted Sled Training (RST) on Muscle Recruitment<br><i>Presenter: Jumain Taepe</i>  |
| 16:00       | <b>21</b>        | Urban Gardens as a Health Promotion Strategy: Evaluating Food Security, Well-being, and Sustainability in Kota Kinabalu, Sabah<br><i>Presenter: S Muhammad Izuddin Rabbani Mohd Zali</i> |
| 16:15       | <b>23</b>        | Proteomics of Box Jellyfish, <i>Chironex yamaguchii</i> , from Sabah<br><i>Presenter: Muhamad Na'im Ab Razak</i>   |
| 16:30       | <b>35</b>        | Case Studies on Traditional Medicinal Systems in Northeast India<br><i>Presenter: Shraddha Basu</i>  |
| 16:45       | <b>54</b>        | Geometric Morphometric of Frontal Sinus: A Digital Approach to Sex Estimation among Malaysians<br><i>Presenter: Nur Damia Iwani Zulkiflee</i>  |
| 17:00       | <b>93</b>        | Antimycobacterial Potential of Hexane and Ethyl Acetate Extracts from Mangrove Species Against a Clinical Mycobacterium tuberculosis Strain from Sabah<br><i>Presenter: Tamar Kansil</i> |



**DAY 1: 10 SEPTEMBER 2025** Wednesday  
**Tourism, Environment & Conservation**

**Venue: Presentation Room 3**

Cluster 3 : **ARTS AND SOCIAL SCIENCES**  
 Session Chair : **ASSOCIATE PROFESSOR DR. NORMAH ABDUL LATIP**

| <b>TIME</b> | <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>  |
|-------------|------------------|---|
| 15:00       | <b>18</b>        | Refining Kota Kinabalu Tourism Trail and Urban Connectivity<br><i>Presenter: Nurakmal Abdullah @ Goh Tuo Ho</i>   |
| 15:15       | <b>25</b>        | Social media, Sustainable Tourism, and Cross-cultural Communication<br><i>Presenter: Melly Ridaryanthi</i>  |
| 15:30       | <b>101</b>       | Limestone Ecosystem Conservation via a Sustainable Tourism Framework in Kinta Valley, Perak<br><i>Presenter: Shaelza Shaca Shalmon</i>  |
| 15:45       | <b>122</b>       | Advocating for Fungal Conservation and Community Empowerment: Insights from the Lenggong Valley<br><i>Presenter: Sanjeef Kumr Subramaniam</i>   |
| 16:00       | <b>52</b>        | In-Situ Measurement of Fluorescence Yield of Scleractinian corals of Acropora Spp. at Kapas Island, Terengganu, Malaysia<br><i>Presenter: Tengku Fara Kamilia Tengku Mohd Kamil</i>                         |
| 16:15       | <b>87</b>        | Comparative Analysis of Dipterocarp Flowering Intensity During the 2019 General Flowering Event Across Multiple Forest Types in Kabili-Sepilok Forest Reserve<br><i>Presenter: Sasikumar A/L Tanggaraju</i> |
| 16:30       | <b>54</b>        | Building a Sustainable Borneo: A Comparative Study of the Sabah and Sarawak Development Corridors<br><i>Presenter: Audrina Shirley Norbert</i>  |
| 16:45       |                  | <b>Session Q&amp;A / Discussion (general)</b>   |
| 17: 00      |                  | <b>Buffer / networking / overflow (if needed)</b>   |

**DAY 1: 10 SEPTEMBER 2025** Wednesday**Consumerism & Technology****Venue: Presentation Room 5**Cluster 3 : **ARTS AND SOCIAL SCIENCES**Session Chair : **ASSOCIATE PROFESSOR DR. MOHD. YAZID MAT NOOR**

| <b>TIME</b> | <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>   |
|-------------|------------------|--|
| 15:00       | <b>58</b>        | Factors Influencing University Students' Purchase Intentions Toward Green Cosmetics in Klang Valley<br><i>Presenter: Zuroni Md Jusoh</i>                         |
| 15:15       | <b>68</b>        | Food Waste Reduction Intention among UPM Students (online delivery case)<br><i>Presenter: Norzalina Zainudin</i>   |
| 15:30       | <b>104</b>       | Does renewable energy and technological innovation impact energy security? Empirical evidence from seven big economies.<br><i>Presenter: Farhana Hoque Urmy</i>  |
| 15:45       | <b>98</b>        | Perception On Food Security: The Role of Self-efficacy, Awareness, And Altruism In Shaping Attitudes and Consumption Behavior<br><i>Presenter: Teck Weng Jee</i> |
| 16:00       |                  | <b>Session Q&amp;A / Discussion</b>  |
| 16:15       |                  | <b>Buffer / networking / overflow</b>  |

**DAY 2: 11 SEPTEMBER 2025** Thursday  
**Sustainable Built Environment****Venue: Presentation Room 1****Cluster 1 : SCIENCE, TECHNOLOGY & ENGINEERING**  
**Session Chair : PROFESSOR AR. NURAKMAL ABDULLAH @ GOH TUO HO**

| <b>TIME</b> | <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>  |
|-------------|------------------|---|
| 10:00       | <b>24</b>        | The Success Key Factors for Green Infrastructure Strategies in Mitigating Urban Heat Islands: A Comparative Case Study of Copenhagen, Singapore, and Portland<br><i>Presenter: Mark Cyril Francis</i> |
| 10:15       | <b>48</b>        | <i>Towards Nearly Zero Energy Building (Nzeb) For Sustainable Campus: A Bim-Driven Approach To Energy Efficiency And Carbon Reduction</i><br><i>Presenter: Siti Kartini Ali Ashgar</i>                |
| 10:30       | <b>145</b>       | Earthquake-Driven Disturbance in River Water Quality: A Pressure-State-Response Early Warning Concept for Ranau, Sabah<br><i>Presenter: Nor Aslina Abd Jalil</i>                                      |
| 11:00       | <b>147</b>       | Enhancing Water Security and Sustainability through Hydraulic Modeling: UMS Campus Case Study<br><i>Presenter: Siti Kartini Ali Ashgar</i>  |



DAY 2: 11 SEPTEMBER 2025 Thursday

**Advanced Materials And Environmental Applications**

Venue: Presentation Room 4

Cluster 1 : **SCIENCE, TECHNOLOGY & ENGINEERING**  
 Session Chair : **ASSOCIATE PROFESSOR DR SAAFIE SALLEH**

| TIME  | PAPER ID:  | PAPER TITLE & AUTHORS  |
|-------|------------|--|
| 10:00 | <b>105</b> | Recent Water Quality of UMS Lake And Its Potential Application for Plant Watering<br><i>Presenter: Nurul Fhatul Said</i>   |
| 10:15 | <b>114</b> | Effect of Cerium Oxides Loaded Nitric Acid-Treated Palm Kernel Shell Biochar on Pyrolysis of High-Density Polyethylene<br><i>Presenter: Vekes Balasundram</i>                    |
| 10:30 | <b>115</b> | Electron Beam Irradiation Effects on Graphene Oxide Thin Films<br><i>Presenter: Chee Fuei Pien</i>   |
| 10:45 | <b>118</b> | MIL-125-NH <sub>2</sub> /MIL-88-NH <sub>2</sub> Composite as the Photo-Fenton-like Catalyst for the Removal of Methylene Blue in Water<br><i>Presenter: Pak Yan Moh</i>          |
| 11:00 | <b>133</b> | MOF-Derived 3D Porous Catalysts for Hydrodeoxygenation of Palm Fatty Acid Distillate: Optimization via Response Surface Methodology<br><i>Presenter: Sivasangar Seenivasagam</i> |
| 11:15 | <b>140</b> | Doping Effects on ZnO, MgZnO, and GZO Thin Films Under Electron Beam Irradiation<br><i>Presenter: Mivolil Duinong</i>  |



**DAY 2: 11 SEPTEMBER 2025** Thursday

**Sustainability Pathways**

**Venue: Presentation Room 2**

Cluster 2 : **MEDICINE AND NATURAL SCIENCES**  
 Session Chair : **DR. VENNILA GOPAL**

| TIME  | PAPER ID:  | PAPER TITLE & AUTHORS   |
|-------|------------|---|
| 10:00 | <b>57</b>  | Climate Change and Food Security in Rural Asia: Exploring Governance Systems and Livelihood Adaptations<br><i>Presenter: Mohd Faizal Madrim</i>   |
| 10:15 | <b>62</b>  | Drivers and Consequences of International Forced Migration: A Narrative Review<br><i>Presenter: Farida Nazahiya Mohd Salleh</i>   |
| 10:30 | <b>81</b>  | Preserving Tradition: A Study of Indigenous Hill Paddy (Kerawing variety) Cultivation and Its Cultural Significance<br><i>Presenter: Samantha Natalie Anak Dadi</i>   |
| 10:45 | <b>109</b> | Status of knowledge, attitudes and practices of food handlers in the CBD area, Kota Kinabalu<br><i>Presenter: Suriana binti Salasan</i>   |
| 11:00 | <b>128</b> | Bacterial Identification Along the Upstream and Downstream of Murum River, Sarawak<br><i>Presenter: Sabrina Rancang Khairul</i>   |
| 11:15 | <b>151</b> | The efficacy of long pools as fire breaks to protect peat swamp forest ecosystems: A case study in Binsuluk Forest Reserve, Sabah, Malaysia<br><i>Presenter: Rebecca Mishallyne Afat</i>  |
| 11:30 | <b>14</b>  | Prevalence and Characteristics of Undiagnosed Hemoglobinopathies among Adolescents in a High Beta Thalassemia Prevalence Area: A Cross-Sectional Study<br><i>Presenter: Tin Tin Thein</i>   |
| 11:45 | <b>60</b>  | Impact of Amoxicillin and Commercial Mangosteen Extract ( <i>Garcinia mangostana</i> L) Antibacterial on the Integrity of Bacterial Cell Membranes <i>Staphylococcus aureus</i> that is resistant to methicillin (MRSA)<br><i>Presenter: Atna Permana</i> |

**DAY 2: 11 SEPTEMBER 2025** Thursday**Education, Psychology & Childhood Studies****Venue: Presentation Room 3**Cluster 3 : **ARTS AND SOCIAL SCIENCES**Session Chair : **ASSOCIATE PROFESSOR DR. LEE BIH NI**

| <b>TIME</b> | <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>   |
|-------------|------------------|--|
| 10:00       | <b>17</b>        | A Systematic Review of Facility Design Factors for Early Childhood Education in Tadika KEMAS, Malaysia<br><i>Presenter: Azilah Baddiri</i>   |
| 10:15       | <b>64</b>        | Child-Friendly Urban Neighbourhoods: Insights from Children's Voices<br><i>Presenter: Mariatul Liza Meor Gheda</i>   |
| 10:30       | <b>112</b>       | Constructing Teacher Ethics Evaluation Systems in Higher Vocational Colleges: Evidence from Chongqing, China<br><i>Presenter: Ji Dongli</i>  |
| 10:45       | <b>111</b>       | Grammar Auctions as a Sustainable Pedagogical Strategy: Revitalizing Students' Interest and Understanding in Grammar Amid the Era of AI<br><i>Presenter: Wan Safuraa Wan Osman</i> |
| 11:00       | <b>134</b>       | Cultural Norms and Leadership Dynamics in Shaping Teaching Effectiveness: A Study of Young Faculty in Chinese Private Universities<br><i>Presenter: Liang Mingyu</i>               |
| 11:15       | <b>90</b>        | My Perseverance Tree: A Self-Narrative Approach to Strengthening Resilience among Pre-Service Teachers<br><i>Presenter: Siti Nurulhida Abdul Rahman</i>                            |
| 11:30       |                  | <b>Session Q&amp;A / Discussion</b>  |
| 11:45       |                  | <b>Buffer / networking / overflow</b>  |



DAY 2: 11 SEPTEMBER 2025 Thursday

## Biowaste Valorization And Catalytic Environmental Solutions

Venue: Presentation Room 1

Cluster 1 : **SCIENCE, TECHNOLOGY & ENGINEERING**Session Chair : **ASSOCIATE PROFESSOR ChM. Ts. DR. ZUHAIR JAMAIN**

| TIME  | PAPER ID: | PAPER TITLE & AUTHORS   |
|-------|-----------|---|
| 11:45 | 13        | CuO/ZnO Nanoflower Composites for The Photocatalytic Degradation of Ciprofloxacin Residue in Aqueous Media<br><i>Presenter: K S D Premarathna</i>   |
| 12:00 | 26        | Silicon-Rich Biochar and Compost Reduce CO <sub>2</sub> /N <sub>2</sub> O Emission and Enhance Plant Stress Tolerance<br><i>Presenter: Daljit Singh Karam</i>   |
| 12:15 | 74        | Photodegradation of Caffeic Acid using CdS/TiO <sub>2</sub> Photocatalyst<br><i>Presenter: Nur Mutheerah Antal</i>  |
| 12:30 | 148       | Electrical and Structural Studies of Carboxymethyl Cellulose derived from Palm Oil Empty Fruit Bunch Fibre Doped with Magnesium Iodide Biopolymer Electrolyte<br><i>Presenter: Mohd Saiful Asmal Rani</i> |
| 12:45 | 151       | Valorization of Non-edible Seaweed ( <i>Sargassum polycystum</i> ) Extract as a Sustainable Biostimulant for Upland Tadong Rice of Sabah<br><i>Presenter: Noumie Surugau</i>                              |

**DAY 2: 11 SEPTEMBER 2025** Thursday

# Digital And AI Applications For Environment And Society

**Venue: Presentation Room 4**

Cluster 1 : **SCIENCE, TECHNOLOGY & ENGINEERING**  
Session Chair : **Ts. DR. CHIN PEI YEE**

| <b>TIME</b> | <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>   |
|-------------|------------------|--|
| 11:45       | <b>28</b>        | Object-Based Image Analysis of UAV Imagery for Seagrass Mapping: A Case Study in Sepanggar Bay, Sabah<br><i>Presenter: Imelus Nius</i>   |
| 12:00       | <b>29</b>        | Assessing Coral Diversity and Coral Condition Using Video Transects and UAV Mapping in Pulau Mantanani Besar, Sabah<br><i>Presenter: Muhammad Aiman Mohd Azseri</i>            |
| 12:15       | <b>32</b>        | The Significance of Digital Literacy for Academic Achievement<br><i>Presenter: Pranjal Bhuyan</i>  |
| 12:30       | <b>119</b>       | Development of Forecast Model for PM10 Concentration in Tawau using Input Variable Selection and Artificial Neural Network<br><i>Presenter: Dr. Muhammad Izzuddin Rumaling</i> |



**DAY 2: 11 SEPTEMBER 2025** Thursday  
**Environmental And Health Risks**

**Venue: Presentation Room 2**

Cluster 2 : **MEDICINE AND NATURAL SCIENCES**  
 Session Chair : **DR. RAHMAWATI PARE**

| <b>TIME</b> | <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>  |
|-------------|------------------|---|
| 11:30       | <b>116</b>       | Equatorial Wave Embedded within the Madden-Julian Oscillation Leading to the 2021 Peninsular Malaysia Flood<br><i>Presenter: Jackson Chang Hian Wui</i>   |
| 11:45       | <b>127</b>       | Molecular Characterization and Phylogenetic Analysis of Pasteurella multocida Isolates from Cattle in Sarawak<br><i>Presenter: Muhammad Zaki Zulkiffle</i>  |
| 12:00       | <b>75</b>        | Factors Associated with Preventable Maternal Mortality in Sabah<br><i>Presenter: Annie Alfred</i>   |
| 12:30       | <b>41</b>        | The Associated Risk Factors for Perinatal Depression Among Teenage Mothers – A Narrative Review<br><i>Presenter: Holly Girlchy Jastin</i>   |
| 12:45       | <b>56</b>        | Computer Vision Syndrome and Its Risk Factors among Undergraduate Students in Universiti Malaysia Sabah<br><i>Presenter: Thirumurugan Nyanasegram</i>   |
| 13:00       | <b>144</b>       | Prevalence, Clinical Presentation, Allergen Triggers, and ARIA (Allergic Rhinitis and its Impact on Asthma) Classification of Allergic Rhinitis among Universiti Malaysia Sabah Staff- A Preliminary Report<br><i>Presenter: Nur Izzati Ishak</i> |



**DAY 2: 11 SEPTEMBER 2025** Thursday

Cluster 1 : **SCIENCE, TECHNOLOGY & ENGINEERING**

| <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>  |
|------------------|---|
| 101              | Kinetics of Lactic Acid Production from Starch-Based Food Waste Fermentation Using Sasad for Animal Feed Production<br><i>Presenter: Angela Cheryl Celestine</i>                                      |
| 106              | Metagenomic Analysis of Bioethanol Production Kinetics from Starch-Based Food Waste Fermented with Sasad Yeast<br><i>Presenter: Nurul Nabilah Nahrawi</i>   |
| 27               | Source Tracing of Heavy Metal Contamination in Soils of Putrajaya's Urban Areas<br><i>Presenter: Mohd Ashadie Kusno</i>   |
| 99               | Web-Based Flood Monitoring System Using ESP32 Microcontroller: An Integrated IoT Solution for Early Warning<br><i>Presenter: Sherry Mansuit</i>   |
| 131              | Evaluating Glycemic Responses to Rice-Based Meals Using Real-Time CGM and Its Application in Low-Glycemic Index Education for Overweight and Obese Young Adults<br><i>Presenter: Khadidja Chekima</i> |
| 117              | AgriSense Vertical: Smart Aquaponics Monitor<br><i>Presenter: Joshua Frances Anak Sagu</i>  |
| 79               | Methane-Hydrogen Blends in Gas Turbines: A Comprehensive Review of Performance, Emissions, and Technological Advancements<br><i>Presenter: Ezzam Ag Sani</i>  |
| 82               | A Systematic Review of Consumer Behavioral Barriers to Sustainable Energy Adoption: Insights into Solar Photovoltaic Adoption in Asia<br><i>Presenter: Chen Meiguirong</i>                            |
| 132              | CFD Analysis of Solar PV Surface Temperature Reduction using MXene Nanofluids: A Preliminary Study<br><i>Presenter: Abdul Rahman</i>  |
| 53               | The impact of Brand AI Attitude on Consumer Purchase Intention: A Systematic Literature<br><i>Presenter: Liu Futian</i>   |
| 121              | Reduce The Risks Of Autonomous Driving By Lattice-Based AKA<br><i>Presenter: Weiqi Wang</i>   |
| 86               | Purification And Characterisation Of Recombinant Tyrosinase Mushroom<br><i>Presenter: Viaevanilly David</i>   |



**DAY 2: 11 SEPTEMBER 2025** Thursday

**Cluster 2 : MEDICINE AND NATURAL SCIENCES**

| <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>   |
|------------------|--|
| 4                | Navigating the Challenges of Hospital Digitalization in Southeast Asia: A Systematic Review<br><i>Presenter: Abdul Rahman Ramdzan</i>                          |
| 6                | Camera Trap Survey of Two Pheasant Species in the Crocker Range Biosphere Reserve<br><i>Presenter: Wing Shen Lim</i>   |
| 25               | Co-circulation of All Four Dengue Virus Serotypes and Genotypic Diversity in Tawau Division, Sabah (2019–2021)<br><i>Presenter: Rahmawati Pare</i>             |
| 66               | Determinants Of Willingness To Pay For Outpatient Services In Health Government Clinics Among Community In Sabah<br><i>Presenter: Nurshafinaz Hj Abu Bakar</i> |
| 42               | Potential Cross-Protection by COVID-19 mRNA Vaccines Against Seasonal Coronaviruses and Influenza<br><i>Presenter: Vennila Gopal</i>                           |
| 72               | Alpha-Mangostin Enhances Endothelial Repair Markers in a High Glucose Model of Diabetic Wound Healing<br><i>Presenter: Melonney Patrick</i>                    |
| 78               | Sago Fiber Mycelium Composites: Transforming Natural Waste into Sustainable, Biodegradable Materialsowland<br><i>Presenter: Ann Anthony</i>                    |
| 105              | Coronary artery disease predictive biomarkers and metabolic syndrome in adult population of Kota Kinabalu<br><i>Presenter: Aye Aye Wynn</i>                    |
| 146              | Preliminary Test on Pathogenicity of Ceratocytis mangenicans on Acacia Hybrid<br><i>Presenter: Maznah Binti Muning</i>   |
| 141              | <i>Post-Pandemic Shifts in Financial Protection and the Urban–Rural Divide in Sabah</i><br><i>Presenter: Adilius Manual</i>                                    |



**DAY 2: 11 SEPTEMBER 2025** Thursday

Cluster 3 : **ARTS AND SOCIAL SCIENCES**

| <b>PAPER ID:</b> | <b>PAPER TITLE &amp; AUTHORS</b>  |
|------------------|---|
| 8                | Leading For Innovation: How Servant Leadership Drives Engagement And Innovative Work Behaviour Among University Middle Managers<br><i>Presenter: Mohamad Nasaruddin Mahdzir</i> |
| 112              | Strategic Roles of Malaysian Business Schools in Community-Based Sustainable Development: A Case Insight from UKM GSB<br><i>Presenter: Gou Yi Hui</i>                           |
| 143              | The Effectiveness of Choice Theory Modules on Adolescents' Basic Needs Satisfaction and Frustration<br><i>Presenter: Nurul Fathihah Nor Azhar</i>                               |



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