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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
Garden of Knowledge and Virtue

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KICT NEWSLETTER

SPECTRUM

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EDITORIAL BOARD

Message from the Editor

Assalamualaikum warahmatullahi wabarakatuh

As we welcome the New Year 2026, I am pleased to present the first issue of our KICT Spectrum for the year. This edition reflects a renewed spirit of purpose, highlighting the achievements, initiatives, and collective efforts that continue to shape our community.

The articles featured in this issue showcase inspiring staff and students accomplishments, meaningful community engagement, and practical applications of knowledge that demonstrate our commitment to excellence and social responsibility.

We also celebrate the achievements of our staff and postgraduate students, whose dedication strengthens our academic standing at both national and international levels.

This issue further highlights key developments within the Kulliyyah, including new appointments, academic activities, seminars, and research insights that contribute to a dynamic and forward-looking scholarly environment.

As we move into 2026, may we continue to work collaboratively, innovate responsibly, and contribute meaningfully to knowledge and society.

I extend my sincere appreciation to our article contributors, editorial team, and KICT Community for their continued support.

Regards,

Hazwani

Chief Editor
January 2026

FROM RED TO BLUE: A PODIUM FINISH THAT SHAPED FUTURE CYBERSECURITY PROFESSIONALS

Article by:

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On 18–19 December 2025, a team of KICT (IIUM) students achieved a proud milestone by securing 3rd place in the MCMC Intervarsity Cyber Forensics Challenge 2025, a national-level competition centered on blue team cybersecurity skills including digital forensics, incident response, and defensive analysis.

What made this achievement particularly noteworthy was not only the strong national participation (117 teams from universities across Malaysia) but also the circumstances under which the students entered the competition. The invitation to participate was received at the last minute, leaving the team with very limited time to prepare for an unfamiliar and demanding challenge.

Red and blue teams are not opposites; they are complementary forces that strengthen each other.

From right: Muhammad Muhaimin Bin Ridzuan, Muhammad Afiq Danial Bin Mohd Bacho, Mohammad Danish Hakim Bin Mohd Nasir.

The MCMC Cyber Forensics Challenge is distinct from many conventional Capture The Flag (CTF) competitions. Rather than focusing on offensive exploitation, the competition emphasizes blue teaming, which involves detecting, analyzing, and responding to cyber incidents to protect systems and data. In contrast, red teaming focuses on simulating real-world attacks to uncover vulnerabilities before malicious actors exploit them. This competition therefore presented an important opportunity to step outside their comfort zone and engage with the defensive side of cybersecurity.

Knowing is not enough; we must apply. Willing is not enough; we must do.

- Johann Wolfgang von Goethe

TEAM PREPARATION AND ROLES

Despite the short notice and their limited blue team experience, the students adapted quickly and leveraged each member's strengths, demonstrating careful attention to detail throughout the competition. Under my guidance as their accompanying lecturer, Muhammad Afiq Danial led the digital forensics investigations, analyzing system artifacts and reconstructing events. Muhammad Muhaimin applied his strong reverse engineering skills, while Mohammad Danish Hakim focused on supporting the team, maintaining morale, and steadily learning the blue team toolset.

QUALIFYING ROUND

The qualifying round was held online in a Jeopardy-style format from 13 December 2025 at 12:01 a.m. to 14 December 2024 at 11:59 p.m., with 117 teams competing.

Our team, known as PERISAI Beta performed strongly, securing a position in the Top-10, which served as an early confidence booster.

IIUM PERISAI Beta qualified to the Final Round

From right: Mohammad Danish Hakim Bin Mohd Nasir, Muhammad Afiq Danial Bin Mohd Bacho, Muhammad Muhaimin Bin Ridzuan, and Asst. Prof. Dr. Andi Fitriah Abdul Kadir

The structured challenges helped familiarize the students with blue team tools and techniques while testing their ability to adapt under time pressure. The team collaborated efficiently, learning from each task and refining their approach in preparation for the more demanding finals. This round laid a solid foundation for their performance in the final stage of the competition.

GRAND FINAL

On Day 1, all teams were provided access to a company SIEM (Splunk) and spent the entire day monitoring, correlating, and analyzing the organization's security risks. The goal was to identify suspicious activity, log anomalies, and potential threats in a controlled, scenario-based environment.

Day 1 of Cyber Forensics Challenge

Day 2 focused on identifying vulnerabilities. Teams were given just one hour to answer a set of scenario-based questions derived from artifacts and logs they had previously analyzed. Final scores were determined not only by recovered flags but by the quality of submitted threat reports, simulating the responsibilities of a real-world SOC analyst. After hours of focused analysis, discussion, and strategic breaks, they successfully recovered 10 out of 12 flags and produced a thorough, clear report.

Even with minimal preparation, teamwork and determination can turn a challenge into a learning opportunity.

ACHIEVEMENT AND REFLECTIONS

When the results were announced, the team was thrilled to learn they had secured 3rd place out of 10 teams in the Grand Final. The students proudly represented their university, demonstrating resilience, adaptability, and collaborative skill under pressure. The competition reinforced a critical lesson: offensive and defensive cybersecurity rely on each other. This experience broadened students' perspective highlighted the importance of blue teamwork and strengthened their understanding of professional cybersecurity practices. InshaAllah, this is just the beginning of their journey toward becoming well-rounded cybersecurity professionals.

IIUM PERISAI secured 3rd Place in the Grand Final

IOTEAMS APPRECIATION DAY:

A Reflection on Origin and Meaning

Article by:

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IoTeams Contributors:

- **Nur Arisya Syazana Mohamad Hafiz**
- **Nur Aflah Sofya Ahmad Sofwan**
- **Fatiha Najwa Kamarulzaman,**
- **Ainin Sofiya Talib**
- **Nur Ain Asyiqin Mohamad Husain**
- **Auni Nazihah Kamaruddin**

The IoTeams Appreciation Day 2025 - From Effort to Excellence, goes far beyond a simple gathering or celebration. It is a purposeful event designed to encourage a reflection on the origins, values, and educational philosophy that underpin IoTeams. Built upon experiential learning and rooted in Islamic principles amanah (responsibility), ikhlas (sincerity), ukhuwah (brotherhood), and islah (continuous improvement), IoTeams serves as a developmental ecosystem that shapes disciplined, accountable, and value-driven individuals.

It discusses the deeper meaning of the appreciation day, highlighting IoTeams' reverse maturity pathway from the highest tier (Trainer V2) to the foundational Alpha stage, and illustrating how transferable excellence is cultivated, sustained, and eventually internalised by its members. On 8 January 2026, members of IoTeams gathered for IoTeams Appreciation Day, an event that symbolised reflection, gratitude, and collective identity. Figure 1 shows the gathering brought together members from different stages of maturity within IoTeams, reinforcing the principle of ukhuwah that growth is not an individual pursuit, but a shared journey.

Figure 1: A Group Photo of IoTeams during IoTeams Appreciation Day 2026

In the Islamic worldview, reflection (muhasabah) and gratitude (syukur) are integral to meaningful development. Accordingly, the appreciation day served as a moment to reaffirm intention (niyyah), process, and responsibility as the foundations of sustainable excellence.

Thank you to all IoTeams trainers and Appreciation Night committees for making this evening a remarkable success. Your dedication and teamwork truly reflect the spirit of IoTeams at KICT IIUM.

Opening video: https://youtu.be/YePvGeOQ9hE?feature=shared

Closing video: https://youtu.be/8ZRJvzLRLwM?feature=shared

CSCI 3302 STUDENTS SHOWCASE

Practical Applications of Data Structures and Algorithm Design Strategies

Article by:

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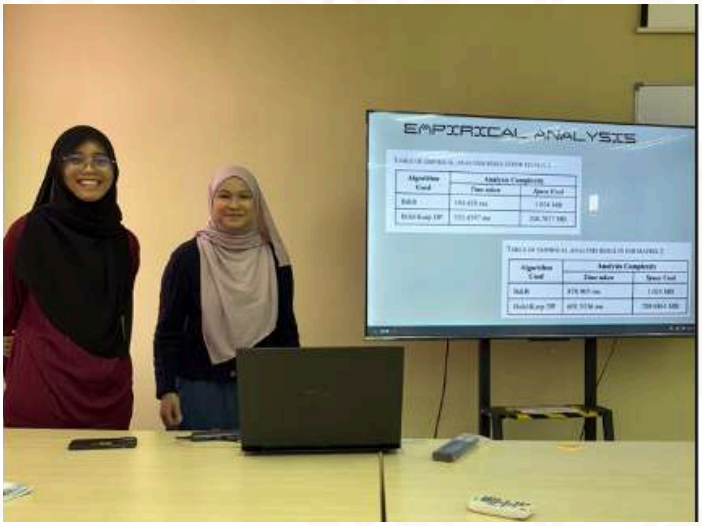
16 January 2026 – A total of 29 students from the Data Structures & Algorithms II course (CSCI 3302 - Section 3) demonstrated their analytical and problem-solving skills through a series of project-based presentations, highlighting how fundamental computing concepts are applied to real-world challenges.

The session featured team presentations focusing on algorithm design strategies, data efficiency and performance evaluation. Among the highlighted project was 'Data Compression In Cloud Storage Using Huffman Coding', where students analyzed compression effectiveness, storage optimization and algorithm suitability for large-scale cloud environments. Quantitative results were used to compare algorithm performance across different data sets, reinforcing the importance of selecting appropriate data structures and algorithms in system design.

Another notable project, **'Optimizing Drone Delivery Routing using the Travelling Salesman Problem',** addressed challenges faced by modern logistics companies deploying drones for delivery services. Students modelled delivery locations as points within a defined service area and investigated the problem of determining the most efficient route that allows a drone to visit each destination exactly once before returning to its base station.



The project explored Branch and Bound approach (brute-force algorithm) and the Held–Karp algorithm (dynamic programming approach), to balance solution quality and computational efficiency. Performance was evaluated based on computation time, tour distance and scalability as the number of delivery points increased.

Throughout the session, students confidently justified their design decisions, discussed and interpreted experimental results. The use of structured visuals, performance tables and comparative analysis reflected a strong understanding of algorithmic thinking and system-level considerations, while strengthening both technical understanding and professional presentation skills.

Beyond technical competence, the course emphasized a holistic learning philosophy. Students were introduced to advanced data structures and the fundamentals of algorithm analysis through lectures (learning to know), and deepened their understanding through peer discussions and collaborative problem-solving (learning to live together). Knowledge was then demonstrated (learning to do) through algorithm design, analysis, programming and real-world problem solving.

When applied to authentic contexts such as optimal route planning, optimizing infrastructure and securing data with cryptography, these algorithms illustrate how computing knowledge can contribute to the protection of intellect, wealth and life, in alignment with the principles of Maqāṣid Ash-Sharīʿah. The topics also encouraged students to value precision, efficiency and attention to detail, reflecting an appreciation of the meticulous design evident in Allah's creation, and inspiring students to recognize and respect the profound order and calculation embedded within both nature and technology.

Through this is presentation-based assessment, the following learning outcomes were achieved:

- Apply core data structure concepts in the design and implementation of efficient algorithms.
- Design and evaluate efficient algorithms for real-world applications, as well as analysing the algorithms using empirical performance data.
- Demonstrate effective technical communication, teamwork and critical thinking through structured presentations and discussion.
- This activity reflects the department's commitment to outcome-based and experiential learning, ensuring that students graduate with both theoretical knowledge and industry-relevant skills.

This activity reflects the department's commitment to outcome-based and experiential learning, ensuring that students graduate with both theoretical knowledge and industry-relevant skills.

MISI KASIH MISI JAWI :
Brings Hope to Stateless Community in Pulau Sibangkat, Sabah

Article by:
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Pulau Sibangkat, Sabah — Misi Kasih Misi Jawi, a community engagement mission, was successfully carried out in Pulau Sibangkat, Sabah, to support the stateless community through healthcare services, welfare assistance, and educational activities. The mission was conducted through the collaboration with various partners and volunteers, reflecting a strong commitment to humanitarian values and social responsibility.

The program was organized by the UMission Club and supported by officers from the International Islamic University Malaysia (IIUM). As an officer from IIUM, I participated in this mission to provide institutional support and assist the UMission Club in ensuring the smooth implementation of activities throughout the program.

One of the main highlights of Misi Kasih Misi Jawi was the provision of khatan (circumcision) services for stateless children.

Volunteers assisted experienced medical doctors from Sabah during procedures, ensuring that all medical practices were conducted safely and hygienically, in accordance with proper healthcare standards. This initiative was especially meaningful for stateless families who often face challenges in accessing formal medical services due to legal and financial constraints. The khatan program helped ease these burdens while promoting better health and hygiene among the children.

In addition to healthcare services, food parcels containing essential daily necessities were distributed to stateless families. This activity aimed to provide immediate relief and support to households facing economic hardship. The distribution process was carried out in an organized and respectful manner, ensuring that assistance reached the intended recipients while maintaining dignity and fairness.

The mission also emphasized community bonding through rewang activities with the villagers. Volunteers worked side by side with local residents to prepare meals and manage communal tasks. This shared experience strengthened relationships, encouraged cultural exchange, and fostered a spirit of cooperation between the volunteers and the community of Pulau Sibangkat.

Recognizing the importance of children's development, Misi Kasih Misi Jawi included educational modules and interactive activities designed specifically for children. These sessions focused on learning through play, teamwork, creativity, and basic values. The activities provided a safe and positive environment for the children to learn, interact, and enjoy meaningful engagement with the volunteer

The mission's success was made possible through collaboration with medical doctors from Sabah, sponsorship support from NGO EZ Prihatin, and accommodation assistance generously provided by NGO Sedulur. Their contributions played a vital role in ensuring the mission could be carried out effectively and sustainably.

Overall, Misi Kasih Misi Jawi stands as a testament to the power of collaboration and compassion in addressing the needs of marginalized communities. The mission not only provided immediate assistance but also strengthened community relationships and raised awareness about the challenges faced by stateless individuals in Sabah. It is hoped that similar initiatives will continue in the future to provide ongoing support and empowerment for stateless communities across the region.

ADVANCING CYBERSECURITY LEADERSHIP AND DIGITAL GOVERNANCE:
A YEAR OF GLOBAL AND NATIONAL ENGAGEMENTS

Article by:

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Research Lead for Cybersecurity Governance, Risk, and Compliance (CGRC) Research Unit (RU12)

Throughout 2025, the Cybersecurity Governance, Risk, and Compliance (CGRC) Research Unit (RU) at KICT continued to solidify its role as a leader in advancing cybersecurity and capacity building. Representing the International Islamic University Malaysia (IIUM), I had the privilege of sharing our research-driven insights at several high-impact national and international forums, focusing on the critical intersection of Artificial Intelligence (AI) and cybersecurity governance, and cyber resilience.

GLOBAL KNOWLEDGE EXCHANGE: AUSTRALIAN AWARD FELLOWSHIP

From May to June 2025, I was invited by the University of Melbourne's Faculty of Engineering and Information Technology (FEIT) to serve as an instructor for the 'Strategic Thinking for Cyber Resilience' program. Held at Melbourne Connect and funded by the Australian government, this intensive two-week fellowship brought together senior Malaysian public officers from agencies such as Royal Malaysian Police, National Cybersecurity Agency (NACSA), Attorney General's Chambers (AGC), and Chief Government Security Office (CGSO). Our sessions focused on equipping these leaders with the strategic mindset necessary to strengthen institutional resilience against evolving global threats.

AP Dr. Nurul Nuha was one of the trainers from Malaysia for Australian Award Fellowship Program at University of Melbourne's Faculty of Engineering and Information Technology

SHAPING NATIONAL DIGITAL POLICY

In Malaysia, the CGRC RU was active in pivotal discussions regarding our nation's digital future:

SmartGov Malaysia 2025 – 17 Sept 2025: At the Kuala Lumpur Convention Centre, I was invited as a panellist in a session titled "Digital Nation: Connecting Citizens, Delivering Results". Together with another panel speaker, Mr. Hannes Astok, Executive Director from Estonian e-Governance Academy, we explored how AI, big data, and cloud computing can be integrated with robust governance to create efficient, citizen-centric services. The session was moderated by Mdm. Ellina Roslan, Senior Director from MyDigital Corporation.

This session explored and exchanged insights on:

` 1. National and ASEAN-level digital transformation policies and strategies.

- Effective public service delivery through digital platforms
- Cutting-edge approaches in cybersecurity to mitigate emerging threats, and enhance public trust in digital government services, and
- The integration and benefits of Artificial Intelligence (AI) in governance.

Assoc. Prof. Dr. Nurul Nuha during a panel session at SmartGov Malaysia 2025

SHAPING NATIONAL DIGITAL POLICY

I**NTAN's IR4.0 Seminar** – 1 October 2025: I was invited by National Institute of Public Administration (INTAN) to deliver a talk on "Cyber Resilience: Strengthening Cybersecurity in the Era of IR4.0" at the Putrajaya International Convention Centre (PICC). It was emphasized that cyber resilience is not just a technical goal but a vital enabler of national security and continuity. In this IR4.0 Seminar, CGRC was also invited to participate in a booth exhibition showcasing research from our RU and Cybersecurity Centre of Excellence (CoExSys) while at the same time promoting KICT undergraduate and postgraduate programs.

The CGRC Research Unit and CoExCyS team representing IIUM at the Digital Government Competency Development and IR4.0 Seminar organised by INTAN at PICC, 30 September – 2 October 2025.

Royal Malaysia Police (RMP) College – 7 October 2025: In conjunction with International Cybercrime Enforcement Course, I was honoured to be involved in conducting a workshop on Fundamentals of Cybersecurity to senior policeofficers from RMP and its international counterparts from Singapore, Indonesia, Philippines, India and the Gulf countries. The workshop involved teaching with strategic thinking cases and group activities.

During a group presentation with senior police officers from Malaysia, India and Indonesia.

LEADING THE DISCOURSE ON AI AND CYBERSECURITY GOVERNANCE

As AI becomes more pervasive, the CGRC RU has been at the forefront of discussing its ethical and strategic implications:

rawSEC February 2025 Meetup - Malaysia Cybersecurity Community (rawSEC) held its February meetup at KICT, co-organised together with CGRC RU. This event focused on AI-Driven Cyber Attacks and AI-Enhanced Cyber Defense. My talk on "AI: A Double-Edged Sword" highlighted how AI is reshaping both cyber threats and control strategies. The other speakers were from Kaspersky, namely, Ahmad Zaidi Said, DFIR Specialist at Kaspersky Global Emergency Response Team (GERT), who delivered insights into AI-driven incident response and advanced cyber threat mitigation strategies, and Fareed Fauzi, Security Researcher at Kaspersky Global Research and Analysis Team (GReAT), who explored AI's dual role in enabling sophisticated cyber-attacks while simultaneously strengthening defensive capabilities. More than 100 participants from the industry including KICT alumni attended this meetup

Participants, speakers, and organisers at the rawSEC February 2025 Meetup themed "AI-Driven Cyber Attacks and AI-Enhanced Cyber Defense," held at KICT, IIUM, on 27 February 2025.

LEADING THE DISCOURSE ON AI AND CYBERSECURITY GOVERNANCE

IIUM Risk Day Forum – 25 September 2025: I was invited by IIUM Risk Management Office (RMO) to join a panel discussion on "AI in Crisis Communication: A Double-Edged Sword for Trust and Risk" together with Dr. Harmi Taazim Mohamad (AHAS KIRKHS). We addressed the complexities of managing misinformation in the age of AI and the need for ethical AI governance during organizational crises.

A panel discussion organized by RMO on "Artificial Intelligence in Crisis Communication: A Double-Edged Sword for Trust and Risk"

CYBERSECURITY ENGAGEMENT WITH THE INDUSTRY

Malaysian Bioeconomy Development Corporation – 2 September 2025: I was invited by the Chief Integrity and Governance Officer of this company to give a half day training session for Bioeconomy Corporation employees at Menara Z10 Putrajaya. The program was on Preserving the Confidentiality, Integrity and Availability of Organizational Information.

At Malaysian Bioeconomy Development Corporation, Putrajaya.

WOMEN IN CYBERSECURITY

CyberDSA 2025 – 2 Oct 2025: At one of Malaysia's largest cybersecurity events, I was invited to join a panel discussion on "Women in Cybersecurity: From Margins to Mission" Forum during Cyber Defense and Security (CyberDSA) held in MITEC Kuala Lumpur. The forum focused on empowering talent and fostering inclusive leadership within the cybersecurity industry.

Dr. Nurul Nuha as a panellist at the Women in Cybersecurity Forum during CyberDSA 2025

CONCLUSION: BRIDGING THE GAP

These engagements reflect CGRC's ongoing mission to bridge the gap between academia, industry, and government. By contributing to both national and global dialogues, we remain committed to building a resilient digital future for Malaysia through research-informed cyber leadership and ethical AI adoption.

Congratulations

AWARDS & RECOGNITIONS

MKitchen
Malaysia Global Sustainability Awards (Elite Category) for the project "Sustainable Masyarakat Kitchen for Needy Students in IIUM.

Congratulations

AWARDS & RECOGNITIONS

MKitchen
Malaysia Global Sustainability Awards (Elite Category) for the project "Sustainable Masyarakat Kitchen for Needy Students in IIUM.

Completion
OF THE VIVA (VOCE)

Completion
OF THE PROPOSAL DEFENSE

Completion
OF THE VIVA (PTEM)

Completion
OF THE COMPUTING PROJECT

Congratulations

NEW APPOINTMENTS

Congratulations

NEW APPOINTMENTS

Congratulations

NEW APPOINTMENTS

Appointment as the Chairman of the High Advisory Board of the Irid International Scientific Foundation.

FYP SHOWCASE SEM 1 2025/2026

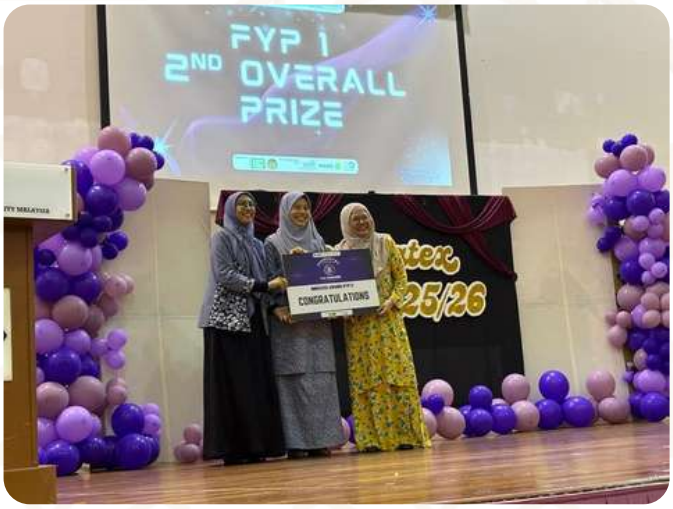
Congratulations!

FYP SHOWCASE SEM 1 2025/2026

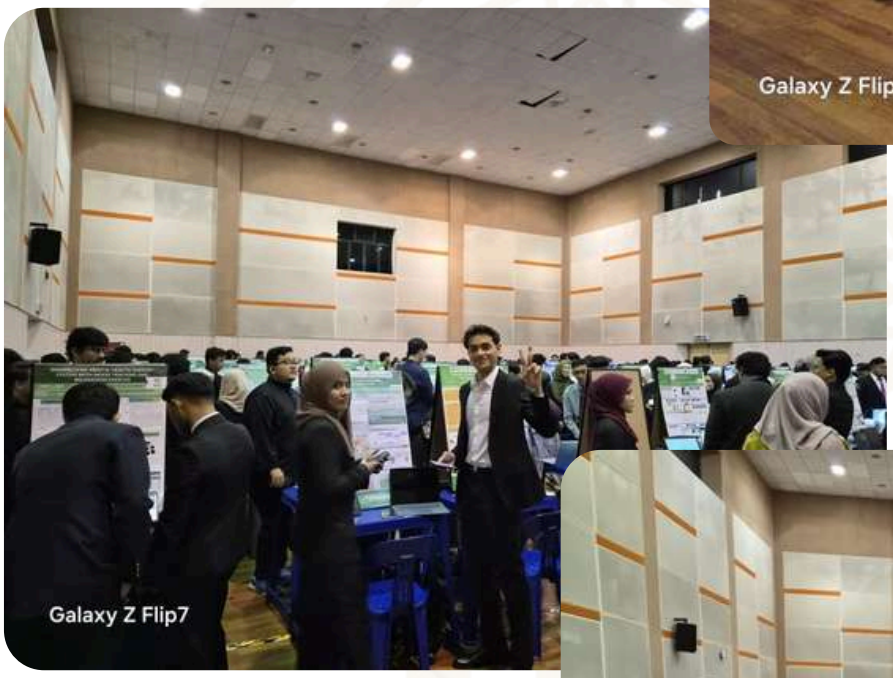
Congratulations!

FYP SHOWCASE SEM 1 2025/2026

Congratulations!



INNOVATEX TECH EXPO SEM 1 25/26



INNOVATEX TECH EXPO SEM 1 25/26

Congratulations!

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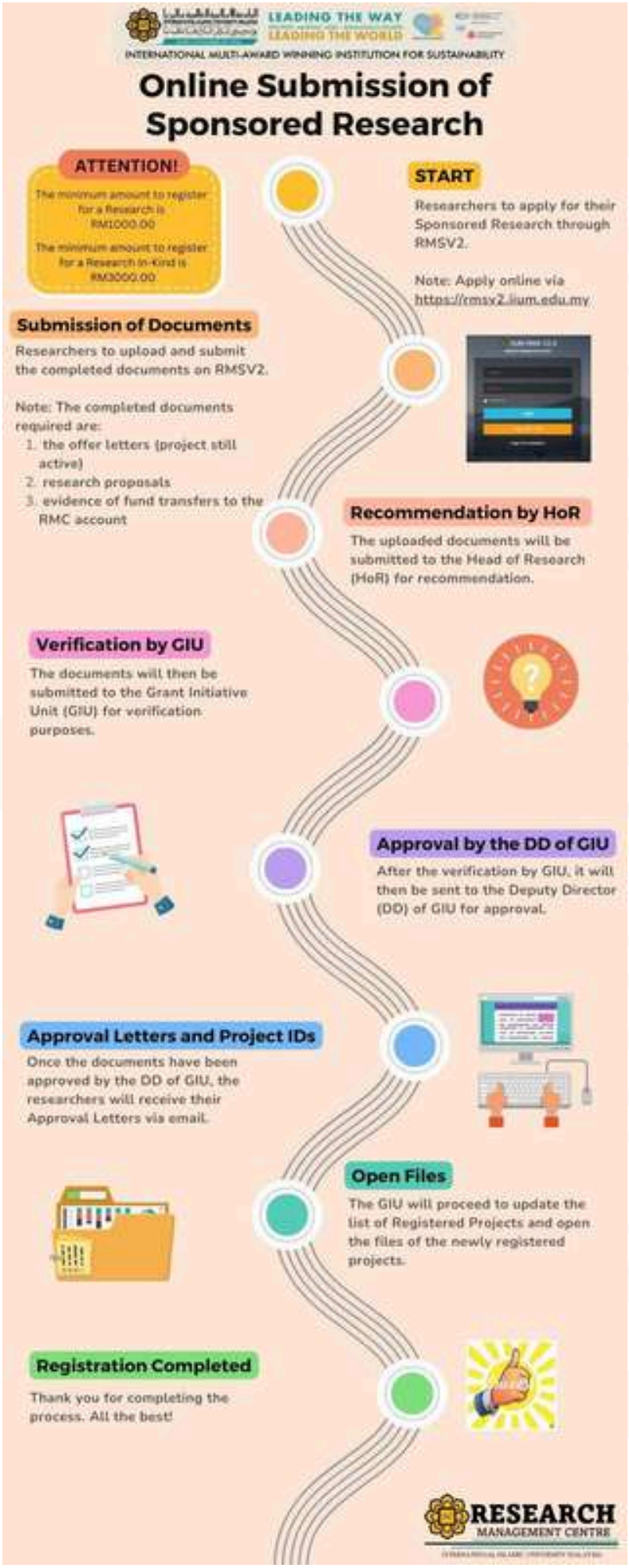
Congratulations!

INVITED SPEAKER

TALKS & SEMINARS

USRAH / TAZKIRAH

RESEARCH TIPS AND FAQS



CALL FOR ARTICLES

Do you have research insights, innovative ideas, project stories, or field experiences that you'd like to share with the KICT community? Spectrum welcomes contributions from our members, researchers, and partners!

We invite you to submit articles for our upcoming issue. Please submit your article through the following Google Form.

Articles published in KICT Spectrum will contribute to MyRA marks under Section C1g (Marks: 0.0004, indexed journal equivalency 0.2).

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