



**12<sup>TH</sup>**  
**INTERNATIONAL**  
**CONFERENCE**  
ON  
**SCIENCE & SOCIAL**  
**RESEARCH**  
— PROGRAMME BOOK —



RESEARCH



KNOWLEDGE



COLLABORATION



INNOVATION



IMPACT

# Program for *12th International Conference on Science & Social Research*

Wednesday, November 5

**Wednesday, November 5 8:30 - 9:00**  
**(Asia/Kuala\_Lumpur)**

**All Tracks (Science & Technology, Social Science & Arts & Humanities) ↑**

<https://tel.meet/aek-qmas-qrf?pin=8237049969717>

**Wednesday, November 5 9:00 - 9:05**  
**(Asia/Kuala\_Lumpur)**

**Doa Recitation & National Anthem ↑**

<https://tel.meet/aek-qmas-qrf?pin=8237049969717>

Chair: Akehsan Dahlan

**Wednesday, November 5 9:05 - 9:10 (Asia/Kuala\_Lumpur)**  
**FOREWORD ↑**

Professor Datuk Ts. Dr. Shahrin bin Sahib @ Sahibuddin, FASc Vice-Chancellor Universiti Teknologi MARA (UiTM)

**Assalamualaikum Warahmatullahi Wabarakatuh and warm greetings to all.**

**On behalf of Universiti Teknologi MARA (UiTM), it gives me immense pleasure to extend a warm welcome to all distinguished delegates, eminent speakers, and participants of the 12th International Conference on Science and Social Research (CSSR 2025).**

**From its early beginnings, CSSR has served as a beacon of intellectual pursuit, a platform where ideas converge, collaborations emerge, and innovations take shape. It embodies UiTM's enduring commitment to advancing research that bridges disciplines and creates lasting impact for society.**

**This year's theme, "From Classrooms to Society: Catalyzing Innovation through Multidisciplinary Education and Research," perfectly encapsulates UiTM's vision of bridging scholarly knowledge with real-world impact. It reflects our belief that true innovation flourishes when academia, industry, and communities come together to address complex challenges through interdisciplinary dialogue and purposeful action.**

**As Malaysia's largest public university, UiTM continues to chart new frontiers in research excellence, innovation, and global engagement. Guided by the UiTM Strategic Plan 2025, we are advancing the integration of technology, sustainability, and human values, ensuring that our research remains inclusive, impactful, and globally relevant. CSSR 2025 stands as a testament to this mission, fostering academic rigour while celebrating diversity in thought, discipline, and perspective.**

To all presenters and scholars, I urge you to use this platform to exchange ideas fearlessly, question constructively, and inspire collectively. Each dialogue held and each paper presented here contributes to a greater purpose, the continuous evolution of knowledge that benefits humanity and shapes a sustainable future.

I wish to record my deepest appreciation to the Office of the Deputy Vice-Chancellor (Research & Innovation), the Research Nexus UiTM (ReNeU), under the leadership of Professor Ts. Dr. Asmah Awal, and the dedicated organising committee for their tireless efforts in realising this prestigious event. My gratitude also extends to our esteemed collaborators and partners for their unwavering support.

May CSSR 2025 catalyze inspiration, forging stronger global networks and advancing UiTM's legacy as a university that not only generates knowledge, but transforms it into meaningful impact.

Wassalamualaikum Warahmatullahi Wabarakatuh.

Thank you.

**PROFESSOR DATUK TS. DR. SHAHRIN BIN SAHIB @ SAHIBUDDIN, FASC**

**Vice-Chancellor**

**Universiti Teknologi MARA (UiTM)**

## Wednesday, November 5 9:10 - 9:15 (Asia/Kuala\_Lumpur)

### OPENING ADDRESS ↑

Professor Ts. Dr. Norazah Abd Rahman, Deputy Vice-Chancellor (Research and Innovation), Universiti Teknologi MARA (UiTM)  
**Assalamualaikum Warahmatullahi Wabarakatuh and a very good day to all.**

**Yang Berbahagia Professor Datuk Ts. Dr. Shahrin bin Sahib @ Sahibuddin,**  
**Vice-Chancellor of Universiti Teknologi MARA,**

**Yang Berusaha Professor Ts. Dr. Asmah Awal,**  
**Director of Research Nexus UiTM (ReNeU),**

**Distinguished members of the university management, respected researchers from within and beyond Malaysia, and esteemed participants - ladies and gentlemen.**

**Alhamdulillah, praise be to Allah SWT, for granting us the opportunity to gather today for the 12th International Conference on Science and Social Research (CSSR 2025). This year's theme, "From Classrooms to Society: Catalyzing Innovation through Multidisciplinary Education and Research," is both timely and profound.**

**It strongly resonates with UiTM's strategic direction under the leadership of our Vice-Chancellor, YBhg. Professor Datuk Ts. Dr. Shahrin bin Sahib @ Sahibuddin, who envisions UiTM as a research-led, globally competitive and socially responsible university that transforms knowledge into meaningful societal outcomes.**

**Ladies and gentlemen,**

**CSSR is not merely an annual academic event. It is a strategic platform designed to strengthen UiTM's research, publication, and innovation ecosystem. Since its inception in 2010, CSSR has**

evolved into a significant international conference that connects scholars, researchers, and industry practitioners from diverse disciplines and regions to exchange ideas, experiences, and emerging discoveries.

CSSR 2025 is closely aligned with UiTM's Research DNA, anchored in the philosophy of Education 5.0: Moving Beyond Teaching to Co-Creating Knowledge for a Sustainable Future. This philosophy reflects UiTM's evolution from a teaching-focused institution into a co-creator of knowledge that generates, translates, and disseminates research for tangible societal impact.

This year, CSSR 2025 brings together three major research clusters - Science & Technology, Social Sciences, and Arts & Humanities, which reflect UiTM's holistic commitment to balancing technological advancement with human values and social integrity. This multidisciplinary approach aligns with the United Nations Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education), SDG 9 (Industry, Innovation, and Infrastructure), SDG 13 (Climate Action), and SDG 17 (Partnerships for the Goals).

By embracing these global frameworks, UiTM reaffirms its role as a catalyst for knowledge-driven progress that transcends disciplinary and national boundaries.

Through this conference, all research papers presented will undergo a rigorous peer-review process and will be published in reputable indexed journals, including Scopus, Web of Science (WoS), and MyCite.

Before I conclude, I wish to extend my deepest appreciation to Professor Ts. Dr. Asmah Awal, Director of Research Nexus UiTM (ReNeU), for her visionary leadership and dedication in steering CSSR 2025, alongside the Research Management Centre (RMC), UiTM Press, and the entire CSSR scientific and technical committees.

My gratitude also goes to our international collaborators from Indonesia, Thailand, Brunei, and the Philippines, whose participation continues to strengthen UiTM's regional and global academic networks.

Congratulations to all presenters, authors, and young researchers who have contributed their work to this conference. Your efforts exemplify the spirit of perseverance, creativity, and commitment that defines UiTM's pursuit of research excellence.

Let us make CSSR 2025 a turning point-from teaching to creating, from presenting to publishing,  
and from innovating to making an impact.

With strong collaboration, shared vision, and unwavering determination, I am confident that CSSR 2025 will serve as another milestone in elevating UiTM's standing as a leading research-driven university in the region and beyond.

With that, and with the utmost pride and gratitude, I hereby declare open the 12th International Conference on Science and Social Research (CSSR 2025).

Thank you.

Wassalamualaikum Warahmatullahi Wabarakatuh.

# Wednesday, November 5 9:15 - 9:20 (Asia/Kuala\_Lumpur)

## WELCOME REMARKS ↑

Professor Ts. Dr. Asmah Awal Director, Research Nexus UiTM (ReNeU) Chair, 12th International Conference on Science and Social Research (CSSR 2025)

**Assalamualaikum Warahmatullahi Wabarakatuh and warm greetings.**

**Yang Berbahagia Professor Datuk Ts. Dr. Shahrin bin Sahib @ Sahibuddin, FASc  
Vice-Chancellor of Universiti Teknologi MARA,**

**Yang Berusaha Professor Ts. Dr. Norazah Abd Rahman,  
Deputy Vice-Chancellor (Research & Innovation) of Universiti Teknologi MARA,**

**Distinguished participants, speakers, delegates and guests of CSSR 2025.**

**On behalf of Research Nexus UiTM (ReNeU) and the organising committee, I extend a heartfelt welcome to each of you to the 12th International Conference on Science and Social Research (CSSR 2025), held under the theme, "From Classrooms to Society: Catalyzing Innovation through Multidisciplinary Education and Research".**

**It is our sincere hope that the days ahead will not only provide a forum for academic dialogue and publication, but also serve as a meaningful platform to build networks, spark collaborative ideas, and translate knowledge into impact.**

**At ReNeU, we are entrusted with steering UiTM's research agenda toward high-impact, multidisciplinary outcomes, in alignment with national priorities and UiTM's Strategic Plan 2025.**

**Our structure is anchored in six dynamic research sub-niches, which are the foundation of this conference's scope:**

- 1. Industrial Technology - encompassing advanced materials, smart manufacturing, plant & process, construction & infrastructure.**
- 2. Cyber Technology - exploring space & satellites, big data & analytics, cyber security, robotics & AI, and smart sensors.**
- 3. Health & Wellness - covering preventive healthcare, rehabilitative care, genomics, non-communicable disease research and natural products.**
- 4. Energy & Environment - addressing water security, renewable energy, environment & climate change, solar technology, biodiversity and food security.**
- 5. Social Creativity & Innovation - including creativity, Islamic finance fintech, socio-innovation, B40-talent development, entrepreneurship & artpreneurship, and socio-economics.**
- 6. Art & Humanities - a vital dimension bridging culture, education, linguistics, religion and the arts with broader research contexts.**

**CSSR 2025 brings together these research domains under one unifying theme, inviting you to explore intersections, forge partnerships, and engage in cross-disciplinary thinking. Whether your work focuses on materials science, social innovation, rehabilitative therapy or fintech**

**entrepreneurship, we encourage you to seize the opportunity to exchange ideas, challenge assumptions, and build bridges beyond your own disciplines.**

**In this rapidly evolving global research landscape, our collective efforts must extend beyond publication - toward impactful knowledge that transforms societies, empowers communities and inspires future generations. ReNeU reaffirms its commitment to supporting this journey by providing platforms, mentorship, networks, and resources that help transform classroom insights into societal significance.**

**Finally, I wish to extend my deepest appreciation to our keynote speakers, authors, delegates, industry partners and the dedicated ReNeU organising teams whose hard work and dedication have made this conference possible. Your commitment underscores the power of collaboration and the promise of innovation.**

**May CSSR 2025 serve as a springboard for fresh ideas, dynamic partnerships and impactful outputs. I wish each of you a most rewarding, engaging and inspiring conference experience.**

**With warm regards,**

**PROFESSOR TS. DR. ASMAH AWAL**  
**Director, Research Nexus UiTM (ReNeU)**  
**Chair, CSSR 2025**

**Wednesday, November 5 9:20 - 9:30**  
**(Asia/Kuala\_Lumpur)**

**Photography Session** ↑

<https://tel.meet/aek-qmas-qrf?pin=8237049969717>

**Wednesday, November 5 9:30 - 11:15**  
**(Asia/Kuala\_Lumpur)**

**Parallel Session 1: Science & Technology (ST)**  ↑

<https://meet.google.com/iar-zgiv-hjk>

**Room 1**

Chairs: Noor Fitrah Abu Bakar, Nur Qursyna Boll Kassim

**9:30 Prevalence and Factors Associated with Overweight and Obesity Among Healthcare Workers in Muar District Health Office of Johor**

Muhammad Muzzammil Mohamad Salleh, Nur Diyana Mansor, Syafiq Taib, Mohd Ridzuan Mohd Lutpi, Rosinah Hussin, Malisa Musa and Mohamad Rodi Isa

The global prevalence of overweight and obesity continues to rise, with Malaysia recording 50.1% of adults affected according to NHMS 2019. Health personnel or workers (HCWs), despite their knowledge of health risks, are not exempt from this trend, as studies have shown high rates of excessive body weight among this group. This study aimed to determine the prevalence and associated factors of overweight and obesity among HCWs in Muar District Health Office. A cross-sectional analysis was conducted using secondary data from the annual KOSPEN WOW medical screening. The screening involved 732 staff across the main administrative office, 11 health clinics, 38 rural health clinics, and two

community clinics. Data included sociodemographic along with anthropometric measurements, blood pressure, fasting blood sugar, and cholesterol levels. A total of 732 HCWs were analyzed. The prevalence of overweight and obesity was 35.1% (95% CI: 31.6-38.6) and 29.1% (95% CI: 25.8-32.4), respectively. Significant risk factors included high blood pressure (OR: 5.38), hypertension (OR: 5.36), diabetes mellitus (OR: 5.05), and age above 40 years (AOR: 1.69). The prevalence among HCWs in Muar exceeded that of the general population. Targeted workplace health programs focusing on older HCWs and those with comorbidities are recommended.

#### **9:45 Bridging the Digital Divide: The Mediating Role of Attitude in E-Wallet Acceptance Among Low-Income Users**

Rohaiza Kamis, Shafinar Ismail and Nur Hayati Abd Rahman

This study investigates the determinants influencing the acceptance of e-wallets among low-income users in Malaysia, with a particular focus on the mediating role of attitude. A quantitative research design was employed, and data were collected from 265 respondents in West Malaysia using a stratified random sampling technique. The analysis was conducted using SmartPLS software, guided by the Technology Acceptance Model (TAM) as the theoretical foundation. The research framework comprises five independent variables-perceived ease of use, security, government intervention, social influence, and trust-with e-wallet acceptance as the dependent variable and attitude as the mediator. The findings reveal that perceived ease of use and trust positively influence e-wallet acceptance, while attitude significantly mediates the relationships between perceived ease of use, social influence, trust, and acceptance. However, attitude does not mediate the effects of security and government intervention. These results provide valuable insights for policymakers, service providers, and marketers, emphasizing the importance of enhancing trust, usability, and user attitudes to increase adoption among low-income communities. By addressing these factors, the study contributes to the literature on financial technology adoption and supports efforts to foster a cashless society in Malaysia, thereby promoting greater financial inclusion and reducing inequality.

#### **10:00 Governance, Access Control, and Risk: A Conceptual Framework for Data Integrity in Malaysian Educational Systems**

Azlin Binti Ramli and Darus Mohamad Yusof

This paper proposes a conceptual framework linking governance, access control, and risk management to improve data integrity in Malaysian educational systems, with the Ministry of Education (MOE) Data Center as the focal context. The aim is to align sector governance with actionable controls that prevent unauthorised alteration and strengthen auditability. We synthesise standards-driven governance (ISO/IEC 27001:2022) with recent literature on access-control architectures and sector governance, deriving testable propositions and a policy, process, technology and people map tailored for education. The framework argues that governance maturity sets assurance rules, while access control and risk routines operationalise them to reduce integrity drift. We posit three propositions: governance positively moderates access-control effects; risk-management maturity independently improves integrity and combined improvements yield super-additive gains. As a conceptual study, empirical validation is needed (e.g., pre-post audits, incident metrics, and integrity checks) to test propositions within MOE environments. The paper integrates public-sector security governance with concrete access-control and risk mechanisms for education, offering a tractable path from policy to operational integrity and a clear agenda for future evaluation.

#### **10:15 Heading Towards Environmental Sustainability: The Role of Green Technology in Balancing the Use of Fossil Fuel Resources in Malaysia**

Aisyah Ab Rahim and Mohd Danial Mohammad Khalid

Global climate change driven by greenhouse gas emissions from fossil fuel consumption highlights the urgent need for sustainable energy alternatives. In Malaysia, rapid economic growth and rising energy

demand have intensified reliance on conventional fossil fuels, accelerating environmental degradation and undermining long-term ecological balance. Green technology emerges as a strategic solution to address this challenge, emphasizing renewable energy sources such as solar, biomass, hydro, and wind. This study applies a document analysis method to academic articles and official reports related to energy and green technology in Malaysia. The analysis focuses on examining the role of green technology, its potential applications, and the challenges in reducing fossil fuel dependence. Findings reveal that initiatives such as the National Green Technology Policy and the Renewable Energy Policy have strengthened Malaysia's sustainability agenda by promoting innovation, financial incentives, and public awareness. However, barriers such as high implementation costs, infrastructure limitations, and societal acceptance persist. Overall, the study underscores that green technology plays a vital role not only in preserving environmental sustainability but also in supporting biodiversity conservation, improving energy security, and fostering economic competitiveness. Its effective implementation will be essential for Malaysia's transition toward a low-carbon and sustainable future.

### **10:30 Hand Gesture and IoT App Controlled Mobile Robot with Obstacle Detection**

Muhammad Arif Abd Shukor, Ruhizan Liza Ahmad Shauri and Zainul Haziman Hisam

Traditional robot systems use wired connections, RF transmission, or Bluetooth with physical controllers, which is inflexible and require operators and robot to stay close to each other. In this work, a mobile platform for an arm robot is developed using a gyro-based system integrated with IoT application. The mobile robot is built with WiFi connectivity and an obstacle detection algorithm to avoid collision. The robot can be navigated by using two masters i.e. user hand gestures measured by a gyroscope module or via an IoT mobile application designed by MIT App Inventor. The master-slave system architecture consists of the master that sends the control's reference commands to a real-time cloud database and the slave robot's controller that uses the commands from the cloud to move the robot. Indoor floor tests results showed that the robot moved according to the directions given by the masters in forward, backward, left and right directions with two different speeds and stopped the navigation commands when moved closer to an obstacle. The successful results proved the practicality of the master-slave control, the established wireless communication, software and hardware interfaces and the IoT integration.

### **10:45 Development and Content Validation of a Dual-Audience Tool to Guide Parental Interventions for Reducing Children's Dental Anxiety**

Majidha Ali, Rohaida Abdul Halim and Azwin Assilah Kamaruddin

Early dental experiences significantly shape a child's perception of oral healthcare. Parental involvement and preparation are critical in reducing dental anxiety during the first dental visit. This study aimed to develop and validate a focus group discussion (FGD) item to inform the design of a parental guidance module for reducing children's dental anxiety. A six-member expert panel (two paediatric dentists, two public health specialists, two general dentists) assessed content and face validity using a 4-point scale. Items rated below 2 were revised or removed. The final version achieved a Scale-level CVI (S-CVI) of 0.96, demonstrating high clarity, appropriateness, and reliability.

**Wednesday, November 5 9:30 - 11:30**  
**(Asia/Kuala\_Lumpur)**

**Parallel Session 2: Science & Technology (ST)**  

<https://meet.google.com/ndt-czuo-mmp>

Room 2

Chairs: Akehsan Dahlan, Siti Alwani Status, Norkhushaini Awang

### **9:30 Malware Detector (MalDet) in Mobile Phone Using Multilayer Perceptron Integrated with Virus Total**

Izma K Khairul Anuar and Fakariah Hani Hj Mohd Ali

The proliferation of Android applications has led to an increase in malicious software targeting mobile devices especially Android, posing significant security threats to users. This study presents a comprehensive approach to malware detector application in mobile applications using machine learning approach which is multilayer perceptron and virus total integration. By analyzing static features extracted from various Android applications, the proposed system classifies applications as benign (safe) or malware (malicious). The methodology incorporates static analysis to extract critical features from the application package files (APKs). The feature focuses on permissions. Machine learning algorithms, Multilayer Perceptron, are employed for feature classification. Datasets chosen which is the combination of malware and benign apps are utilized to train and test the models, ensuring a robust evaluation of their performance. The integration of feature selection and optimization techniques further enhances detection accuracy, with results demonstrating high efficacy in identifying malicious applications. The Integration with Virus Total providing an additional layer of verification for each scanned application. This research underscores the potential of machine learning in bolstering mobile security by providing an efficient and scalable solution for detecting Android malware.

### **9:45 Feature-Driven Development as a Strategy for Managing Requirements for LearnBIM Application**

Noorihan Abdul Rahman, Ainun Mardeya Mohamad Kasmani, Nor Asma Mohd Zin and Zuriani Ahmad Zulkarnain

In the dynamic landscape of ICT industry, requirements have become a persistent challenge which may incur costs, delayed timelines and changing requirements. In managing ambiguous requirements, agile software methodology able to address volatile requirements during the software development process. Existing technological initiatives such as mobile applications and recognition datasets are often constrained to prototypes and lack structured development methodologies. Therefore, this study presents the development of LearnBIM, a gamified mobile learning application designed to support Malaysia Sign Language (MSL) learning for both hearing and non-hearing users. LearnBIM has adopted Feature-Driven Development (FDD) as the selected agile software methodology by offering a structured yet iterative approach for systematically eliciting and translating user requirements into functional features. The development process also used FDD to integrate gamification elements such as quizzes, badges, and progress dashboards for enhancing usability. Findings indicate that applying FDD facilitated traceability, modularity, and user-centered design, resulting in a pedagogically grounded and accessible application.

*Presenter bio:* Noorihan Abdul Rahman is a senior lecturer in Universiti Teknologi MARA, Malaysia. In 2014, she graduated from Universiti Teknologi Malaysia with Ph.D in Computer Science. Her research interests are not limited to business data analytics, big data application, socio-technical systems, software engineering and collaborative application. She has published in various publications which are related to big data, software engineering, collaborative application and other related publications on teaching and learning. She has involved as a technical program committee in various international and national conferences. She is a member of Microsoft Certified Professional, a Professional Technologist from Malaysia Board of Technologists and a member of Malaysian Software Engineering Interest Group (MySEIG). She was an instructor under the Oracle Academy for Microsoft Database Design and Programming with SQL and previously worked as a Test Development Engineer in Western Digital (M) Corporation.

### **10:00 Bridging Theory and Practice: The Importance of Numerical and Statistical Approaches in Electrical Engineering**

Noor Hafizah Abdul Aziz, Ismarani Ismail, Nur Nabila Binti Mohamed and Rozita Mustafa

This paper highlights the significance of numerical and statistical techniques in electrical engineering, emphasizing their role in bridging theory with practical problem-solving. Numerical methods such as

integration, interpolation, and regression analysis enable accurate modeling, simulation, and optimization of complex systems. Statistical analysis complements these by addressing uncertainty, reliability, and performance evaluation through data interpretation and hypothesis testing. Together, these techniques empower technologists to analyze, design, and optimize electrical systems effectively. Their integration in engineering education enhances computational accuracy, critical thinking, and decision-making, preparing graduates for professional challenges in modern, data-driven technological environments.

#### **10:15 Demonstrating Adaptive Decision-Making: What-If Scenario Analysis of the DeMI Framework in Municipal Solid Waste Management**

Rabiatul Adawiyah Ali, Nik Nor Liyana Nik Ibrahim, Husna Aini Swarno and Mazlinda Ab Rahman

Effective municipal solid waste (MSW) planning requires adaptive decision-support tools. This study evaluates the flexibility of the Decision-Making Integration (DeMI) framework through two what-if scenarios. The first examines profit and technology impacts of a recycling rate exceeding the projected 2.5% annual growth, while the second analyses government incentives for electricity generation. DeMI integrates these changes by updating inputs, reconstructing process structures, and generating new solutions. Results show accurate profit reassessment, improved technology selection, and optimised configurations, demonstrating DeMI's capability as a flexible, scenario-responsive tool for advancing waste-to-resource systems and supporting sustainable transitions.

#### **10:30 Analysing Knowledge and Skill Attainment Among Engineering Technology Students in the Communication Engineering Technology Course**

Hasnida Saad, Mohd. Fuad Abdul Latip, Anees Abdul Aziz and Mohd Khairil Rahmat

This study examines the attainment of PO1 (Knowledge) and PO5 (Modern Tool Usage) among seven cohorts of first-semester UiTM Bachelor of Electrical and Electronics Engineering Technology students (2020-2025) in the Communication Engineering Technology course. PO1, which focuses on theoretical understanding, showed underperformance in most semesters, with scores falling below the 65% benchmark set by the faculty. Temporary gains were noted during open-book exams and with formula appendices, though these mainly supported basic recall. PO5 performance remained consistently strong, reflecting solid practical skills. The gap highlights the need to better integrate theory and practice through improved teaching strategies.

#### **10:45 Effectiveness of Sagittal View Enhanced Video-Based Demonstration on Endodontic Access Cavity in Preclinical Endodontic**

Afiq Azizi Jawami, Nurul Ain Ramlan, Sharifah Nadiah Alqudsy Syed Khedher and Natasha Camelia Azizul Hanafee

Introduction: Preclinical dental education frequently depends on live demonstrations; yet, restricted visibility and distinctive exposure could hinder student understanding. A novel sagittal cross-sectional video presentation was created to capture real-time procedural stages using a high-definition dental operating microscope. This technology enables students to perceive the internal pulp chamber morphology in three dimensions, a viewpoint unattainable by traditional techniques. Objective: To evaluate the effectiveness of sagittal-view video-based demonstration (VD) compared to live demonstration (LD) in improving undergraduate students' understanding and skill in endodontic access cavity preparation. Methodology: Sixty second-year dental students were randomly assigned to the LD group (n=30) or the VD group (n=30). Both groups completed pre- and post-demonstration questionnaires assessing the domains of conceptualization, visualization, and implementation, subsequently followed by a practical access cavity exercise evaluated by calibrated examiners ( $\kappa=0.78$ ). Data were analyzed using repeated measures ANOVA and Chi-square tests ( $p<0.05$ ). Results: Both groups showed a big improvement in comprehension within their own groups ( $p<0.05$  for 7 of 18 questions). There was no statistically significant difference observed between the LD and VD groups in

terms of knowledge acquisition or practical performance ( $p > 0.05$ ). Conclusion: The sagittal-view video demonstration produced learning outcomes comparable to those of conventional live demonstrations, offering a versatile and visually enhanced method for preclinical endodontic education.

### **11:00 From Waste to Worth: Blending Plantain and Pineapple Core Flour for Sustainable Next-Gen Ingredient**

Asmeda Rajab

This study scrutinized the physicochemical properties of plantain and pineapple core flour (PF and PCF), elucidating significant disparities between the two. The primary objective was to explore the feasibility of these flours in yielding a nutritious and sustainable product. PF exhibited lower moisture content (6.38%) compared to PCF (7.03%). PF possessed a protein content of 3.82%, while PCF contained 3.34%; with no statistical difference ( $p > 0.05$ ). PCF demonstrated a markedly significantly higher ( $p < 0.05$ ) fiber content (67.86%) than PF (0.13%), underscoring the substantial fiber richness inherent in pineapple cores. PCF had a significantly greater fat content (1.82%) ( $p < 0.05$ ) than PF (0.40%), suggesting divergent nutritional applications. The finer texture of PF, as indicated by particle size distribution, may enhance its hydration and mixing capabilities. Scanning electron microscopy revealed differences in morphology, with PCF being coarser due to increased fiber content. The differential scanning calorimetry demonstrated PF to be thermally stable than PCF. The energy requisite for gelatinization diminished with the addition of more PCF to the mixtures, indicating potential energy savings in food preparation. In conclusion, the combination of PF and PCF offers a promising approach for generating functional food ingredients with enhanced processing applicability; promoting the sustainable utilization of agricultural byproducts.

## Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)

### Parallel Session 3: Science & Technology (ST)

<https://meet.google.com/jhz-abpu-svm>

Room 3

Chairs: Ismarani Ismail, Nurul Syaza Abdul Latif, Yusnani Mohd Yussoff

### **9:30 pH-Dependent Chromatic Behavior of Cotton Fabric Dyed with Clitoria Ternatea (Butterfly Pea) Extract**

Najua Tulos

The textile industry's reliance on synthetic dyes is a significant environmental concern due to the associated toxicity and high energy demands. This has intensified research into sustainable alternatives, such as natural colorants. This study investigates the potential of *Clitoria ternatea* (butterfly pea flower) extract as a natural dye on cotton fabric, emphasizing the effect of pH variation on its colorimetric properties. Owing to their biodegradability and renewable origins, natural dyes such as butterfly pea extract represent a promising route toward environmentally responsible textile colouration. The dyeing process utilized a pre-mordanting technique, recognized for its efficacy in improving dye fixation and enhancing colour depth. Cotton fabrics were dyed under three distinct pH conditions: acidic (pH 3), neutral (pH 7), and alkaline (pH 9). The resultant colour was quantitatively analysed using the CIELAB system to determine colour strength (K/S) and coordinates. The fastness properties of the dyed fabrics were evaluated through standard tests for washing, rubbing, and light. Results indicated that pH exerts a significant effect on dye performance, with alkaline conditions yielding the most vivid and saturated hues. The pre-mordanting approach was instrumental in achieving superior colour fixation and durability. Overall, this research underscores the viability of optimizing dyeing parameters and

employing natural dyes as sustainable alternatives to synthetic counterparts, contributing to reduced environmental contamination and a greener textile industry.

### **9:45 Transforming Behavioral Insights into Strategy: Leveraging Machine Learning for Churn Management in the Telecommunications Industry**

Nouf Alhajri, Seham A Khashwayn, Noof Aldossary, Amina Alaqa and Amal Salah Ali

Customer churn is a frequently faced issue within the telecommunications sector and customer retention becomes a key strategy because the market is saturated, there is a high rate of competition and customers can easily switch providers. In this research, the behavioural theory is combined with machine learning to develop an effective framework in predicting and controlling churn. The 6 supervised learning algorithms (Logistic Regression, Support Vector Machine, Random Forest, Gradient Boosting, XGBoost, and LightGBM) were tested on a publicly available Kaggle dataset of 7,044 customer records. The Synthetic Minority Over-Sampling Technique (SMOTE) was used to deal with class imbalance. The ensemble models, particularly stacking and LightGBM, performed best, and they achieved accuracies of approximately 0.90 and F1-scores of 0.91. The key drivers of churn were a type of contract, the time of tenure, monthly payment, and internet service. The contribution of unmet expectations and perceived losses to churn behavior was explained through the behavioral theories of Expectation-Confirmation Theory (ECT) and Prospect Theory which were used to explain these predictors. The paper concludes that Explainable Artificial Intelligence (XAI) has the potential to enhance transparency, as it allows organizations to understand predictions and lead to sustainable customer retention strategies on their data

### **10:00 Phytochemical Screening and Antifungal Activity of Cinnamomum Verum Extracts Against Plant Pathogenic Fungi**

Nurul Wahida Ramli

Cinnamomum verum, also known as Ceylon cinnamon is a plant belonging to Lauraceae family and one of the hardest tree among the spices. The extracts of cinnamon are highly valued due to their insecticidal properties, medicinal bioactive properties, and health benefits against common diseases and disorders. Eugenol is the primary component of the leaf extract, has been shown to possess significant antifungal activity against a wide range of fungal species. This work reports on the in vitro antifungal activity of methanolic leaf extract of C. verum against some plant pathogenic fungi such as Neoscytalidium dimidiatum and Fusarium proliferatum using poison food technique with concentration 20%, 30%, 40% and 50% of C. verum leaf extract. It was found that the extracts exhibit antifungal effects against the tested fungi with the percentage inhibition of radial growth (PIRG) value more than 50%. The highest PIRG values (98.38%) were achieved at 50% concentration of the leaf extract against F. proliferatum. While the lowest PIRG values, 10.74% was recorded at 20% concentration against N. dimidiatum. Preliminary phytochemical screening test showed that the leaf extract contains a significant number of alkaloids, flavonoids, terpenoids, saponins, phenols, and tannins which might contribute to its antifungal activity. The findings would serve as a basis for further exploration of C. verum leaf extract and potential development of effective bio-fungicides that enhance crop protection and contribute to sustainable agriculture.

### **10:15 Engagement in Cognitive Leisure Activities and Its Impact on the Quality of Life of Community-Dwelling Elderly Individuals**

Nur Atiqah Azman, Naa, Wadihah Ab Halim, Norsyaqina Shamsuddin and Purnama Betty Sitorus

This study examined the relationship between cognitive leisure activities and quality of life among 126 community-dwelling elderly individuals in Selangor aged over 60. Using a quantitative cross-sectional design with the Cognitive and Leisure Activity Scale (CLAS) and WHOQOL-OLD, the study explored levels of engagement and related well-being. Results revealed a significant positive correlation between active participation in cognitive leisure activities and improved quality of life. Despite

limitations such as small sample size and self-report bias, the findings highlight the importance of promoting cognitive leisure activities through occupational therapy and community programs to enhance elderly well-being and life satisfaction.

### **10:30 Immunoinformatics Prediction of Conserved Dengue Virus Epitopes for Community Health Preparedness**

Roziah Binti Kambol, Nurain Mohd Tarmizi and Norfatimah Mohd Yunus

Dengue remains a major public health challenge in Malaysia, causing recurring outbreaks that affect community well-being. This study used the Major Histocompatibility Complex Class II Prediction (MHC2Pred) tool to identify potential T-cell epitopes within dengue virus polyproteins. Polyprotein sequences from prototype and Malaysian strains were analysed, revealing twenty conserved epitopes across all serotypes. Most epitopes were located in non-structural proteins NS5 and NS4B, with strong binding to HLA Class II alleles. These findings highlight the role of immunoinformatics in supporting vaccine development and improving community preparedness against dengue.

### **10:45 Development of a Visualization Framework for Automotive Warranty Data Management**

Nor Hissham Abdul Hamid, Mohammad Hakim Roslan, Nor Fazli Adull Manan, Mohd Fauzi Ismail and Femmay Anak Jika

In today's automotive industry, warranty data holds untapped potential for improving product quality and customer experience. With the growth of digital tools and big data analytics, manufacturers are now able to detect patterns, identify recurring failures, and address root causes more effectively. Customer experiences are also increasingly captured through online surveys-via email, websites, and mobile applications-covering service quality, repair satisfaction, and overall performance. Platforms such as Tavant Warranty and Microsoft Azure provide specialized tools for automating claims and linking data with analytics. Despite these advances, warranty management still faces persistent issues. Claims often contain incomplete information, missing customer details, or errors in product serial numbers and service dates. Such gaps undermine efficiency and lead to costly mismanagement. This study introduces a novel warranty visualization system designed to transform fragmented data into clear, actionable insights. Unlike conventional platforms that focus mainly on claim automation, this system emphasizes interactive visualization to support real-time monitoring, decision-making, and accessibility. The development process followed three phases: conceptual design, which defined user scenarios and interface needs; embodiment design, which enhanced usability and accessibility for diverse users; and detailed design, where technical specifications and software integration were finalized. The resulting interface provides a comprehensive view of key warranty indicators, including total cost, total claims, annual distributions, brand-specific claims, and trend analyses. By consolidating and visualizing these insights, the system helps manufacturers reduce claim-processing time, optimize costs, and strengthen their understanding of product performance. The novelty of this work lies in its integration of warranty data visualization with user-centered design principles, bridging the gap between raw data and practical decision-making. This approach demonstrates a new pathway for improving industrial data monitoring, offering measurable benefits in efficiency, cost reduction, and customer satisfaction.

*Presenter bio:* Ts. Nor Hissham Abdul Hamid, MSc is currently pursuing his Doctor of Philosophy (PhD) in Mechanical Engineering at Universiti Teknologi MARA (UiTM), Malaysia. His doctoral research focuses on improving product design quality to reduce warranty-related costs in the automotive aftermarket sector, with a particular emphasis on Original Equipment Manufacturer (OEM) customer satisfaction and quality assurance. He brings over 20 years of industry experience in automotive manufacturing and aftermarket operations, specializing in continuous improvement initiatives, Kaizen activities, and failure mode analysis. His expertise includes the application of data-driven quality control methods, statistical problem-solving techniques, and design optimization tools to enhance product performance and reduce field defects. Ts. Nor Hissham has actively contributed to the academic and industrial research community through publications and has also filed intellectual property (IP) works related to process and design innovation. His work bridges the gap between practical industry challenges and academic research, promoting actionable solutions for quality enhancement in the automotive industry.

### **11:00 Enhanced Oil Recovery: Influence of Ions in Methyl Ester Sulfonate Adsorption at Water/Decane Interface**

Saiful Hafiz Habib, Dina Kania and Yunus Robiah

The synergy between methyl ester sulfonate (MES), alkali, and sodium ions significantly affects the interfacial tension (IFT) of the water/decane system. Alkali addition enhances MES headgroup packing, while  $\text{Na}^+$  stabilizes adsorbed surfactant by reducing sulfonate repulsion. Increased salinity induces a salting-out effect, promoting optimal adsorption. Compared with sodium dodecyl sulfate (SDS), MES achieves superior IFT reduction due to the stronger C-S bond. The lowest IFT (0.27 mN/m) occurred at 0.5% MES, 0.5% alkali, and 4.5% salinity. MES-NaOH and MES- $\text{Na}_2\text{CO}_3$  flooding recovered 30.8% and 27.8% n-decane, respectively.

## **Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)**

### **Parallel Session 4: Science & Technology (ST)**

<https://meet.google.com/vsc-dfof-cav>

#### **Room 4**

Chairs: Mohd Yusof Darus, Hamizah Mohd Zaki, Noor Hafizah Abdul Aziz

### **9:30 Authentication and Quality Evaluation of Agarwood Oils Using FTIR Spectroscopy and Principal Component Analysis**

Noriza Othman, Hasnida Saad, Noor Hafizah Abdul Aziz and Siti Hajar Amran

Agarwood oil is highly valuable but frequently adulterated, creating a need for rapid and reliable authentication tools. This study investigates the purity and authenticity of agarwood oil extracted from four *Aquilaria* species -Beccariana, Subintegra, Crassna, and Malaccensis- using Fourier Transform Infrared (FTIR) spectroscopy and Principal Component Analysis (PCA). FTIR identified key functional groups at 3571 nm, 3333 nm, 3030 nm, and 2941 nm corresponding to hydroxyl, aromatic, and aliphatic C-H vibrations that indicate chemical integrity. PCA explained 99.4% of total variance (PC1 = 92.6%; PC2 = 6.8%), successfully separating pure and water-mixed oils. Findings demonstrate strong potential for authenticity screening, with further validation required across broader sample sets.

### **9:45 Design of Multiwavelength Laser for Dense Wavelength-Division Multiplexing Application**

Naim Nani Fadzlina, Wan Muhd Danial Wan Ahmad, Wan Norsyafizan Wan Muhamad, Suzi Seroja Sarnin, Norsuzila Ya'acob, Azita Laily Yusof and Mohd Saiful Dzulkefly Zan

This paper presents the design and simulation of a C-band multiwavelength laser source optimized for Dense Wavelength Division Multiplexing Passive Optical Networks (DWDM-PON) applications. Unlike conventional DWDM systems that rely on multiple single-wavelength lasers, the proposed design employs a single multiwavelength laser structure to generate 32 stable channels within the frequency range of 193.1THz-196.2 THz, reducing cost and complexity. The laser and DWDM-PON architecture were simulated using OptiSystem, and system performance was analyzed in terms of power budget, transmission distance, and optical signal-to-noise ratio (OSNR). Simulation results demonstrate robust downstream transmission over 190 km with an excess power margin of 1.8 dB, confirming high spectral stability across all channels. Comparative analysis shows that the proposed configuration offers improved scalability and cost efficiency compared to traditional multi-laser DWDM-PON designs. This work contributes a simpler and more economical multiwavelength source design, potentially enabling large-scale DWDM-PON deployment. Experimental validation is recommended for future work to confirm practical feasibility.

*Presenter bio:* Nani Fadzlin Naim received B.Eng in electrical and electronics and M.Eng in electronics and communication from Universiti Teknologi Malaysia (UTM), Skudai, Johor, in 2005 and 2007, respectively. She is received her PhD in optical communication at Universiti Kebangsaan Malaysia (UKM) in 2015. Currently, she is a lecturer at Universiti Teknologi MARA (UiTM). Her current research interests are in the areas of photonic networks and optical communication.

### **10:00 Strategies Towards Sustainable Campus in Higher Education Institute**

Nur Kamaliah Mustaffa, Nur Shuhada Nor Shahrudin, Mohd Feisal Hafiz Abdul Aziz, Verona Ramas Anak Joseph and Nurul Atiqah Mukhtar

Despite emerging concerns regarding sustainable development, comprehension of the responsibilities and commitment of Higher Education Institutions (HEI) to better environmental sustainability practices remains limited. Through an investigation of university behaviours and strategies, also the recommendation of holistic, sustainable campus initiatives in Malaysian universities, this study seeks to help bridge the gap. The study employed an explanatory sequential mixed methodology, analysing 155 responses to a survey questionnaire distributed to Malaysian public universities and ten additional expert interviews to facilitate information triangulation. The analysis revealed that current strategies for sustainable management are premised on low- to medium-hanging fruit initiatives. Moreover, the findings indicate that enhancing education and culture, strengthening institutional capacity, structuring governance, and boosting infrastructure capabilities are crucial for accelerating universities' transition to sustainability. This article presents outcomes by expanding practical perspectives on the extent of sustainable campus initiatives and offering strategic views for benchmarking a sustainable campus in Malaysian HEIs.

### **10:15 Data Driven Strategies for Crime Prevention: A Focus on Integrated Crime Risk Assessment System**

Mohammad Fahmi Hussin Action, Mohd Razif Maidin, Khairilmizal Samsudin, Nor Ayu Zakaria and Siti Amalina Enche Ab Rahim

This paper presents the Integrated Crime Risk Assessment System (ICRAS), a mobile application developed to assist Investigation Officers (IOs) within the Royal Malaysian Police in assessing crime risks and making well informed decisions. The app utilizes a crime risk matrix that has been designed based on a pre established risk appetite framework, allowing officers to evaluate crime risks accurately and efficiently. By integrating diverse data sources, such as historical crime data, demographic trends, and environmental factors, the app generates a risk score that reflects the likelihood of criminal activity in various areas. This risk score is essential for guiding decision making, ensuring that resources are allocated effectively and that law enforcement efforts are focused on the most critical areas. The system empowers IOs to make proactive, evidence based decisions that enhance community safety. With the help of ICRAS, officers can identify potential threats early, which improves the accuracy of crime predictions and optimizes the overall effectiveness of policing strategies. ICRAS exemplifies how technology can play a crucial role in modernizing law enforcement by providing a data driven approach to crime prevention. Ultimately, it strengthens the decision making processes, ensuring that the Royal Malaysian Police can respond to crime risks in a more informed and efficient manner.

### **10:30 Contrasting Adulteration Patterns in Traditional Chinese and Malay Pain-Relief Products Detection by Gas Chromatography-Mass Spectrometry**

Khairulmazidah Mohamed, Anatasia Anak Kiang, Julia Dayana Jalil and Ahmad Shalihin Mohamad Samin

Traditional herbal medicines are widely accessible due to affordability and cultural significance, but their commercialisation raises safety concerns. This study detected pharmaceutical adulterants in traditional pain-relief products from Malaysian markets using Gas Chromatography-Mass Spectrometry. Ten Traditional Chinese Medicine (TCM) and ten Malay herbal samples were extracted, filtered, and analyzed by GC-MS. Results revealed contrasting patterns: 90% of TCM samples contained undeclared synthetic compounds including chlorphenamine, acetaminophen, promethazine, and diclofenac. Conversely, Malay medicines predominantly contained authentic plant-derived compounds

like eugenol and, with 70% showing natural analgesic properties. These findings highlight critical quality disparities, underscoring urgent needs for enhanced regulatory oversight in traditional medicine industries.

#### **10:45 *In Vitro* Anticancer Activities of *Holothuria Leucospilota*: A Narrative Review**

Nur Amira Dol Ramli, Nurharnani Harun, Rahayu Zulkapli and Muhammad Farhan Nazarudin

*Holothuria leucospilota* (HL) is an edible sea cucumber with promising in vitro anticancer activities. HL extract demonstrates high therapeutic selectivity against cancer cells while sparing normal cells. The extract disrupts cell cycle at both the early (G1) and late (S/G2/M) phases. The anticancer effects of HL are mediated by various mechanisms including the activation of the intrinsic apoptotic pathway via BAX upregulation and BCL-2 downregulation, suppression of tumor-promoting genes, inhibition of angiogenesis and preservation of cellular integrity through CDH1 upregulation. These findings highlight HL's multi targeted mechanisms and render it a potential marine-derived candidate for oncology drug development

## Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)

### Parallel Session 5: Science & Technology (ST)

<https://meet.google.com/hcp-path-qmh>

#### Room 5

Chairs: Azliyana Azizan, Kama Azura Status, Suhaila Subahir

#### **9:30 *Enhancing Learning Outcomes in Digital Systems Education Through Continuous Quality Improvement (CQI) Analysis: A Case Study of MEK526***

Kama Azura Othman, Noor Hafizah Abdul Aziz and Zarina Mohd Noh

This paper presents an evaluation of Continuous Quality Improvement (CQI) and Outcome-Based Education (OBE) implementation in the Fundamentals of Digital System (MEK526) course at Universiti Teknologi MARA for CEEM242 students. Two consecutive semesters, March-August 2024 and August 2024-February 2025, were analyzed to evaluate student performance, Course Outcomes (COs), and Programme Outcomes (POs) achievement. Findings indicate consistent improvement in students' analytical and problem-solving skills aligned with PO2 and PO3 of the programme, reflecting the effectiveness of the implemented CQI actions such as enhanced problem-solving sessions and group-based discussions. The results demonstrate the impact of structured OBE and CQI strategies on teaching and learning quality within engineering education

#### **9:45 *Comparative Characterization of Iron Oxide Nanoparticles Synthesized Using Citrus Peel Extracts for Potential Enhanced Oil Recovery Applications***

Siti Nurliyana Che Mohamed Hussein, Nur Anissa Azahra Azizi, Azlinda Azizi, Husna Aini Swarno and Rabiatal Adawiyah Ali

This study presents the green synthesis of iron oxide nanoparticles (IONPs) using citrus peel extracts from lemon (*Citrus limon*), key lime (*Citrus aurantiifolia*), and calamansi (*Citrus microcarpa*) as natural reducing and stabilizing agents. The synthesized Fe<sub>3</sub>O<sub>4</sub> nanoparticles were characterized using FTIR, XRD, SEM, DLS, and zeta potential analyses. Calamansi-derived IONPs exhibited superior dispersion and stability (-26.00 mV) with minimal aggregation compared to key lime and lemon. These findings

demonstrate the potential of citrus waste for sustainable nanoparticle production and identify calamansi extract as a promising candidate for future enhanced oil recovery applications.

#### **10:00 Buckling Load Optimisation of Cylindrical Shells Under Compressive Load Using Various Response Surface Methodology - Regression Functions**

Mohd Nor Aiman Ab Patar, Mohd Shahrom Ismail, Azizul Hakim Samsudin, Ilyani Akmar and Jamaluddin Mahmud

Cylindrical shells fabricated from high strength API 5L X65 steel, are widely employed in pipelines and pressure vessels due to their advantageous load-carrying capacity in relation to material weight. This advantage, however, is offset by buckling risk under axial compression, particularly in thin-walled structures. Minor geometric and boundary imperfections could significantly diminishes stability, establishing buckling as the primary failure mode in most practical applications. This study investigates the axial buckling behaviour of high-strength steel cylindrical shells through a combined simulation and statistical modelling approach. Validated datasets were generated by solving finite-element models of steel cylindrical shells under axial compression using ANSYS APDL. A structured experimental design based on Response Surface Methodology was executed to quantify the effects of key parameters: material stiffness, wall thickness, and shell length. A statistical comparison involving linear, two-factor interaction (2FI), and quadratic regression models revealed that the linear model provides the optimal prediction accuracy. This outcome confirm the dominance of first-order effects on the buckling response within the bounds of the investigated parameter space. The present predictive model offers a reliable and computationally efficient tool for optimising the buckling strength of these high strength shells, thereby facilitating the development of safer and more economically viable structural designs, consistent with available design codes.

#### **10:15 Synthesis and Characterization of Polyethylenimine-Functionalized MIL-101(Cr) for Potential CO<sub>2</sub> Adsorption Applications**

Effah Yahya, 'Azzah Nazihah Che Abdul Rahim and Nur Hashimah Alias

Capturing carbon dioxide (CO<sub>2</sub>) remains a major environmental concern, prompting extensive research into porous materials. Among these, metal-organic frameworks (MOFs) stand out as promising adsorbents with high crystallinity, tunable pore structures, and strong adsorption capacity. This study focuses on MIL-101(Cr), which was synthesized using a hydrothermal method and modified with polyethylenimine (PEI) through wet impregnation. PEI has a high density of amine groups and accessible primary amine sites, which improve CO<sub>2</sub> affinity. Characterization confirmed that the synthesis of PEI-MIL-101(Cr) was successful. However, further investigation is needed to determine the optimal PEI loading for achieving maximum CO<sub>2</sub> adsorption efficiency.

#### **10:30 Death Anxiety and Self-Esteem Among Youth in Malaysia**

Erna Faryza Mohd Poot, Siti Aishah Azman, Nur Atiqah Azman, Naa and Reza Nur Arsyi

This study explores the relationship between death anxiety and self-esteem among Malaysian youth aged 18-30. An online cross-sectional survey of 394 participants employed the Collett-Lester Fear of Death Scale (Version 3) and the Rosenberg Self-Esteem Scale. Results indicated moderate to high death anxiety and lower self-esteem levels. Female participants reported significantly higher death anxiety than males ( $p = 0.003$ ). No significant correlations were found between age and death anxiety ( $r = 0.032$ ,  $p = 0.527$ ) or between death anxiety and self-esteem ( $r = -0.085$ ,  $p = 0.092$ ). Findings highlight death anxiety as a growing psychological concern among Malaysian youth.

# Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)

## Parallel Session 6: Science & Technology (ST)

<https://meet.google.com/sbv-axts-zyo>

### Room 6

Chairs: Wan Zuraida Wan Zain, Siti Raihan Zakaria

#### **9:30 Effectiveness of Spices to Control Rice Weevil, *Sitophilus Oryzae* L. in Stored Rice Grains**

Nur Amira Hamid, Nurul Wahida Ramli and Muhammad Afiq Tajol Ariffin

Rice grain preservation faces significant challenges due to insect infestations, particularly by *Sitophilus oryzae*, which compromises grain quality and lead to economic losses for farmers. This study investigates the efficacy of spice powders: *Cinnamomum verum*, *Capsicum annum*, *Curcuma longa* L, and *Cymbopogon citratus*. Mortality rates of *S. oryzae* achieved 100% mortality within 96 hours by the combination of 4g *C. verum* and 5g *C. longa*. Additionally, hedonic testing revealed no significant differences in consumer acceptance ( $P > 0.05$ ). These results support the potential of spice-based treatments in Integrated Pest Management (IPM), offering safe and sustainable solutions for rice grain protection.

#### **9:45 Nutritional Enhancement of *Azolla* Sp. Through Microbial Enzymatic Bioconversion**

Rohana Mat Nor, Wan Rozianoor Mohd Hassan, Farizan Aris, Sharifah Raina Manaf and Alawi Sulaiman

The increasing demand for sustainable and cost-effective animal feed has driven research into enhancing the nutritional quality of alternative protein sources, such as plant resources. *Azolla*, a fast-growing aquatic fern, is rich in nutrients but contains high levels of insoluble fiber and antinutritional factors (ANFs), limiting its digestibility in animal diets. This study evaluated the potential of dual culture solid state fermentation (SSF) using two Generally Recognized As Safe (GRAS) strains, *Rhizopus* sp., isolated from local tempeh, and *Lactiplantibacillus plantarum*, a lactic acid bacterium isolated from rumen samples, to enhance the nutritional composition of *Azolla*. Proximate analyses were conducted following AOAC (2005) methods. Dual culture SSF significantly ( $p < 0.05$ ) increased total protein and lipid contents by 24% and 60%, respectively, while reducing crude fiber by over 50% after five days of incubation, compared to single-culture fermentations. These results highlight the synergistic enzymatic interactions between fungal and bacterial strains, underscoring dual culture SSF as a promising biotechnological approach for developing nutritionally enriched, sustainable feed ingredients.

#### **10:00 NFT-Based Authentication in Education: ERC-721 Token Use for Moodle LMS Security and Credentialing**

Danang Handoko Belut Saputro, Noor Akhmad Setiawan, Azkario Rizky Pratama and Avinanta Tarigan

The increasing adoption of blockchain in education has introduced new paradigms in identity verification and credentialing. This study explores the use of ERC-721 non-fungible tokens (NFTs) as authentication tools in Moodle LMS, aiming to enhance both security and user control. Built on Web3 infrastructure, the system enables students to authenticate via unique, tamper-resistant tokens stored in decentralized wallets. Using a design science methodology, the prototype was iteratively developed and tested for usability, security, and performance metrics. Findings suggest that NFT-based authentication offers significant advantages in terms of transparency, credential integrity, and ownership. These results align with current trends in blockchain-supported educational credentialing (Allen & Light, 2023), and support further exploration into decentralized identity systems in academia.

**10:15 Assessment of Offshore Wind Energy Potential and Technical Challenges in Southeast Asia**

Husna Aini Swarno, Rabiatal Adawiyah Ali, Siti Nurliyana Che Mohamed Hussein and Mazlinda Ab Rahman

Offshore wind energy offers strong potential for renewable electricity generation in Southeast Asia, supported by vast coastlines, consistent monsoonal winds, and rising power demand. This study evaluates geographic, technical, economic, environmental, and policy dimensions influencing regional development. Key challenges include deepwater conditions requiring floating turbines, wind variability, grid limitations, and marine spatial conflicts. Advancements in turbine efficiency, hybrid systems, and regional power trade can enhance feasibility. Environmental and social concerns are addressed through inclusive assessments. Regulatory inconsistency and limited coordination across ASEAN remain barriers, necessitating harmonized standards, adaptive financing, and integrated policies to achieve decarbonization and energy security goals.

**10:30 Evolving Learning Through Community Engagement: A Three-Year Reflection on Dental Students' Experiences with Individuals with Special Needs**

Azwin Assilah Kamaruddin, Aminda Faizura Omar, Mas Suryalis Ahmad and Ilham Wan Mokhtar

This study examines the evolving reflections of three cohorts of final-year dental students who participated in a community engagement program involving individuals with special needs (IWSN). A total of 240 students planned and conducted oral health activities in community institutions, followed by guided reflective writing. Thematic analysis revealed progressive learning across cohorts: Cohort 1 developed awareness and empathy, Cohort 2 enhanced communication and behavioural management skills, and Cohort 3 demonstrated leadership and advocacy. These findings illustrate how experiential learning transforms classroom-based knowledge into social responsibility, embodying UiTM's SULAM philosophy and the CSSR 2025 theme, "From Classrooms to Society".

**10:45 Three-Dimensional Morphometric Analysis of Primary Molar Crowns of Children Treated in Faculty of Dentistry, UiTM**

Mohd Amir Mukhsin Zurin Adnan, Nur Hasanah Ulfa Zulkifli, Nurulain Rosli and Azwin Assilah Kamaruddin

This study mapped the three-dimensional morphology of primary molars among children treated at Universiti Teknologi MARA using 3D scanning and digital analysis. A total of 141 models (69 males, 72 females) comprising 644 molars were assessed for mesiodistal, buccolingual, and cuspal height dimensions. Males exhibited significantly taller cusp heights, while mesiodistal and buccolingual widths showed minimal differences. Right-left variations were minor. The generated 3D average shapes provide population-specific references to guide the design of paediatric dental and orthodontic appliances, potentially improving fit and reducing chairside adjustments.

**Wednesday, November 5 9:30 - 11:30**  
**(Asia/Kuala\_Lumpur)**

**Parallel Session 7: Science Social (SS)**  

<https://meet.google.com/ruj-obe-z-rnn>

**Room 7**

Chairs: Mazlan Che Soh, Muhammad Fairuz Azmi, Nur Aliana Hidayah Mohamed

**9:30 Exploring the Level of Acceptance of Cashless Transaction Among Community in Kuching: A Preliminary Study**

Tuan Nooriani Binti Tuan Ismail, Vivien Anak Kilin and Noni Harianti Binti Junaidi

This study aims to identify the level of acceptance of cashless payment among the community in Kuching, Sarawak. Cashless transactions are defined as a payment made without the use of physical cash or which payment that not involved the cash or coin. The cashless have become increasingly popular due to the efficiencies, convenience to use and wide acceptance across the retailers. In Sarawak, Sarawak Pay is one of the official mobile payment tools launched by state government which currently known as Spay global. Spay global serve multifunctional tools to pay goods and services which the physical cash automatically being replaced and the functions similarly to other e-wallets. In other words, Kuching, Sarawak is adapting the cashless payment as part of the broader shift towards a smart city development. This indirectly promote the digital innovation to the community. This changes basically will give Sarawak a bright future by the year 2030 due to rapid development of smart cities. However, despite these advantages on using cashless payment, challenges remain such as increase of cybersecurity breaches, risk which this can discourage the adoption among the community. Specifically, this preliminary study examines on how the level of acceptance affect the intention to adopt the cashless payment methods in future especially among the communities in Kuching, Sarawak. The quantitative research approach was used, utilizing a structured questionnaire to collect responses from participants who stayed in Kuching, Sarawak. The data collection for this study involved the use of Google form and face-to-face distribution methods, with the respondents selected through purposive sampling. In this study, there are 329 respondents from Kuching involved in this study to study the level of acceptance on the intention to use the cashless payment. The data analysis used to analyze by using SPSS software. The findings from this study are expected to provide valuable insights for government efforts to address challenges related to the adoption of cashless transaction in Kuching, Sarawak prior to full implementation.

#### **9:45 Assess the Level of Barriers of Main Factors to Choosing E-Learning in Ho Chi Minh City**

Phan Hong Thang

This article identifies and evaluates the main barrier factors influencing the choice of E-learning based on the perspectives of many stakeholders. Stakeholder perspectives are focused on exploring conflicting viewpoints. The Symbiotic Organisms Search (SOS) algorithm is applied to evaluate and rank the factors of a successful e-learning model in Ho Chi Minh City by identifying the main barriers to choice. choose this model. The article presents four final criteria selected after analyzing and evaluating the opinions of experts in in-depth interviews. The findings show that the order of importance is infrastructure and technology, human resource quality, management and implementation, support and pedagogy. The research results contribute a number of important contents to the development of solutions to improve the quality of online teaching and learning within the framework of limited resources.

#### **10:00 Sustainability in Services Industry: A Bibliometric Review of Research Patterns, Themes, and Global Insights (1970-2024)**

Abdul Rashid Bin Mohd Ghazalli, Jamaludin Akbar, Zurina Ismail and Azyyati Anuar

This study conducts a comprehensive bibliometric analysis to map research trends, intellectual structures, and global collaboration patterns in sustainability practices within the service industry. Data was extracted from the Web of Science Core Collection using targeted keywords, yielding 489 publications from 1970 to 2024. Using VOSviewer, the analysis encompassed keyword co-occurrence mapping, citation and co-citation analyses, and network visualizations to identify thematic clusters, influential authors, and core journals. Findings reveal that research is highly interdisciplinary, dominated by categories such as Green Sustainable Science Technology, Environmental Sciences, and Business Economics, reflecting a dual emphasis on technological innovation and economic feasibility. Publication trends show a slow growth from 1995 to 2013, followed by a steady rise post-2014, with a significant surge in the last three years. Geographically, the United States, China, and the United Kingdom emerge as leading contributors, while keyword mapping highlights core themes such as

corporate social responsibility, green innovation, and sustainable supply chains, alongside emerging topics like circular economy and digital transformation. The results indicate that scholarly interest is increasingly aligned with global sustainability agendas, particularly the Sustainable Development Goals. However, the analysis also reveals gaps in integrating socio-behavioral dimensions and industry-specific adaptation strategies.

*Presenter bio:* Certified Six Sigma Green and Black Belt by using DMAIC approach with results-oriented, high-energy, hands-on professional, with a successful record of accomplishments in various projects and manufacturing line sustaining. Major strengths include strong leadership, excellent communication skills, competent, strong team player, and attention to detail, dutiful respect for compliance in all regulated environments, as well as supervisory skills and other administrative tasks. Thorough knowledge of current manufacturing practices, and a clear vision to accomplish the company goals. Computer and Internet literate. 20+ years of experience in Manufacturing Industry and currently pursue DBA at University Technology of MARA, Kedah.

### **10:15 Determinants of Police Integrity and Its Relevance to Ethical Governance in the Public Sector: A Scoping Review**

Norlida Zakirai Zakaria, Nur Faithzah Jamian, Idris Osman, Erratul Shela Eshak and Masliza Mohd Razali

Integrity remains a cornerstone of ethical governance and a crucial foundation for sustaining public trust in institutions. This scoping review aims to identify the determinants of police integrity and examine their relevance to shaping ethical governance within public-sector organizations. Guided by the PRISMA-ScR framework, a systematic search was conducted using the Scopus and Web of Science databases for studies published between 2015 and 2025. Twenty-four eligible publications, encompassing both empirical and conceptual works, were reviewed and synthesized across individual, organizational, and societal levels. The findings reveal that integrity is shaped by a combination of individual values, institutional conditions, and societal expectations that interact to influence ethical behaviour and accountability. Police integrity provides a useful comparative perspective for understanding how ethical principles can be embedded and sustained within broader public-sector governance systems. The review highlights the need for more inclusive and culturally diverse research beyond Western contexts. This study contributes to management and public administration literature by mapping key integrity determinants and emphasizing leadership development, institutional reform, and value-based management as central strategies to strengthen ethical performance in public organizations.

### **10:30 Engaging Students in Hybrid Learning: Insights into Learning Content, Emotion, and Teaching Practices in Malaysian Universities**

Teoh Sian Hoon, Nurshamshida Md Shamsudin, Joseph Boon Zik Hong, Parmjit Singh, Rudi Hartono, Fathur Rokhman and Lulu April Farida

In hybrid classes, engagement is widely acknowledged as a critical determinant of success for both undergraduates and lecturers. However, more empirical evidence is needed to clarify this understanding. Hence, this study aimed to investigate the role of emotion in moderating the relationship between learning content and student engagement in hybrid learning among Malaysian undergraduates. In addition, insights from lecturers' teaching practices were explored to complement the analysis of student engagement. A mixed approach, focusing on a case study, was employed to collect quantitative and qualitative data from 86 undergraduates and six lecturers in Malaysia. The findings revealed that students' emotions play a significant role in building the relationship between the quality content of learning materials and engagement. The successful use of hybrid teaching by lecturers was strongly dependent on three key factors: utilisation of technical tools, efforts to create instructional materials, and securing active students' participation. This study suggests that preparing engaging and attentive learning materials for the content of teaching is essential to engaging students in hybrid learning while securing their emotional motivation. Hence, lecturers in universities should focus on this experience to provide supportive material while putting effort into engaging students in hybrid teaching and learning.

*Presenter bio:* Prof. Dr. Teoh Sian Hoon received B.Sc (Hons) from Universiti Teknologi Malaysia (UTM), MSc (Statistics) degree from Universiti Sains Malaysia, and PhD at the same university. Her PhD area is "Interactive Learning Using Three Different Strategies in the Learning of Matrices". Her research interests are educational mathematics & statistics and e-Learning.

### **10:45 *Strengthening Adaptability: The Role of Interpersonal Factors in Law Enforcement Team Performance in Dynamic Environments***

Norsyazwani Ab Halim, Azlyn Zawawi and Nur Zafifa Kamarunzaman

Adaptive team performance is critical for law enforcement units operating in complex and unpredictable environments. This study investigates the role of interpersonal factors such as team support, team cognition, and team psychological safety in predicting adaptive team performance among law enforcement teams in Peninsular Malaysia. Using a cross-sectional survey design, the population are 1124 operational officers, and data were collected from representing 765 individuals aggregated into 186 law enforcement teams. Purposive sampling was employed to target law enforcement personnel directly involved in team-based operations. Validated survey instruments were used to measure team support, team cognition, psychological safety, and adaptive team performance. Structural analyses revealed that all three interpersonal factors were significantly and positively associated with adaptive team performance. These findings highlight the importance of cultivating supportive team environments, fostering shared cognitive understanding, and promoting psychological safety to enhance adaptability in dynamic operational teams' contexts. The study contributes empirical evidence to the growing literature on team performance by extending the role of interpersonal dynamics to law enforcement settings in Malaysia. Practical implications suggest that frontliners organizations should strengthen training and leadership practices that reinforce interpersonal support, shared cognition, and psychological safety to sustain effective team adaptability.

### **11:00 *Beyond Compliance: An Information Literacy-GRC Framework for Vetting Media Engagements in Public Universities***

Saidatul Akmar Ismail, Shahrin Sahib and Nor Hayati Saad

This study examines the convergence of Information Literacy (IL) and Governance, Risk, and Compliance (GRC) in higher education, introducing a hybrid framework for institutional media vetting. Through a Systematic Critical Literature Review (SCLR), it critically assesses the shortcomings of compliance-focused models in mitigating reputational risks, highlighting the need for integrated evaluative and procedural elements. Analysis reveals that GRC frameworks offer structural stability but insufficient cognitive tools for media credibility assessment. The proposed Literacy-GRC Hybrid Framework operationalizes evaluative fluency-the capacity to interpret, verify, and ethically apply information-within governance processes. This advancement enriches institutional governance literature by providing a replicable model that enhances universities' media engagement strategies for improved reputational resilience.

## **Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)**

### **Parallel Session 8: Science Social (SS)**

<https://meet.google.com/trh-jmzg-gsw>

Room 8

Chairs: Nor Tutiaini Ab Wahid, Amizon Azizan, Nurharnani Harun

### **9:30 *A Social and Technological Factors Influencing Malaysian Gen Z's Online Accommodation Purchases***

Mazlina Binti Mahdzar, Arni Abdul Gani and Putri Huda Zafirah Ridhwan Deepak Anopchand

This study investigates factors influencing Malaysian Generation Z's online purchase intention for accommodation using the extended Technology Acceptance Model (TAM). Data from 220 respondents were analyzed through Partial Least Squares Structural Equation Modeling (PLS-SEM). Findings reveal that perceived usefulness and website design quality significantly predict online purchase intention, while social influence mediates both relationships. The results extend TAM by integrating social and design dimensions, offering theoretical and practical insights for enhancing digital engagement, platform design, and marketing strategies in Malaysia's emerging tourism e-commerce landscape.

#### **9:45 Analyzing the Correlation Between Agile Team Factors, Team Performance and Project Success in Software Development**

Marmiati Al-Azimah Azhari, Abdurrahman Jalil, Fadhilnor Rahmad and Abdul Samad Bin Shibghatullah

Achieving project success requires the interplay of agile team factors, team performance, and their collective influence on outcomes. This study investigates the correlation between Agile team factors, team performance, and project success in software development environments. Data were collected from software development professionals and analyzed through Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) method. The results reveal significant positive correlations between Agile team factors (except for team size) and team performance, as well as between team performance and project success, highlighting the mediating role of the team performance.

#### **10:00 Exploring Performance Expectancy, Perceived Technology Security, Hedonic Motivation and Social Influence in Cashless Payment Adoption**

Siti Nadzurah Ramli, Syazanajwa Suhaimi, Nor Raihana Asmar Mohd Noor and Syed Azlan Aljaffree Syed Khadzil

The study examines key motivations driving the adoption of cashless payment methods. These include performance expectancy, which is the belief that cashless payments improve efficiency. Other motivations are perceived technology security, which relates to trust in the safety of cashless payments, hedonic motivation, which refers to the enjoyment of using digital payments, and social influence, which reflects the impact of peers and society. Quantitative data was collected and analyzed. The results show that students are strongly motivated by hedonic experiences. These insights clarify how user societal factors interact to influence digital transaction adoption and have broader implications for policymakers.

#### **10:15 Advancing Green Innovation to Improve Environmental Sustainability in Malaysian Hotels**

Rasidah Binti Hamid, Mohd Hanafi Azman Ong, Siti Zuraini Ramley Alan and Fajar Kusnadi Kusumah Putra

This study investigates the influence of various factors on green innovation and its impact on environmental performance in hotels located in Kuala Lumpur, Malaysia. Adopting a quantitative, cross-sectional design, data were collected through structured questionnaires and analysed using AMOS. The analysis incorporated exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modeling (SEM). Results reveal that green organizational culture, innovation strategy, energy conservation and environmental regulations significantly affect green innovation, which positively influences environmental performance. These findings contribute to the limited literature on green innovation in the hotel sector and highlight implications for environmental stewardship in hospitality contexts.

#### **10:30 Geopolitical Risks and Economic Performance in OIC Economies: Descriptive Evidence from 1990 to 2023**

Nurul Fahana Aini Harun, Nur Hayati Abd Rahman, Shafinar Ismail and Khairunnisa Abd Samad

This study examines the relationship between geopolitical risks (GPR) and economic growth in Organization of Islamic Cooperation (OIC) countries from 1990 to 2023. It provides one of the first long-term descriptive analyses of how geopolitical shocks influence economic performance across this group of nations. The findings show a consistent pattern where events such as the Gulf War in 1991, the Iraq War in 2003, the Arab Spring in 2011, the Russia-Ukraine conflict in 2022, and the Israel-Palestine conflict in 2023 were followed by declines in growth or increased economic volatility. These results support the idea that political instability reduces investment and trade, thereby hindering development. The unique contribution of this research is its focus on OIC economies, where weaker institutions and greater exposure to external shocks intensify the impacts of instability. By leveraging historical evidence and adopting a forward-looking approach, the study presents a framework emphasizing uneven vulnerabilities among OIC members. It also reveals a significant gap in current literature, as low and lower-middle-income OIC economies have been underexplored in previous studies. Addressing this gap is crucial for guiding future research and shaping policies that enhance resilience to geopolitical risks.

#### **10:45 *Political Instability and Economic Growth in Low-Income Economies: Evidence from Panel Data Analysis (2002-2022)***

Muhamad Aliff Watri Soldin, Nur Hayati Abd Rahman, Khairunnisa Abd Samad and Shafinar Ismail  
This paper investigates the effect of political instability on economic growth in low-income economies over the period 2002-2022. While political stability is widely recognized as a precondition for sustained development, empirical evidence remains mixed, particularly for fragile economies with weak institutional capacity. Using a balanced panel of 32 low-income countries, this study combines country fixed-effects and year dummies to control for unobserved heterogeneity and global shocks. To address concerns of endogeneity and growth persistence, robustness checks were conducted using the Arellano-Bond dynamic panel estimator. The results demonstrate that improvements in political stability, measured by the Worldwide Governance Indicators' Political Stability and Absence of Violence/Terrorism index, are positively associated with real GDP growth. Specifically, a one-unit increase in the stability index corresponds to an average increase of 1.7 percentage points in annual growth. These findings underscore the central role of political stability in shaping development trajectories, particularly in economies where institutional fragility magnifies the costs of instability. The study contributes to the political economy of growth literature by providing updated, low-income-specific evidence and highlights the need for policymakers to integrate governance reforms, institutional strengthening, and conflict mitigation into broader development strategies.

#### **11:00 *Teachers' Use of Interactive Teaching Aids and Their Influence on Students' Attitudes and Behaviours in Science Education***

Al'Aina Y Firus Khan and Nurdiana Athirah Mohd Khairuddin  
Science education in Malaysia faces challenges from teacher-centred practices, limited resources, and uneven use of interactive teaching aids (ITAs). This study examined ITA usage among 78 secondary science teachers in Selangor and its influence on students' attitudes and behaviours. A quantitative survey using descriptive statistics and paired t-tests showed that multimedia-based ITAs (slides, YouTube, quizzes) were most used, while role play was least favoured. Results indicated significant improvements ( $p < 0.001$ ) in student participation and focus. Younger teachers preferred digital tools, highlighting demographic influence. Overall, ITAs enhanced engagement and learning, supporting their broader adoption in science classrooms.

# Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)

## Parallel Session 9: Science Social (SS)

<https://meet.google.com/oub-ojsz-qyp>

### Room 9

Chairs: Siti Sabariah Buhari, Ahmad Naqiyuddin Bakar, Siti Norsyafika binti Kamarudin Status

#### **9:30 A Thematic Analysis of Barriers to Business Sustainability Among Indigenous Entrepreneurs in Pahang, Malaysia**

Mohd Ali Bahari Abdul Kadir, Badli Esham Ahmad and Mohd Amli Abdullah Baharum

This qualitative study examines barriers to business sustainability for Indigenous entrepreneurs in Pahang, Malaysia. Through thematic analysis of interviews with 15 entrepreneurs, four key barriers were identified: financial constraints, fragile supply chains, insufficient government support, and socio-cultural dynamics. These interconnected challenges create a cycle that stifles business growth. The findings underscore the need for integrated, context-sensitive support strategies to foster sustainable Indigenous entrepreneurship, offering valuable insights for policymakers and support organizations.

*Presenter bio:* Dr. Mohd Amli bin Abdullah @ Baharum is a senior academic and researcher with expertise in leadership, education, and sustainable entrepreneurship. His research interests span organizational behavior, workplace safety culture, educational innovation, and indigenous community development. Dr. Mohd Amli has been actively involved in multidisciplinary research projects focusing on sustainability, entrepreneurship, and pedagogical development, and has published in several indexed journals. He also contributes to academic and community-based initiatives promoting financial literacy and educational equity.

#### **9:45 A Conceptual Model of Ethical Behavior Among Student of Higher Education**

Azhar Abd Aziz, Saidatul Rahah Hamidi, Afiza Ismail and Jamaiah Yahaya

Previous research in the field of information technology (IT) is based on personality and linked to the issues of abuse in the usage of IT. This study focuses on students of higher education institutions (HEI) and their regular abuse of unethical behaviour (UB) while on IT usage, which has now become the norm among students. Personality research based on the Big Five Personality Model focuses on only five behavioural characteristics: agreeableness, conscientiousness, emotional stability, intelligence, and extraversion. However, there is still a gap in the area of studies since prior studies have only linked individual ethical violations to the personality types and also the creation of the Big 7 Personality. The relationship between all the elements in the personality model and all unethical behaviour issues is essential since the problem of ethics violation should be addressed concurrently. This research tries to synthesise constructs, actions, and control measures with relation to the social and ethical use of information technology. This research is based on a literature review on the topic of information technology ethics. A total of fifty publications were integrated and a conceptual model of constructs, actions, and control measures in computer ethics was constructed. This conceptual model provides systematic knowledge for computer ethics researchers, as it may be used as a reference for future computer ethics research, particularly in the conversion of negative to positive actions through the use of a set of control measures. The conceptual model offers a clear view and relation in classifying the actions, constructs, and control measures in a table format in seeing the computer ethical issues.

#### **10:00 The Impacts of Learner's Dropout and Discontinuation of Courses on MOOC: MOOC Developers and Lecturer's Perspective**

Samirah Nasuha Mohd Razali and Nor Shahniza Kamal Bashah

Massive Open Online Courses (MOOCs) offer flexible, accessible learning but face high dropout rates. This study explores MOOC instructors' and developers' perspectives on factors influencing learner retention and dropout. Using quantitative surveys, descriptive, and correlation analyses, findings reveal motivation, course structure, and personalization as key to retention (mean = 3.95-4.08/5). Self-efficacy,

content relevance, and intrinsic interest show strong positive correlations ( $r \approx 0.59$ ,  $p < 0.01$ ). The study highlights the need for holistic strategies focusing on community, learner support, and course design, suggesting future research on predictive models and personalized interventions to enhance MOOC engagement and retention.

*Presenter bio:* Dr. Samirah Razali is a lecturer and researcher in Computer Science whose work bridges the domains of education, technology, and digital well-being. With extensive experience serving in both private and public universities, she specializes in computer networking and the applications of artificial intelligence in education. Her current research focuses on AI-driven MOOCs, learner retention, and youth digital citizenship areas that reflect her commitment to advancing equitable and adaptive learning ecosystems. She actively investigates how artificial intelligence and personalized learning frameworks can enhance student engagement and minimize dropout rates in online learning environments.

### **10:15 *Fragmented Support or Emerging Learning? A Qualitative Analysis of Mental Health Practices in Offshore Oil & Gas Workplaces***

Nur Dalilah Mohd Rani, Nur Zafifa Kamarunzaman and Azlyn Ahmad Zawawi

Offshore O&G work environments place employees at high risk of psychosocial stressors that directly affect their mental health, yet organizational responses to these challenges often remain fragmented and inconsistently applied. This study explored how organizational learning, rules and regulations, and socialization processes influence employees' mental health experiences in offshore settings. Using the qualitative strand of a sequential mixed-method design, semi-structured interviews were conducted with offshore employees and analyzed thematically with ATLAS.ti. The analysis identified two central domains: 1) rules and regulations, which encompassed both ordained rules in the form of formal programs and policies, and enacted rules such as departmental guidelines, contracts, and regulatory standards; and 2) socialization processes, which included formal and informal communication as well as the critical roles of leadership as translators, knowledge brokers, and influencers. Together, these domains illustrate how organizational learning unfolds through both structured and informal practices, at times enabling but often constraining the support available to employees. The findings show that mental health support offshore remains largely compliance-driven and reactive, yet adaptive learning is evident in leadership practices and communication, highlighting the importance of integrating more proactive and coordinated organizational strategies to sustain employee well-being.

### **10:30 *Corporate Governance and the Likelihood of Fraud in Malaysia: The Moderating Effect of Risk Management Practices***

Wan Noor Asmuni Wan Fauzi, Marziana Madah Marzuki and Muhaniza Zainal Ariffin

This study examines how corporate governance and risk management practices influence fraudulent financial reporting among 61 construction companies listed on Bursa Malaysia (2018-2021) using the Fraud Diamond Theory. Fraud likelihood is measured by the F-score model, with ROA (pressure), independent directors (opportunity), women on board (rationalization), and CEO duality (capability) as variables. Risk management features act as a moderator. Data are sourced from annual reports and EIKON, analyzed using descriptive, correlation, and multivariate methods. Findings aim to guide regulators, companies, and auditors in strengthening governance, detecting fraud early, and improving investor confidence.

### **10:45 *The Rise and Emergence of Digital Influencer Marketing Among Gen Z: Shaping the Future of Decision-Making and Content Outreach***

Saraswathy Chinnasamy, Huan Zhang and Shifa Faizal

Social media has evolved into businesses to promote brands, connect with consumers, and shape trends with digital marketing, brand storytelling, and community building. This study examines the rise of influencer marketing and its impact on the purchasing decisions of Malaysian Gen Z, focusing on influencer credibility and parasocial relationships, which shape their attitudes and behaviors. The study investigates how trust, expertise, and authenticity of influencers, and explores the emotional bonds of

intimacy, loyalty, and parasocial connections. Online surveys distributed to Gen Z resulted influencers perceived as credible and relatable exert greater influence on consumer trust and purchase intentions.

### **11:00 Artificial Intelligence in Teacher Education: From Anxiety to Agency for Inclusive Practice**

Isabel Berrueto-Aldunate

Artificial intelligence (AI) is transforming teacher education by reshaping professional expectations and pedagogical practices. Once limited to digital literacy workshops, training programmes now include modules on AI literacy, ethics, and adaptive technologies. This paper presents a narrative, practice-informed study that synthesises professional experiences with policy frameworks such as UNESCO (2023/2025), OECD (2025), and the European Union's AI Act (European Union, 2024). The latter entered into force on 1 August 2024 and introduced mandatory AI literacy provisions (Art. 4) for providers and deployers from 2 February 2025. Using a narrative approach, five leverage points are identified: (1) teacher capacity-building through mentoring, (2) assessment redesign to emphasise process transparency and higher-order thinking, (3) evidence of impact under structured instructional design, (4) governance frameworks integrating ethics and equity, and (5) digital divides as critical conditions. Findings show AI enhances differentiation, feedback, and judgement when accompanied by scaffolding and support. Conversely, unguided or unequal adoption fosters shortcuts, dependence, and inequity. The paper contributes a compact framework for aligning AI adoption with inclusive teacher education. It argues AI does not replace pedagogy but heightens need for critical pedagogy, equitable governance, and context-sensitive professional development.

## **Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)**

### **Parallel Session 10: Arts & Humanities (AH)**

<https://meet.google.com/ddq-vgdv-rqt>

Room 10

Chairs: Syarul Azlina Sikandar, Mohd Hasrul Yushairi Johari, Tengku Shahrul Anuar Status

### **9:30 Practical Legal Frameworks for Global Resale Royalty Rights Implementation: A Systematic Literature**

Hairulnisak Merman, Ishak Ramli, Hamidi Abdul Hadi and Muhamad Helmi Muhamad Khair

This systematic literature review examines the practical legal frameworks necessary to effectively implement global Resale Royalty Rights (RRR) for visual artists. As artists increasingly seek fair compensation from secondary sales of their works, the evolving art market presents unique challenges and opportunities for regulatory frameworks. The problem statement addresses the inconsistent application of resale rights across different jurisdictions, highlighting gaps in legal protections that can undermine artists' economic interests. An advanced search was conducted using the Scopus and Web of Science databases, resulting in the identification of 33 relevant articles that provide insight into the current state of research on RRR. The methodology involved a thorough analysis of the literature to extract key themes related to legal frameworks, market dynamics, and the cultural implications of implementing resale rights. The finding was divided into three themes which are (1) legal frameworks and regulations for RRRVA, (2) technological impact on RRRVA and art markets, and (3) market dynamics, valuation practices, and governance. The review concludes that fostering collaboration among policymakers, legal experts, and artists is essential for developing effective regulations that ensure equitable treatment of artists and promote sustainable growth in the art sector. By addressing

these critical issues, this study aims to contribute to a deeper understanding of the pathways toward enhancing the rights and protections of artists globally.

### **9:45 *Reinterpreting Malay Wisdom: Tampuk Manggis as a Symbolic Framework in Abstract Geometric Painting***

Mohd Farif Ab Jalil

This practice-based fine art research investigates the Tampuk Manggis motif-an ornamental form rooted in Malay cultural wisdom-as a conceptual and visual catalyst for the development of abstract geometric painting. Traditionally found in woodcarving and textile design, the Tampuk Manggis embodies values of unity, harmony, and spiritual balance. Rather than appropriating the motif as a decorative element, this study reinterprets its philosophical essence through a contemporary abstraction process within the studio. The research methodology integrates material experimentation, compositional deconstruction, and reflective documentation to translate the symbolic geometry of Tampuk Manggis into a new visual language. Through iterative painting trials, layering techniques, and spatial rhythm exploration, the study explores how indigenous symbolism can inform modern abstraction without losing its cultural integrity. By situating the painting process as a form of knowledge production, this research contributes to the discourse of Southeast Asian contemporary art and decolonial aesthetics. The outcome proposes that abstract geometry, when grounded in local symbolism, can serve as a critical medium for recontextualising traditional wisdom in the fine art studio. This research affirms that cultural motifs hold potential not only as visual references but as living epistemologies that can inspire new methodologies in contemporary painting practice.

### **10:00 *Media Practitioners' Perceptions on the Coverage of Abusive Police Cases in Online News***

Shifa Faizal

This paper examines how Malaysian online news media report cases of police abuse and brutality using a mixed-methods approach combining content analysis and interviews. Thirty-four news reports from four outlets-two mainstream (Berita Harian, New Straits Times) and two alternatives (Malaysiakini, Free Malaysia Today)-were analysed alongside journalists' perspectives. Mainstream outlets favoured informative, institutionaffirming frames, while alternative portals adopted episodic and provocative frames that highlighted injustice. Practitioners identified three determinants of coverage: organisational philosophy and ownership, framing and headline construction, and source credibility. Findings reveal that Malaysian media framing reflects negotiated ethics shaped by structural constraints and moral responsibility.

### **10:15 *Effectiveness and Equity in Compressed Academic Delivery: A Pilot Study***

Muhammad Yusuf Masod and Aezzaddin Zainuddin

This pilot study evaluates the effectiveness and equity of the Short Semester implemented in the Bachelor of Printing Technology programme at Universiti Teknologi MARA (UiTM). Using a mixed-methods descriptive design, it examines student satisfaction, workload, and access under a five-week compressed delivery. Results indicate strong teaching quality but reduced satisfaction due to assessment density and perceived financial burden. The findings highlight the need to balance pedagogy, pacing, and affordability to ensure sustainable and equitable short-semester delivery in Malaysian higher education.

### **10:30 *Tifo as a Medium of Nationalistic and Collective Expression in Public Spaces***

Farid Raihan Ahmad

Tifo, an Italian term derived from the word "typhus" to denote the feverish passion of fans, has evolved from simple stadium banners into sophisticated visual spectacles that embody collective identity, nationalism, and socio-political sentiment. This paper explores how tifo functions as a form of public

art and communication medium that transcends sport to become a participatory, nationalistic expression in public spaces. By analyzing visual symbolism, collective participation, and contextual meanings of tifo performances, this study highlights the role of tifo as a grassroots cultural practice that constructs, negotiates, and performs national identity. The research situates tifo within the broader discourse of visual culture, nationalism, and social cohesion, arguing that it serves as an ephemeral yet powerful platform for civic expression and emotional solidarity among citizens.

## Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)

### Parallel Session 11: Arts & Humanities (AH)

<https://meet.google.com/qcx-wira-eyd>

Room 11

Chairs: Sanghamitra Dalal, Bahiyah Abdullah Status

#### **9:30 *Cartoonization of Chinese Opera Characters from the Perspective of Cultural Translation: A Case Study of "Centenary Commander"***

Chen Xue and Sharkawi Bin Che Din

Traditional Chinese opera is a highly coded visual and performative system, yet naive porting of stage conventions into animation often dilutes meaning. Using Hall's cultural iceberg and visual semiotics, this paper proposes a reproducible pipeline for cartoonizing Yangju (Yangzhou Opera) characters that links surface (visual), intermediate (behavioral), and deep (value) layers to concrete design operators—analogy, simplification, and symbolism. Focusing on She Taijun and Mu Guiying in Centenary Commander, we conduct a literature-informed content analysis to extract motifs, gestures, and value cues, then translate them into scene-specific blueprints (pose, prop, palette, motif set). Compared with motif "borrowing," our approach preserves cultural semantics while improving readability and production efficiency. The study contributes: (1) a culture-to-design mapping framework with operator definitions, (2) validated design blueprints for two canonical roles, and (3) an evaluation rubric for cultural fidelity, readability, and efficiency. The findings offer a practical reference for revitalizing traditional arts through contemporary animation and suggest directions for broader applications across regional opera forms.

*Presenter bio:* Xue Chen is currently pursuing her PhD at the College of Creative Arts, Universiti Teknologi MARA Puncak Alam, Malaysia. She also serves as a lecturer at the School of Fashion Communication, Jiangxi Institute Of Fashion Technology, China. She has developed a strong academic interest in the intersection of animation and traditional Chinese opera. Her research focuses on how animation can serve as a medium for the preservation, reinterpretation, and dissemination of opera culture in the digital age. In addition to her expertise in animation production, Xue is passionate about applying new media and digital technologies to cultural expression.

#### **9:45 *Aesthetic and Functional Intergration: A Neuroaesthetic Framework for Smart Furniture in Academic Libraries***

Nurul Ain Haron, Natrina M P Toyong and S'harin Mokhtar

This study begins by examining the role of neuroaesthetics, smart furniture design and, academic library environments to understand the current landscape, identifying a critical issue related to the lack of synergy between aesthetic appeal and functional utility in smart furniture within academic libraries. This research departs from traditional approaches by bridging this gap through a comprehensive neuroaesthetic framework, addressing the existing research gap concerning the intergration of sensory-motor, emotion-valuation, and knowledge-meaning elements into library environments. Through a theoretical analysis, the paper highlights design strategies that enhance user experience, emotional well-being, and cognitive engagement, offering practical implications for designers,

policymakers, and educators. This study systematically investigates and develops a theoretical model. This model offers a more effective and innovative way to enhance user experiences in Malaysian academic libraries by aligning furniture design with neuroaesthetic principles. The study is expected to contribute to the field of library design by providing new insights, practical frameworks, and recommendations, ultimately enhancing understanding and improving practices in Malaysia.

### **10:00 Confronting Challenges - Navigating on-Site Hurdles in Interior Design Projects**

Mohd Firdaus Tugiman, Nur Maizura Ahmad Noorhani, Arniatul Aiza Mustapha and Mohd Azrul Baharudin

Interior design construction projects involve the coordination and integration of various design elements, materials, and specialist trades within an existing structural shell. Unlike general construction, these projects demand high precision, detailed customization, and close attention to aesthetic and functional outcomes, often within tight timelines and confined spaces. Through qualitative research using semi-structured interviews, this study captures insights from experienced interior design project managers representing various stakeholders. The findings reveal practical strategies used to mitigate these issues, including enhanced site monitoring, structured communication frameworks, and the implementation of risk-based planning approaches. Among the key challenges encountered in interior construction projects during the construction stage can be categorized into three (3) predominant issues that significantly influence project performance. These issues, if left unaddressed, can lead to delays, cost overruns, and compromised design quality. Meanwhile, the most frequently proposed solutions by the respondents are proper monitoring and execution, establishing effective communication channels, and implementing rigorous cost estimation with contingency planning. As a result, interior projects present unique challenges that can significantly affect project performance and client satisfaction. This paper investigates the issues faced during the execution phase of interior design works, particularly those occurring at project sites.

### **10:15 Comparative Analysis of Islamic Affairs Management in Malaysia and Brunei**

Mohamad Afandi Md Ismail, Muhammad Najib Abd Wakil, Rafeah Binti Saidon, Muhammad Hasif Yahaya, Ikmal Hafiz Jamal, Mohamad Khairul Izwan Rifin, Mohd Yusra Abdullah and Hajah Hanan Haji Abdul Aziz

This study explores the comparative administration of Islamic affairs in Malaysia and Brunei, two Southeast Asian Islamic monarchies that uphold Islam as the official religion and share a common Malay-Islamic cultural heritage. Despite their similarities in governance, religion, and regional alignment, both nations exhibit distinct approaches to managing Islamic affairs. Using a qualitative methodology based on document analysis, the research identifies key differences and strengths shaped by each country's political, economic, and socio-cultural contexts. Malaysia stands out for its institutional diversity and progressive Islamic thought, while Brunei is noted for its policy consistency and comprehensive implementation of Sharia law. These differences offer valuable insights for enhancing Islamic governance globally. The study applies comparative and deductive analysis to highlight how each model balances tradition with modernity, monarchy with legislative authority, and religious values with administrative efficiency. By examining these unique frameworks, the research proposes improvements to Islamic affairs administration that can benefit other Islamic nations. The findings underscore the importance of adapting Islamic governance to local contexts while maintaining core religious principles, offering a blueprint for harmonizing Sharia traditions with contemporary needs. This comparative approach contributes to the broader discourse on effective Islamic administration in diverse political landscapes.

### **10:30 Photographic Creativity as Visual Communication: A Framework for Aesthetic Meaning and Consumer Engagement in Malaysian Fashion E-Commerce**

Siti Shahida KameI

This paper reinterprets photographic creativity as a vital form of visual communication within Malaysia's fashion e-commerce sector. Drawing on theories of creativity, visual perception, and consumer engagement, it posits that innovative imagery serves as a visual stimulus that conveys brand meaning and evokes emotional value. Elements such as photographic originality, composition, and relevance significantly influence how audiences interpret aesthetic messages and engage with them. By merging artistic and marketing perspectives, the study highlights the role of visual innovation as a strategic communicative tool that shapes perception, fosters emotional connections, and encourages participation in digital fashion branding.

### **10:45 *Symbolism and Cultural Expressions in the Mah Meri Ritual: An Ethnographic Study on Cultural Identity Preservation***

Fadli Abdul Razak

This study examines the role of symbols, language, and cultural expressions in the Hari Moyang ritual of the Mah Meri community. Using ethnographic methods-field observation, interviews, and visual documentation-the research applies Peirce's Semiotic Theory to interpret meanings in carvings, masks, dances, and linguistic elements. Findings show that these expressions function beyond spirituality, serving as tools for cultural preservation, community cohesion, and intergenerational learning. The study also highlights modernization's threat to cultural continuity and proposes strategies, such as digital documentation and cultural education. It contributes to visual anthropology and indigenous studies through semiotic interpretations of endangered cultural heritage.

*Presenter bio:* Fadli bin Abdul Razak. Lecturer, Creative Photomedia Department, Faculty of Art and Design, Universiti Teknologi MARA (UiTM) Puncak Alam. He has expertise in visual journalism, ethnographic photography, and video production. His practice spans commercial and community-based documentary photography. Fadli is also actively engaged in research on Indigenous communities and academic writing related to photographic studies.

## **Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)**

### **Parallel Session 12: Arts & Humanities (AH)**

<https://meet.google.com/xoo-cttb-pbt>

Room 12

Chairs: Umi Marshida Abd Hamid, Husna Ahmad Ainuddin

#### **9:30 *Dimension of Family Well-Being During Disaster***

Rafeah Saidon, Siti Khadijah Ab. Manan, Nurzahidah Jaapar and Erik S Rahmawati Khudori

There is strong evidence demonstrating the impacts of disasters on the physical, emotional, and psychological well-being of families. This study is conducted to examine the well-being of families during the disaster. It adopts a quantitative method by distributing questionnaires to 276 targeted respondents. The collected data were analyzed descriptively and analytically, and the findings of the study implied that the overall respondents are not severely affected by the disaster. They can cope well with all the problems. This shows that by fostering a sense of togetherness, flexibility, and resilience, families can navigate the challenges and emerge from the disaster with their well-being intact

#### **9:45 *Accessibility of Workplaces for Physically Disabled Workers in the Pre-Press of the Printing Industry***

Muhammad Syawal Zahari and Shalida Mohd Rosnan

This study examines accessibility of the pre-press workplace for persons with disabilities in the Malaysian printing industry. Despite national policies and incentives supporting the employment of the person with disabilities, the representation remains low. The low representation is due to the inadequate facilities and limited employer awareness. Using a mixed-methods design, the data were collected via an online survey of companies under the Malay Printers Association (PPPM) and qualitative data through interviews with key stakeholders (HR managers, expert architects, the Disability Services and Development Division, and PWD employees). Only 4.8% of surveyed printing companies in Selangor reported employing PWDs and provided accessible ramps, toilets, a lift, or an adjustable desk arrangement. This study specifies pre-press workplace accessibility requirements, including ergonomic furniture, compliant door dimensions, minimum circulation width, and accessible toilet layouts. Hence, implementing these measures can remove physical barriers, enhance safety, functionality, and offer guidance for employers and policymakers to include Malaysia printing industry.

#### **10:00 Advancing Design Trend Forecasting Through Human-AI Collaboration**

Natrina M P Toyong, Linda Abd Hamid, Puan Norhayati Che daud and Tang Jialu

This paper presents an AI-assisted Scenario Planning activity within a Design Trend Study Method. Conducted through workshops with forty novice designers, five teams explored key issues across professions teachers, police, nurses, firefighters, and paramedics. Using Design Thinking's Sense-Intent stage and intuitive decision-making theory, participants evaluated stakeholder journeys based on trend significance and uncertainty. AI tools expanded narratives from each group's analysis, producing four AI generated extreme future scenarios and design concept. The study demonstrates how human-AI collaboration can enhance forecasting and inspire concept generation for future goods and services, contributing to socially impactful design outcomes in qualitative studies.

#### **10:15 Fostering Civic Responsibility Through an Environmental Awareness Study on Littering in Malaysia**

Linda Abd Hamid, Natrina M P Toyong and Erwin Rezasyah

Littering, often perceived as a minor issue, poses persistent environmental and social challenges in Malaysia. This environmental awareness study examines how education and public engagement influence civic responsibility and littering behaviour. Using a mixed-methods approach combining surveys and observations, the study found moderate public awareness but limited understanding of long-term ecological impacts. Social media, formal education, and gamified learning emerged as effective tools for promoting responsible behaviour. The findings underscore the importance of multi-platform environmental education and community participation in cultivating civic responsibility and fostering cleaner, more sustainable urban environments.

#### **10:30 Binge-Watching and Audience Behaviors: Understanding the Netflix Effect in Malaysia**

Mastura Muhammad and Najwa Ashiqen Abdul Rahman

The growth of over-the-top (OTT) platforms has transformed global media consumption and significantly influenced audience behaviour. In Malaysia, this shift is clearly evident, as technological convergence and COVID-19 have accelerated the move from traditional TV to digital streaming. This study examines Malaysian audiences' engagement with Netflix, focusing on viewing habits such as binge-watching using the Uses and Gratifications Theory and Technology Acceptance Model. It explores how perceived usefulness, accessibility, and entertainment influence adoption. A survey of 157 younger viewers who lead in subscriptions, binge-watching, and digital ownership highlights how global strategies intersect with local cultures and shape viewer habits in Malaysia.

#### **10:45 Consumer Perceptions and Market Adoption of Nature-Derived Colourants: Evidence from Malaysia's Fashion Industry**

Zamrudin Abdullah

**Purpose** - This study investigates Malaysian consumers' perceptions, acceptance, and behavioural intentions toward apparel coloured with nature-derived dyes. It aims to clarify how sustainability awareness, comfort beliefs, and willingness to wear influence market adoption of eco-friendly colourants within the Malaysian fashion industry. **Design/methodology/approach** - A nationwide quantitative survey ( $n = 500$ ) was conducted among fashion consumers, craft producers, and design educators. Data were analysed using descriptive statistics, exploratory factor analysis (EFA), MANOVA, Pearson correlation, and multiple regression to validate constructs and assess predictive relationships. **Findings** - The results reveal high acceptance and endorsement for natural-dye apparel ( $M = 4.25$ ,  $SD = 0.36$ ). The EFA confirmed a five-factor structure ( $KMO = 0.89$ , Bartlett's  $p < .001$ ) explaining 58% of variance, encompassing awareness, acceptance, willingness to wear, comfort beliefs, and perceived benefits. Regression analysis demonstrated that awareness, comfort perception, and willingness to wear significantly predicted acceptance ( $p < .05$ ). Consumers view nature-derived dyes as culturally authentic, safe, and environmentally responsible alternatives to synthetic colourants. **Originality/value** - This study provides empirical evidence of consumer readiness for natural-dye fashion in a Global South context. It contributes to sustainable fashion research by linking environmental awareness to tangible behavioural intentions, offering an actionable framework for the integration of traditional dyeing knowledge in modern apparel markets.

### **11:00 *The Role of Early Aesthetics in Daily Life Experiences in Developing Aesthetic Interpretations of People with Low Vision***

Yulyta Kodrat

This study explores the aesthetic dimensions of daily life and the surrounding environment experienced by people with low vision during childhood, thereby helping develop an aesthetic interpretation framework. Some research examines how past visual and sensory experiences serve as cognitive and emotional resources for current aesthetic interpretations. Through a phenomenological approach, it describes the aesthetic framework through which individuals with low vision construct meaning and find aesthetic in childhood encounters in their daily lives. These findings reveal that aesthetic experiences in childhood play an important role in shaping aesthetic literacy and interpretive strategies in adulthood by fostering alternative aesthetic literacy and prioritising sensory experiences and spatial relationships beyond the criteria of visual aesthetics for people with normal vision.

## **Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)**

### **Parallel Session 13: Arts & Humanities (AH)**

<https://meet.google.com/ubn-jdky-hfg>

Room 13

Chairs: Rafeah Legino, Mohd Amli Abdullah Baharum

### **9:30 *Symbolic Meanings of Woodcarving Motifs in Rumah Tengku Saiyed, Seremban, Negeri Sembilan***

Juliana Adlin Ahmad, Arbaiyah Binti Ab Aziz and Nor Azlin Hamidon

This study analyses the woodcarving motifs found in Rumah Tengku Saiyed, located at the Muzium Negeri in Seremban, Negeri Sembilan. This study gathered data through direct fieldwork, including on-site observation, photographic recording, and semi-structured interviews. The researchers employed a visual and interpretative approach to examine the meanings behind the motifs in this historic Malay house, which once belonged to Tengku Saiyed Ismail Tengku Saiyed Abdul Rahman, and Cik Kundur

Wan Jaebah. By analysing through the lens of symbolism, the findings demonstrate that the long-standing motifs preserved in this rumah contoh (sample house) reflect the cultural identity and worldview of the Malay people. The results reveal the floral category to be the most dominant motif in the house. This research demonstrates that traditional motifs continue to provide valuable insights into the narratives and meanings imparted within Malay woodcarving, and they can serve as a pathway for informing contemporary design in vernacular architecture. Further documentation is crucial for future research to focus its lens on the symbolism behind the motifs in Negeri Sembilan's Malay houses.

*Presenter bio:* My name is Juliana Adlin, age 34. Currently pursuing a PhD.

### **9:45 Design-Led Product Intervention for Enhancing Upper-Limb Recovery in Stroke Rehabilitation Therapy**

Zakiyah Hasan, Nor Faridah Ahmad Roslan, Natrina M P Toyong and Saiful Ramly

The development of rehabilitation products has traditionally focused on functional and ergonomic performance, often overlooking the emotional and sensory dimensions that influence patient motivation and therapeutic engagement. This research introduces an Evocative Design Evaluation Framework aimed at integrating emotional responsiveness and sensory interaction into rehabilitation product development. The central problem addressed lies in the limited evaluative mechanisms capable of capturing users' affective experiences during post-treatment recovery, which frequently results in products that are functionally efficient but emotionally disengaging.

Employing a mixed-method approach, the study combines qualitative design intervention and quantitative usability evaluation through iterative prototyping, observational studies, and user feedback analysis among post-stroke patients. The framework synthesizes principles from emotional design, tactile interaction, and rehabilitation science to establish evaluative dimensions encompassing sensory engagement, emotional resonance, and therapeutic efficacy.

The expected outcomes include a validated design evaluation framework that enables designers and healthcare developers to assess emotional and sensory parameters systematically during the product development phase. The research is significant for bridging design and medical domains, offering an evidence-based methodology that enhances the emotional connectivity between user and rehabilitation product. Ultimately, this study advances the discourse on human-centered and evocative design, contributing to improved user compliance, motivation, and long-term rehabilitation outcomes.

### **10:00 Symbolism and Cultural Economy: Ngepan Skrang as Heritage and Identity of the Iban Community in Sarawak**

Alexander Anak Chelum

Ngepan Skrang, the traditional Iban attire adorned with antique coins, functions not only as personal clothing but also as a symbol of cultural heritage and the collective identity of the Iban community in Sarawak. This study examines the symbolic meanings and the cultural-economic roles embodied in Ngepan Skrang, highlighting its position as an artifact that connects aesthetic, historical, and socioeconomic values. Employing a multidisciplinary approach that includes historical analysis, ethnographic study, and material culture observation, this research uncovers the narratives, values, and craftsmanship underlying this traditional attire. The findings reveal that Ngepan Skrang not only reflects the uniqueness of Iban culture but also plays a vital role in preserving collective memory, constructing identity, and strengthening the cultural economy of the Iban community in Sarawak.

### **10:15 Blockchain Backed Heritage: Preserving Qiang Embroidery Through NFTs**

Fangjin Zheng, Muhamad Fairus Kamaruzaman and Rusmawati Ghazali

This research explores the application potential of blockchain technology, especially non-fungible tokens (NFTs), in the protection and inheritance of Shaanxi Qiang embroidery intangible cultural

heritage. Through a qualitative research approach, combines literature analysis, field surveys, Semi-structured interviews and empirical method to examine the artistic characteristics, inheritance status and challenges of Shaanxi Qiang embroidery were systematically sorted out, and a sustainable inheritance model based on NFT was proposed. The research found that NFT technology can establish a unique digital identity for Qiang embroidery, solving the problems of piracy, infringement, limited dissemination and low economic benefits in traditional inheritance. The research offers a new theoretical and practical framework for the digital protection of intangible cultural heritage.

### **10:30 Portrait Painting: The Influence of Cultural Congress (1971) on the Preferences of the Permanent Collection of the National Art Gallery of Malaysia**

Rosliza Abdul Rahim

This study examines the impact of the 1971 National Cultural Congress on the National Art Gallery of Malaysia's portrait collection preferences. Using a quantitative approach to secondary data (1960-1989), it statistically compares the nationality, theme, style, and medium of portrait paintings across two decades surrounding the Congress. Findings reveal a rise in national artists' portrait collections from 1960-1963, followed by a decline after 1971, though portrait production persisted. The study provides empirical evidence of cultural policy influence on collection development and contributes to understanding the evolving concept and role of Malaysian portraiture within national identity formation.

### **10:45 Revisiting the Role of Music in Medical Recovery: A Library Research Perspective**

Laura Pranti Tutom, Alexander Anak Chelum and Asrul Asshadi Mohamad Morni

Across contemporary medicine, music emerges as a powerful therapeutic tool, offering measurable benefits in neurological and physical rehabilitation. Utilizing a comprehensive library research methodology, this study systematically examines scholarly articles, academic books, and scientific theses to synthesize both conceptual perspectives and empirical findings. Evidence reveals that music actively stimulates cognitive, emotional, and motor functions, particularly supporting recovery in stroke patients. The research underscores music therapy's capacity to foster neuroplasticity and emotional resilience, making it a viable complementary intervention in rehabilitative and clinical care. By bridging scientific rigor and artistic expression, music therapy is affirmed as integral to holistic patient recovery and health.

### **11:00 Ecological Narratives in Malaysian Printmaking: Exploring Sustainability Through Artistic Practice**

Mursyidah Zainal Abidin and Mohd Jamil Mat Isa

This paper examines the intersection of ecological sustainability and contemporary printmaking by exploring how environmental narratives shape artists' creative practices. Printmaking is an accessible yet conceptually rich art form that embodies both aesthetic innovation and ecological awareness. In contemporary art practice, many artists actively engage environmental themes in their work, responding to global and local concerns about climate change, deforestation and ecosystem degradation. This study aims to explore the influence of sustainability principles on artistic practice and demonstrate how printmaking serves as a catalyst for ecological awareness within the Malaysian art context. This research applies a descriptive qualitative approach, grounded in formalistic and environmental theoretical frameworks, to examine five selected artworks. The analysis focuses on form, technique, and thematic content, especially the work of prominent Malaysian artists, including Faizal Suhif, Samsudin Wahab, Haafiz Shahimi, Pangrok Sulap and Sharon Chin. Ecological systems and local cultural contexts influence the artists' creative processes, shaping the narrative dimensions of contemporary Malaysian printmaking. The results highlight the integration of material experimentation, environmental symbolism and socio-cultural engagement in the printmaking process. The discourse emphasises printmaking's function as a creative and communicative medium for ecological advocacy,

illustrating visual narratives convey environmental values. Ultimately, Malaysian printmaking reflects ecological awareness and contributes to public discourse on sustainability, thereby reinforcing art's role as an active agent in shaping a more environmentally responsible society.

## Wednesday, November 5 9:30 - 11:30 (Asia/Kuala\_Lumpur)

### Parallel Session 14: Arts & Humanities (AH)

<https://meet.google.com/ufo-wqer-sxj>

Room 14

Chairs: Mohd Fuad Arif, Ahmad Zamir Che Daud

#### **9:30 *The Sifir Ajang Formula: Mathematical Precision and Cultural Heritage in Melanau Songket Weaving***

Asrul Asshadi Mohamad Morni

This study investigates the Sifir Ajang formula, an advanced mathematical framework integral to the traditional art of Melanau songket weaving in Sarawak, Malaysia. This formula, which dictates the arrangement of threads to produce culturally significant motifs, represents the confluence of mathematical precision, artistic craftsmanship, and cultural identity. By integrating ethnomathematics and semiotic analysis, this paper examines how the Sifir Ajang formula functions both as a technical blueprint for artisans and as a living cultural artifact. The study highlights the way this formula encapsulates not only mathematical knowledge but also values, spirituality, and social narratives, thereby playing a critical role in preserving intangible cultural heritage and fostering sustainable artisanal practices.

#### **9:45 *The Tale of Two Cities: Comparative Analysis of Public Perception and Service Quality in Integrated Urban Transportation in Jakarta and Kuala Lumpur***

Diraisnu Gozali, Asiyah Kassim and Bintoro Wardiyanto

This study examines public perception of transportation service delivery within integrated transportation policies in DKI Jakarta, Indonesia, and Kuala Lumpur, Malaysia. Both cities encounter congestion, emissions, and infrastructural inefficiencies that constrain sustainable urban mobility. Using a cross-sectional quantitative design, data were collected from 800 respondents through online surveys. The SERVQUAL model assessed service quality across five dimensions. Pearson's correlation analysis revealed a positive relationship between service quality and public perception, with reliability and timeliness emerging as key determinants. The findings offer policy insights to enhance service efficiency and strengthen public confidence in integrated urban transport systems.

#### **10:00 *Empowering Local Communities in Developing Tamansari as a Sustainable Living and Cultural Heritage Area***

Yeni Rosilawati, Ms

As a diverse country, Indonesia has enormous potential for tourism development. Cultural assets, natural resources, and a complex historical past have formed an aesthetic that promotes the country's foreign exchange growth through the tourism industry. Effective communication is essential for realizing the tourism sector's contribution and success. Yogyakarta, one of Indonesia's most popular tourist attractions, has seen a considerable increase in visitor numbers. Tamansari is one of Yogyakarta City Tourism's primary attractions. The purpose of this study is to better understand stakeholders' interaction with Tamansari as a heritage culture. The methodology employed was descriptive qualitative

research. Qualitative research is a type of research that seeks to understand the phenomenon of what research subjects experience, such as behavior, perception, motivation, actions, and others, holistically and through description in the form of words and language, in a specific natural context, and using a variety of natural methods. The data collection approaches in this study are separated into two categories: primary data collection, which involves researchers going directly to the field, and secondary data collection. In-depth interviews are used to obtain primary data, while secondary data is gathered from news articles, websites, and institutional records. The study's findings indicate that communal action is required to ensure the Tamansari historical conservation planning program's success. Stakeholder involvement is necessary. Local communities, leaders, and governments, as well as other parties such as organizations and institutions with similar visions and missions, have all provided support. Residents also believe that the program must be sustainable, as conservation is a big problem in their community. The conversation revealed that local communities must be more empowered in terms of developing their capacity to undertake evaluations and planning, as well as implement and monitor.

*Presenter bio:* Associate Professor in Communication Department, Universitas Muhammadiyah Yogyakarta majoring in Public Relations

### **10:15 *An Analytical Study of Extended Flute Techniques in Four Selected Contemporary Works***

Mohd. Syazrin Riman and Wen Bin Ong

This study examines how extended techniques shape modern flute performance and pedagogy. Once seen as marginal, these techniques now define versatility in flutists. Yet, many educators still overlook them. Through qualitative content and score analysis of four works: Berio's *Sequenza I*, Clarke's *Zoom Tube*, Pattillo's *Three Beats for Beatbox Flute*, and Raja Mohamad Alif's *Hadalpelagik*, the study finds that techniques like multiphonics, jet whistle, and flutter tonguing expand tonal range while refining traditional skills. Sectional practice, embouchure exploration, and vocal integration enhance learning. The findings advocate systematic inclusion of extended techniques in flute training.

### **10:30 *Malaysian Mural Art: Preserving and Deteriorating***

Muhammad Salehuddin Zakaria, Hairulnisak Merman and Rafeah Legino

The development of mural art in Malaysia is a form of visual expression that plays an important role in enriching cultural identity and fostering aesthetic values in the public sphere. However, physical damage factors like weather exposure, air pollution, humidity, and acts of vandalism are increasingly threatening the sustainability of mural art. This research was conducted to discuss the primary and current issues related to the preservation and deterioration of murals from the perspectives of weather, pollution, humidity, surface cracks, and material degradation. This study also assessed the globally available restoration methods and how they can be applied in accordance with the local context, including the use of modern technologies such as digitization and weather-resistant materials. This study found that the lack of a comprehensive conservation policy, funding limitations, and a lack of awareness contribute to the high level of damage. Therefore, an integrated approach among government agencies, state and district governments, and the art community is needed to ensure the long-term sustainability of mural art values.

### **10:45 *Decoding the Role of Product Design Objects in Indonesian Folklore: Insights from a Systematic Literature Review***

Nandang Septian, Rafeah Legino and Yulyta Kodrat

Indonesian folklore not only conveys moral and social values but also depicts the involvement of various physical objects or products that serve both narrative and symbolic functions. Objects such as heirloom weapons, craft artifacts, jewelry, clothing, musical instruments, as well as traditional containers and vehicles often appear in the narratives, portrayed as sacred or enchanted entities that play significant roles in the storylines. This phenomenon raises a fundamental question: why do certain

products or objects appear in folklore, and how can their meanings be interpreted within the context of product design? This article aims to address these questions through a systematic literature review based on PRISMA guidelines. A literature search across international databases (2019-2025) yielded more than 100 articles, which were gradually screened and refined to 25 relevant publications encompassing folklore, cultural, and product design studies. The synthesis results reveal that the involvement of objects in folklore serves dual functions: as magical helpers or conflict catalysts in accordance with classical folklore morphology, and as cultural symbols that legitimize community identity, values, and authority. These findings underscore the significance of understanding the role of objects in both cultural preservation and design innovation.

**Wednesday, November 5 11:30 - 12:00**  
**(Asia/Kuala\_Lumpur)**

**Morning Break** ↗

**Wednesday, November 5 12:00 - 12:30**  
**(Asia/Kuala\_Lumpur)**

**Award & Closing Ceremony (CSSR 2025)** ↗

<https://tel.meet/aek-qmas-qrf?pin=8237049969717>

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