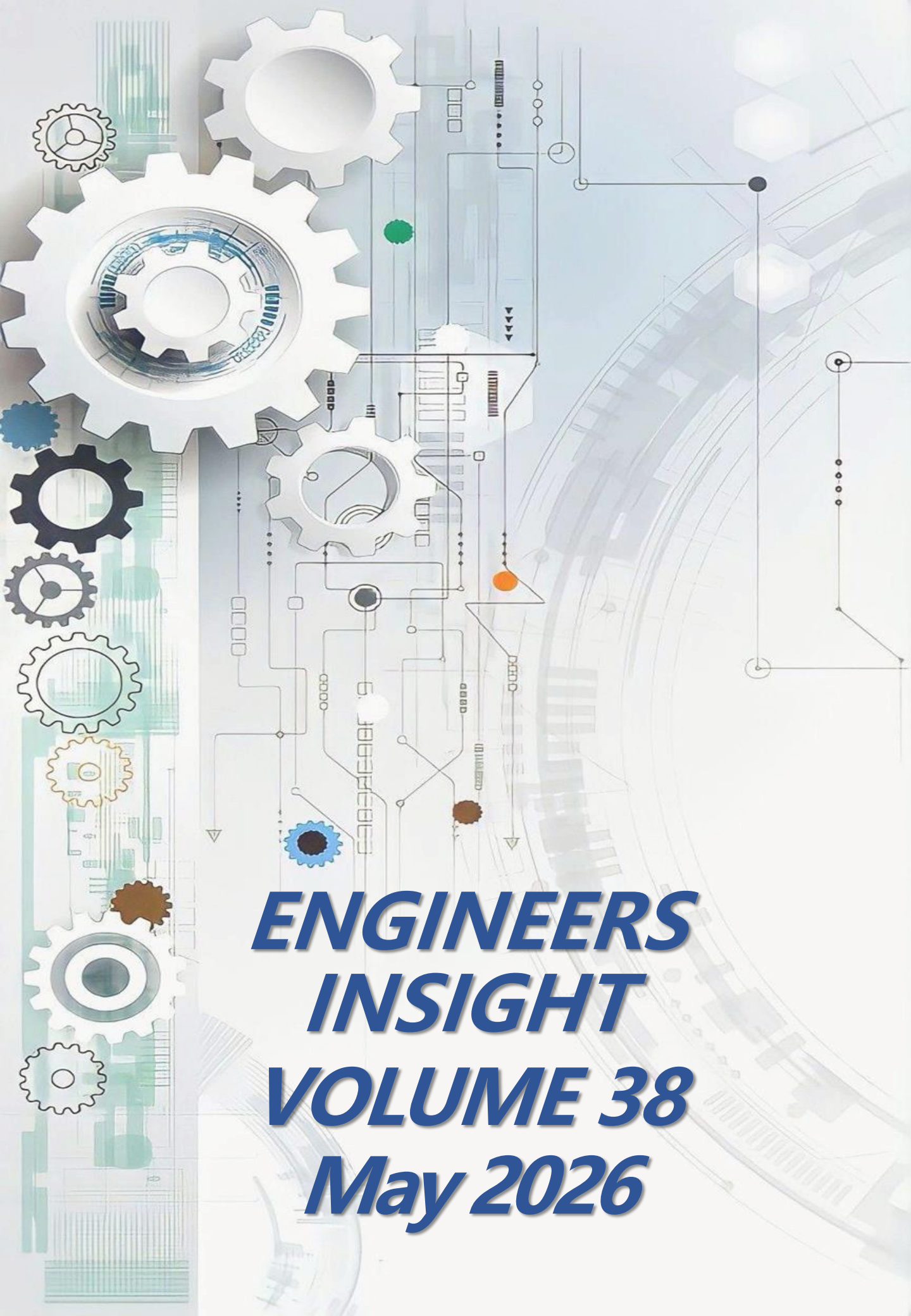

ENGINEERS INSIGHT

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Engineers Insight Editorial Board

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AWARDS & ACHIEVEMENTS

Forged in Competition: How APU Engineers Are Built for the Real World

Team Tesla, comprising three Mechatronic Engineering students—(second from left to right) Kevin Hoe Jian Vei, Priyashini Nagarajan and Wong Yong Jien—pose with their mentor, Asst Prof Ir EUR ING Ts Dr Lau Chee Yong, celebrating their achievement at the BIMAGE Competition.

Asia Pacific University of Technology and Innovation (APU) opened 2026 on a triumphant note as Team Tesla clinched the **First Runner-Up** position at the **BIMAGE Automotive Structural Design Workshop & Creative Design Showcase Competition.**

More than a trophy, the achievement represents something deeper: proof that when students are placed in demanding, high-level arenas alongside formidable opponents, they emerge sharper, stronger, and better prepared for the realities of professional life.

Concluded on 6 January 2026, the competition was organised by BIMAGE Consulting (M) Sdn. Bhd., in collaboration with the **IMechE Universiti Malaya Student Chapter and AKIUM.**

Designed to elevate the technical proficiency of mechanical engineering students, the event brought together some of the brightest minds from Malaysia's leading universities turning learning into a live, industry-driven test of capability.

Rising Against the Best

APU's Team Tesla comprised three Bachelor of Mechatronic Engineering with Honours students: **Priyashini Nagarajan, Wong Yong Jien, and Kevin Hoe Jian Vei.** Competing against teams from top institutions, including Universiti Malaya, they demonstrated exceptional engineering insight in automotive structural optimization.

Guided by **Assistant Professor Ir EUR ING Ts Dr Lau Chee Yong, School of Engineering (SoE)** and **Visionary AI Studio Lead** at APU, the team embraced the challenge with determination. Their success reflects APU's enduring commitment to nurturing innovation and technical excellence through industry-relevant competitions and hands-on learning experiences.

Where Training Meets Reality

The BIMAGE competition combined intensive training with immediate application. Participants attended a compulsory two-day workshop on 20–21 December 2025 at Universiti Malaya's ECC 8 facility, mastering **Autodesk Inventor and Autodesk Fusion**, with a strong emphasis on generative design. This powerful technology enables software to determine optimal component designs based on defined parameters, a cornerstone of modern engineering.

(From left to right) Wong Yong Jien, Kevin Hoe Jian Vei and Priyashini Nagarajan deliver their final pitch before the BIMAGE representatives and the company's CEO.

Armed with new tools, teams were given just one week to redesign or optimize an automotive component. By 28 December, they had to submit 3D models, presentation decks, and videos. Designs were judged on innovation, sustainability, manufacturing feasibility, engineering logic, and presentation quality.

Engineering Under Pressure

Team Tesla chose to optimize the steering knuckle, a critical control hub connecting multiple automotive systems. The challenge was complex: achieve a balance between strength and weight. The component had to withstand multidirectional loads while remaining light enough to reduce unsprung mass and enhance vehicle performance.

Through multiple generative design iterations and material evaluations, the team pursued the best weight-to-strength ratio. The process demanded not only technical rigour but also resilience.

The competition period coincided with the Christmas holidays, when most students were with family and friends. Yet Team Tesla pressed on, meeting every deadline.

When they reached the top six, a new challenge emerged. Judges' feedback required changes, but major CAD and simulation revisions were unrealistic within the timeframe. The team pivoted strategically: instead of reengineering the entire model, they refined how they explained it, strengthening their narrative, clarifying design logic, and anticipating technical questions.

Learning to Perform Under Fire

Reflecting on the journey, **Priyashini Nagarajan** shared, *"This First Runner-Up achievement marks our first win of 2026; an exciting year start that taught us invaluable lessons in design and presentation under real constraints*."

For **Wong Yong Jien**, the pressure of the finals became a personal training ground, *"Presenting third among six finalists, we felt immense pressure watching the first two teams deliver outstanding presentations. I reminded myself to see this not as life-or-death, but as an opportunity to train my presentation skills and build confidence. That reframing relieved the pressure tremendously."*

Kevin Hoe Jian Vei captured the essence of the experience, *"This journey strengthened our technical competence and engineering judgement, while revealing the resilience and teamwork behind our efforts. Achieving First Runner-Up is a proud milestone and reinforces our aspiration to contribute to smart manufacturing and Industry 4.0-driven engineering solutions."*

Strength Beyond the Podium

Another APU team, Minecraft Saga, comprising **Tan Ti Kang, Ho Zu Ming, and Ng Yan Hong,** also reached the top six finalists with their chassis optimization project. Although they did not secure a podium finish, their technical depth and presentation quality reflected the breadth of APU's engineering strength.

The full APU contingent teams Minecraft Saga and Team Tesla whose technical depth and presentation quality reflect the breadth of APU's engineering strength.

Preparing Engineers for Tomorrow

Congratulating the teams, **Professor Ir EUR ING Dr Vinesh Thiruchelvam,** Chief Innovation and Enterprise Officer of APU, remarked, *"Congratulations to Team Tesla on this outstanding achievement! Your success exemplifies the engineering excellence and innovative spirit we cultivate at APU."*

The full APU contingent teams Minecraft Saga and Team Tesla whose technical depth and presentation quality reflect the breadth of APU's engineering strength.

He added, "*This accomplishment demonstrates that our students can compete at the highest levels, combining technical proficiency with professional presentation skills. Your perseverance and strategic thinking reflect the holistic engineering education we provide. Well done!*"

In the end, the true victory lies not only in medals but in mindset. By stepping into demanding competitions with strong opponents, APU students learn to think critically, adapt swiftly, and perform under pressure. And in doing so, they become ready for the real world.

Congratulations to Team Tesla on this outstanding achievement!

Your success reflects true engineering excellence and dedication!

APU Pioneers CSSC-Accredited Lean Six Sigma Green Belt Certification

Prof Dr Ho Chin Kuan (wearing a black tie), Vice Chancellor of APU, and Assoc Prof Ir Dr Siva Kumar Sivanesan (wearing a silver tie), Head of the School of Engineering (SoE), pose with students who are recognized for attaining the Lean Six Sigma Green Belt certification. The success of this programme is driven by the strong academic leadership of Ir EUR ING Ts Dr Harvin Kaur (fourth from left), Programme Leader of Petroleum Engineering, and Ir Ts Dr Yvette Shaan-Li Susiapan (third from left), Senior Lecturer at SoE

Asia Pacific University of Technology & Innovation (APU) marked a significant academic milestone on 16 January 2026, with the **Lean Six Sigma Green Belt Certificate Presentation Ceremony**, honoring students who have completed the internationally recognized **Lean Six Sigma Green Belt certification.**

The ceremony celebrated not only the achievements of the students but also APU's continued leadership in integrating globally valued professional credentials into its academic framework.

Graced by **Professor Dr Ho Chin Kuan**, Vice Chancellor of APU, and **Associate Professor Ir Dr Siva Kumar Sivanesan**, Head of the School of Engineering (SoE), the ceremony reflected the University's commitment to nurturing graduates who possess both academic knowledge and professional competencies demanded by modern industries.

Notably, APU stands as the first university to implement and offer the Council for **Six Sigma Certification (CSSC)-accredited Lean Six Sigma Green Belt** certification within its academic structure.

This pioneering initiative represents a bold step forward in higher education innovation, where professional certification is embedded seamlessly alongside formal degree programmes, enhancing the professional value and global competitiveness of graduates.

Internationally Recognised Certification for Real-World Problem Solving

The CSSC-accredited Lean Six Sigma Green Belt is a globally respected professional certification that validates expertise in the **DMAIC methodology—Define, Measure, Analyse, Improve, and Control.**

Prof Dr Ho Chin Kuan (left), Vice Chancellor of APU, presents the Lean Six Sigma Green Belt Certificate to one of the achievers, Farah Wesam Mohammad Alali, a Bachelor of Mechatronic Engineering with Honours student from the School of Engineering. Witnessing the presentation is Assoc Prof Ir Dr Siva Kumar Sivanesan, Head of SoE.

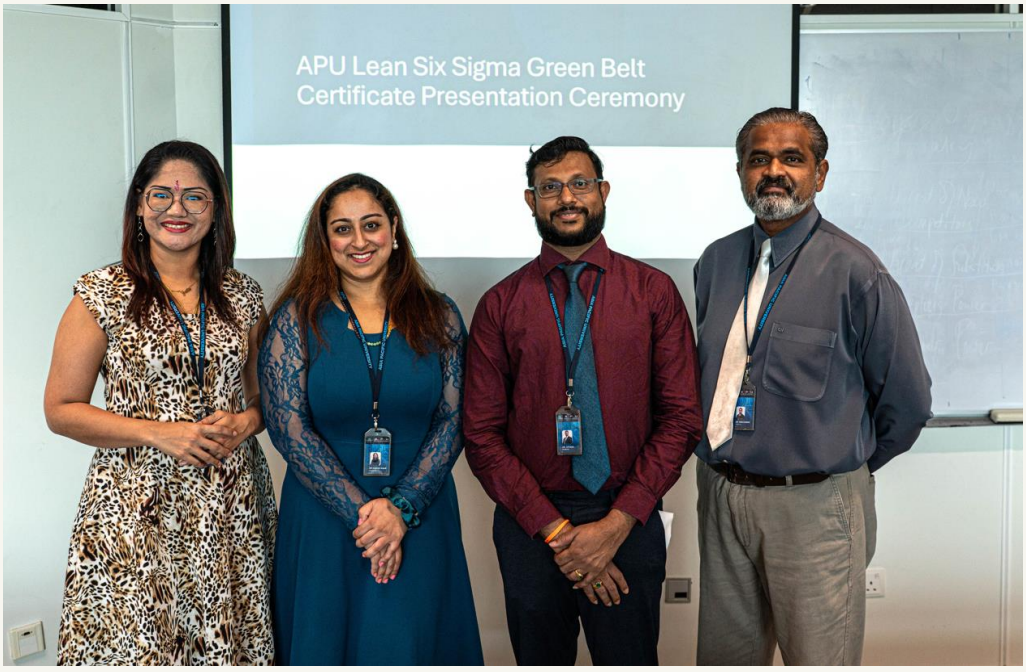
These structured principles equip individuals with the capability to enhance process efficiency, reduce waste, and solve complex operational challenges through data-driven decision-making.

The Council for Six Sigma Certification (CSSC) is an independent global industry body that accredits training providers and certifies professionals across multiple levels, including White, Yellow, Green, Black, and Master Black Belts.

These structured principles equip individuals with the capability to enhance process efficiency, reduce waste, and solve complex operational challenges through data-driven decision-making.

The certification ensures proficiency in Lean Six Sigma practices and is designed to be accessible, featuring non-expiring credentials, open-book examinations, and flexible learning pathways, including self-paced and instructor-led training.

By earning this certification, APU students gain internationally recognized validation of their analytical and process improvement capabilities skills that are increasingly sought after across engineering, manufacturing, technology, business, and service industries.



The driving forces behind the Lean Six Sigma Green Belt programme at SoE, APU (from left to right): Ir Ts Dr Yvette Shaan-Li Susiapan, Ir EUR ING Ts Dr Harvin Kaur, Assoc Prof Ts Dr Sathish Kumar Selva Perumal, and Assoc Prof Ir Dr Siva Kumar Sivanesan, Head of SoE.

The success of the Lean Six Sigma Green Belt programme at APU is driven by the strong academic leadership of the School of Engineering, particularly **Ir EUR ING Ts Dr Harvin Kaur**, Programme Leader of Petroleum Engineering, and **Ir Ts Dr Yvette Shaan-Li Susiapan,** Senior Lecturer at SoE.

Both academics are distinguished Lean Six Sigma Master Black Belt holders, bringing advanced industry-level expertise into the classroom.

Commenting on the programme, **Dr Harvin** shared, *"Lean Six Sigma goes beyond certification. It equips students with a structured, data-driven mindset and a culture of continuous improvement that is essential for addressing real-world challenges."*

Echoing this, **Dr Yvette** added, "*The strength of this programme lies in its strong practical focus, allowing students to translate theory into meaningful process improvements and informed decision-making."*

Their leadership ensures that students not only understand theoretical concepts but also develop the critical thinking, analytical precision, and problem-solving discipline required to drive organizational excellence.

Strengthening APU's Mission to Produce Industry-Ready Graduates

By earning this certification, APU students gain internationally recognized validation of their analytical and process improvement capabilities.

To date, three batches of students have completed the Lean Six Sigma Green Belt programme, reflecting the growing impact and relevance of this certification within APU's academic ecosystem.

The programme strengthens students' ability to approach challenges systematically, analyse data effectively, and implement sustainable improvements; competencies that align closely with industry expectations in an increasingly competitive and efficiency-driven global economy.

By embedding internationally accredited certifications such as the **CSSC Lean Six Sigma Green Belt** into its academic offerings, APU continues to reinforce its mission of producing highly employable, future-ready graduates.

This initiative exemplifies the University's forward-looking approach to education where academic excellence is complemented by professional relevance, and where students are empowered with both knowledge and globally recognized credentials.

As industries continue to evolve and demand greater efficiency, innovation, and accountability, APU graduates equipped with Lean Six Sigma expertise stand poised to contribute meaningfully to organizational transformation and operational excellence worldwide.

Well done to all participants for earning the Lean Six Sigma Green Belt certification.
Wishing you continued success in your professional journey.

APU's SoE Makes History with First IADC WSU Driller's Certification

Asia Pacific University of Technology & Innovation's (APU) School of Engineering (SoE) made global history as the first university to produce graduates certified under the **WellSharp University (WSU) IADC Driller's Surface Stack programme**, with **Lucas Chiong Ju Wynne, Maahika Kamal Malkani, and Muhammad Satria Raafi Irvia** becoming the **world's first university-trained WSU-certified holders**.

Asia Pacific University of Technology & Innovation's (APU) School of Engineering (SoE) marked a historic breakthrough in **Petroleum Engineering** education by producing the world's first cohort of university graduates certified under the **WellSharp University (WSU) IADC Driller's Surface Stack programme.**

Earlier this year, APU successfully secured accreditation from WellSharp University, becoming the first university globally to be formally authorized to deliver this highly respected, industry-driven certification.

This achievement reinforced APU's strong commitment to aligning academic delivery with internationally recognized oil and gas safety, competency, and operational standards.

The programme was spearheaded by a dedicated IADC-trained academic team from APU's SoE, comprising **Assistant Professor Ir Eur Ing Ts Dr Harvin Kaur Gurchran Singh** (Petroleum Engineering Programme Leader), **Ir Dr Juhairi Aris Muhamad Shuhili,** and **Mr Muhammad Safri Basruddin.**

To ensure full compliance with **the International Association of Drilling Contractors (IADC)** requirements, the team underwent formal professional training conducted by Rely-On Asia in early 2025.

Following accreditation, the academic team meticulously designed and delivered an intensive preparatory programme.

This included focused lectures, applied learning sessions, and examination-aligned practices aimed at equipping students with a comprehensive understanding of well control principles and operational readiness.

The rigorous approach ensured that candidates were thoroughly prepared for the certification assessment.

All selected candidates performed strongly in the examination, demonstrating a high level of competency in well control, operational awareness, and the professional standards expected of IADC-certified personnel.

APU's first-ever WSU-certified graduates were **Lucas Chiong Ju Wynne, Maahika Kamal Malkani, and Muhammad Satria Raafi Irvia**.

Reflecting on his experience, Petroleum Engineering student **Lucas Chiong Ju Wynne** said he had gained a deep understanding of primary, secondary, and tertiary well control fundamentals.

"It was rather challenging, as much of the content was not fully covered in the syllabus. Through this programme, we learned about various equipment, procedures, and calculations involved in maintaining stable well operating conditions," he explained.

"While the level of detail required was demanding, repeated practice significantly enhanced our overall understanding."

Another graduate, **Muhammad Satria Raafi Irvia**, highlighted the programme's strong emphasis on safety and practical application.

"We attended lessons led by Dr Juhairi, which made the assessment achievable," he said, added *"We learned about drilling safety through correct well control procedures, and this certification strongly supported our drilling and well control modules."*

Meanwhile, **Maahika Kamal Malkani** shared that the programme gave her a strong foundation in well control, covering pressure concepts, kick detection, well control methods, and the operation of surface BOP stacks, alongside safe drilling practices aligned with industry standards.

Although challenging, she found the training manageable and well-structured, with clear explanations that helped her grasp complex calculations and real-world well control scenarios.

She added that "*The programme significantly enhanced our petroleum engineering studies, providing practical, industry-relevant knowledge and an internationally recognized certification that exceeded her expectations.*"

As APU remained the only university worldwide to hold WellSharp University accreditation at the time, these graduates were officially recognized as the first university-trained WSU-certified Driller's Surface Stack holders globally; an achievement that set a new benchmark for professional certification within higher education.

This milestone underscored APU's leadership in advancing industry-aligned education, strengthening academia–industry collaboration, and producing graduates equipped to meet the evolving demands of the global oil and gas sector.

APU extended its heartfelt congratulations to its pioneering graduates and commended the academic team whose dedication and strategic vision made this global first possible.

Congratulations to all pioneers on this historic achievement.
Your success sets a new benchmark for engineering excellence worldwide.

IMechE Achievement 2025

Jonathan Cheong Eugene – IMechE Project Award

Jonathan Cheong Eugene is recognized for his outstanding work in developing a ROS2-based autonomous mobile robot system powered by the Jetson Orin Nano. His project integrates advanced sensor fusion techniques, combining 2D LiDAR, depth camera, and IMU data using an Unscented Kalman Filter to ensure reliable localization across varying environments and lighting conditions. The robot supports multimodal control, including traditional teleoperation, voice-command navigation, and touchscreen-based point-to-point destination selection, making it highly accessible to differently abled users.

Jonathan further implemented a locally running LLM for spoken interaction, enabling intuitive task execution and chatbot communication. His most innovative contribution is a custom Nav2 obstacle avoidance plugin utilizing YOLOv8 detections, enabling dynamic, object-specific collision handling a major improvement over current uniform inflation-based approach. His project reflects excellent technical depth, modular design, and practical application in human–robot interaction.

IMechE Achievement 2025

Amogha Seelan Balakrishnan Arun Seeralan – The Frederic Barnes Waldron 'Best Student' Award

Amogha Seelan is awarded for his exceptional leadership, technical innovation, and significant contributions to the engineering community. He has delivered impactful engineering solutions, including an autonomous agricultural drone spraying system using MAVLink-enabled failsafe control on STM32, smart farming IoT systems with automated irrigation and cooling, and advanced crop-health monitoring using multispectral vision. His UAV VR concept paper was published by Springer, marking a notable international academic contribution.

As **President of the IMechE Student Chapter at APU**, he successfully led over 18 major events, including the flagship PLC Southeast Asia Competition, elevating institutional visibility and cross-border collaboration. His technical expertise spans embedded systems, robotics, AI, control systems, CAD, and field engineering, while he also champions community education through STEM workshops and drone training. Amogha's distinguished blend of innovation, leadership, and societal impact exemplifies the qualities of a top-tier engineering role model.

IMechE Achievement 2025

Viman Vinesh – The Institution Best Student Certificate

Viman Vinesh is recognized for his exceptional engagement in engineering innovation, research excellence, and industry-relevant achievements. As an active committee member of the APU IMechE Chapter, he has contributed to over 25 impactful initiatives since 2024, demonstrating strong leadership and teamwork. He serves as a Technical Assistant at the CREDIT Research Centre, playing key roles in AI-driven drone systems, disaster-response robotics development (RescueAI), and operational digitalization through inventory dashboards.

His strong academic performance (CGPA 3.6) is complemented by IEEE publication success and certifications in cybersecurity, blockchain, and drone technologies. Viman has also excelled in major international innovation challenges, earning awards in Startup Weekend Malaysia, EthTaipei, the Lazada Business Challenge, EthSeoul, and Eth New Delhi for solutions spanning fintech, governance, and artificial intelligence. His flagship development, RescueAI, integrates VLM-based perception, secure telemetry, and real-time decision support, showcasing his passion for impactful engineering in humanitarian applications.

IMechE Achievement 2025

Zahra Mehboob Osman – The Institution Best Project Certificate

Zahra Mehboob Osman is awarded for her outstanding development of a smart and fully integrated precision agriculture monitoring system adaptable to hydroponic and soil-based environments. Her design centres on a TTGO LoRa V2 microcontroller encased in a custom SolidWorks-engineered housing, fitted with pH, EC, and temperature sensors for hydroponics and a 3-in-1 soil sensor for traditional farming.

Using LoRa long-range communication, data is transmitted to a gateway, processed through a Raspberry Pi, and visualized on a user-friendly dashboard that tracks nutrient cycles, environmental conditions, and device location to support sustainable resource optimization.

Zahra extends her innovation into agricultural robotics by developing real-time segmentation-based AI models for harvesting automation of crops such as tomatoes, cucumbers, and lettuce, enhancing accuracy and productivity in farm operations. Her project highlights a strong commitment to advancing sustainable agriculture using integrated IoT and AI technologies.

IMechE Achievement 2025

APU Engineers Excel at Speak Out for Engineering (SOfE) 2025

Asia Pacific University (APU), in collaboration with the Institution of Mechanical Engineers (IMechE), successfully hosted the S**peak Out for Engineering (SOfE) 2025** competition an event designed to enhance students' ability to communicate complex engineering concepts with clarity and confidence.

Under the guidance of **Prof. Ir. Eur. Ing. Dr. Vinesh A/L Thiruchelvam** and **Ts. Dr. Arun Seeralan**, ALO of the IMechE Student Chapter, participants presented innovative research and engineering advancements to a panel of expert judges from APLC. Ms. Sharen Kaur (Senior Manager, APLC) and Ms. Raziah Sultan Kabeer (EPT & Teacher Training Coordinator, APLC) served as adjudicators for the competition. Both played a pivotal role in evaluating the participants' performance with a keen and balanced lens offering not only critical assessment, but also insightful feedback that strengthened the finalists' delivery. Their comments helped participants refine both language precision and presentation skills, ultimately bringing out their best as communicators of engineering ideas.

IMechE Achievement 2025

The competition showcased exceptional talent in mechanical engineering communication. **Emma Reese Hoff** secured first place with a presentation on nanotechnology for advanced materials, followed by **Shiddarrtana Soorace** in second place for her exploration of robot-assisted surgery systems. **Jocelyn Gresia** earned third place with an engaging review of mechanical engineering applications in immersive theme park ride design. The finalists will progress to the next stage at the University of Malaya, with the opportunity to compete internationally in the United Kingdom.

The success of SOfE 2025 was made possible by the dedicated organising committee: **Amogha Seelan B.A, Sanjay Kumar, Ahmed Adam, Isameldin Ahmed Hussein Ahmed, Raveen A/L Sangaran, Praveen Vikkram A/L Arul Rajan, Shiddarrtana Soorace,** and **Emma Reese Hoff** whose teamwork and leadership ensured a well-executed and professional event. Their contribution reflects APU's strong culture of engineering excellence and innovation on national and global platforms.

IMechE Achievement 2025

Team, We-Cooked – First Prize Winners, PLC Competition 2025

Team, We-Cooked, representing Asia Pacific University (APU), achieved first place in the **PLC Competition 2025** organised by the APU IMechE Student Chapter Malaysia. The team consists of four dedicated engineering students: Wai Chun Kit (Team Leader), Lee Yi Hong, Choo Zhen Yik, and Lim Wei Chen. Their mentor, **Ts. Dr. Arun Seeralan Balakrishnan,** ALO of the APU IMechE Student Chapter, guided and supported the team throughout their journey to becoming champions.

Throughout the competition, they demonstrated strong proficiency in automation system design, applying advanced PLC programming concepts and innovative problem-solving strategies to deliver a highly efficient and well-engineered solution. Their work reflected excellent teamwork, attention to detail, and a solid understanding of industrial automation technologies.

This achievement not only highlights their technical capabilities but also showcases the quality of engineering education and hands-on skills developed at APU. The success of Team We-Cooked stands as a proud moment for the university and reinforces its commitment to nurturing future industry-ready engineers.

APU Roars onto the International Stage with Robotics and AI Triumph at RoboRoarZ Singapore 2026

A Strong Malaysian Presence in a Highly Competitive Arena

The RoboRoarZ Singapore 2026 winners celebrate their achievement with Prof Ir EUR ING Ts Dr Vinesh Thiruchelvam (centre), APU's Chief Innovation and Enterprise Officer (CIEO), and the team of mentors (fourth from left onwards) — Ts Dr Arun Seeralan, Ts Suresh Gobee, Dr Adeline Sneha John Chrisastum, and Asst Prof Ir EUR ING Ts Dr Lau Chee Yong (fifth from right).

Asia Pacific University of Technology and Innovation (APU) has once again demonstrated its prowess in robotics and artificial intelligence on the international stage, as four student teams delivered an impressive medal haul at **RoboRoarZ Singapore 2026.**

Held from 22 to 23 January 2026 at the prestigious **Singapore University of Technology and Design (SUTD),** the competition brought together more than 380 young innovators from across Asia, including China, India, Indonesia, Vietnam, Malaysia, and Oman.

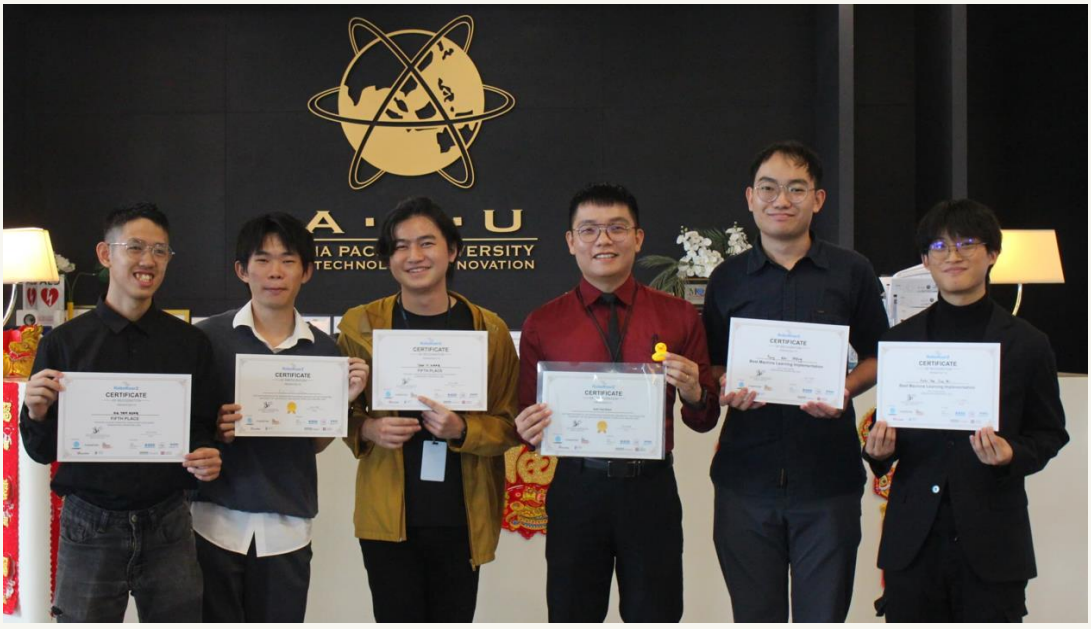
Supported by **the Institute of Electrical and Electronics Engineers (IEEE) Singapore, RoboRoarZ** has grown into a premier platform for tertiary-level students to design, build and programme Smorphi robots in response to complex, real-world challenges.

Competing under the banner of the **Asia Pacific Centre of Robotic Engineering (APCORE)**, alongside two creatively named independent teams, APU students proved that they are not merely participants on the global stage but formidable contenders.

Excelling in Artificial Intelligence Strategy

In the fiercely contested AI League, "**APCORE Team 2**" secured an outstanding **2nd place** finish. The all-female team**; Thasne Rames (Mechatronics Engineering), Kalpikaa Ramaiyah** (Digital Forensics)**, Tanusha Tamil Selvan** (Cyber Security), **Mahallaxmie AR Dharmmanandhan** (Cyber Security), **and Chan Hui Xin** (Mechatronics Engineering) demonstrated exceptional competence in AI strategy, algorithmic thinking, and machine learning integration.

Competing against leading institutions from across the region, the team distinguished itself through rigorous model optimization and strategic problem-solving, reflecting both depth of knowledge and resilience under pressure.



"Team Malaysian Bakuteh Better" celebrates its victory in winning the prestigious Best Machine Learning Implementation Award at RoboRoarZ Singapore 2026 with its mentor, Asst Prof Ir EUR ING Ts Dr Lau Chee Yong (third from right).

Adding to APU's success in the AI League, "Team Malaysian Bakuteh Better" earned the prestigious Best Machine Learning Implementation Award. The team; **Ng Soon Teck** (Computer Engineering), **Koh Yon Shan, Quek Kia Hau, Kevin Hoe Jian Vei, and Pang Wei Meng** (all Mechatronics Engineering) was recognized for the technical sophistication and innovative architecture of their machine learning solution. Their award underscores the strength of APU's interdisciplinary AI training and its emphasis on practical application.

Mastery in Hardware and Autonomous Systems

APU's strength extended beyond software and algorithms. In the **Physical Robot Challenge, the "APCORE Team"** clinched **3rd Place** through the efforts of **Fernandez Tan Jun Xian** (Mechatronics Engineering), **Low Yinn Ean** (Electrical and Electronic Engineering), and **Yeo Peng Sian** (Electrical and Electronic Engineering).

The team impressed judges with their robust robot design, seamless hardware integration, and precise autonomous navigation. In a field where milliseconds and millimetres determine victory, their technical execution stood out among a highly competitive international cohort.

"Team Singbakut" achieves a commendable 5th Place in the Robotics Simulation Challenge at RoboRoarZ Singapore 2026.

Meanwhile, **"Team Singbakut"** achieved a commendable **5th Place** in the **Robotics Simulation Challenge**. **Harindraa Shanmugam, Tan Ti Kang, Ho Zu Ming, Ng Yan Hong** (Mechatronics Engineering), and **How Yong-Heng** (Artificial Intelligence) showcased strong programming proficiency and strategic adaptability in the virtual arena, demonstrating that APU's competitive edge extends across both physical and simulated environments.

Summary of Achievements

Team	Category	Achievement	Members
APCORE Team 2	AI League	2nd Place	Thasne, Kalpikaa, Tanusha, Mahallaxmie, Hui Xin
APCORE Team	Physical Robot Challenge	3rd Place	Fernandaz, Yinn Ean, Peng Sian
Singbakut	Robotics Simulation	5th Place	Harindraa, Ti Kang, Zu Ming, Yong Heng, Yan Hong
Malaysian Bakuteh Better	AI League	Best ML Implementation Award	Soon Teck, Yon Shan, Kia Hau, Kevin, Wei Meng

Mentorship that Shapes Champions

Behind every podium finish was a dedicated team of mentors who guided the students technically and mentally through the rigours of international competition. The mentors were **Ts Suresh Gobee** (Head of APCORE), **Ts Dr Arun Seeralan** (Assistant Professor, School of Engineering), **Dr Adeline Sneha John Chrisastum** (Senior Lecturer, School of Computing), and **Assistant Professor Ir EUR ING Ts Dr Lau Chee Yong** (Programme Leader for Computer Engineering and Lead of the Visionary AI Studio).

Their mentorship reflects APU's broader institutional philosophy where experiential learning, interdisciplinary collaboration, and global benchmarking are integral to student development.

Competing and Winning at International Standards

"Team Malaysian Bakuteh Better" competes in the preliminary round at RoboRoarZ Singapore 2026 alongside more than 380 young innovators from across Asia, including China, India, Indonesia, Vietnam, Malaysia, and Oman.

APU's Chief Innovation and Enterprise Officer, **Professor Ir EUR ING Ts Dr Vinesh Thiruchelvam,** congratulated the teams on their accomplishments:

"These victories are the outcome of rigorous preparation, interdisciplinary collaboration, and an unwavering commitment to excellence. Competing on an international platform such as RoboRoarZ demands not only technical capability but also resilience, strategic thinking, and the courage to innovate under pressure.

Our students have proven that they are able to meet, and indeed exceed, international standards. They are not simply keeping pace with global advancements in robotics and artificial intelligence but contributing to them. This achievement reflects the calibre of talent we nurture at APU and our commitment to producing graduates who can compete and win on the world stage."

Powering the Next Generation of Tech Leaders

APU's success at **RoboRoarZ Singapore 2026** reaffirms its position as a leading institution in technology education within the Asia-Pacific region. More importantly, it highlights the competitiveness of its students in an increasingly demanding global landscape.

As robotics and AI continue to reshape industries worldwide, achievements such as these signal that APU students are not only future-ready they are future-defining.

The University looks forward to building on this momentum in upcoming competitions and continuing to inspire the next generation of innovators who will shape the technological frontier.

Congratulations on your international success; keep pushing the boundaries of innovation.

Engineering Undergraduates at APU Transform Classroom Ideas into Award-Winning Innovations on the International Stage

When curiosity meets structured mentorship and global exposure, innovation thrives. This was precisely the case for two purpose-driven projects from the School of Engineering (SoE) at the Asia Pacific University of Technology & Innovation (APU), which rose above 498 participants from across Asia to clinch two distinguished awards **(Gold and Silver)** at **the International Research and Information Science Expo 2025 (iRISE2025).**

Competing against entries from Malaysia, the Philippines, Indonesia, Thailand, Cameroon and beyond, APU's Year-3 engineering undergraduates demonstrated not only technical ingenuity but also a mature, validation-driven approach to applied research an achievement rarely seen at this stage of study.

Mechatronics Engineering student Seifelden Hatim Kamal Abdelmonem (left) wins the Gold award for his individual project titled "AirVista: Redefining Heads-Up Mobile Interaction Through Wearable Technology" at iRISE2025. In this picture, he celebrates his achievement with his mentor, Ir Ts Dr Reena Sri Selvarajan, Senior Lecturer at SoE, APU.

Organised virtually by DIGIT360, a Universiti Teknologi MARA (UiTM) spin-off company, in collaboration with UiTM Kelantan Branch, iRISE2025 was held from 1 October 2025 to 15 January 2026. The competition culminated in a live-streamed award ceremony broadcast from UiTM Kelantan on 28 January, where **APU's students were announced as Gold and Silver award recipients** among participants from institutions such as Montfort College (Chiang Mai), Universiti Malaysia Perlis, Universiti Tun Hussein Onn Malaysia and UiTM Shah Alam.

A Launchpad for Applied Research in Year Three

The two award-winning entries were developed under the mentorship of **Ir Ts Dr Reena Sri Selvarajan**, Senior Lecturer at SoE and module lecturer for "**Communication Engineering Principles".** From ideation and conceptual framing to design refinement, validation and final presentation, Dr Reena guided the students throughout the entire innovation lifecycle.

"When I extended the opportunity to students within my module, these two teams stepped forward to transform ideas into tangible innovations," **Dr Reena** reflected. *"They exemplify initiative and intellectual courage. By choosing to begin their applied research journey in Year Three, they have set a powerful precedent for future cohorts."*

She further emphasised that such platforms provide invaluable exposure. *"For the students, these projects marked the true beginning of their applied research and innovation journey. They were introduced early to international evaluation standards, interdisciplinary collaboration, and solution-driven engineering. This experience moves them beyond theoretical learning and places them within a global innovation ecosystem."*

Reimagining Mobile Interaction Through Wearable Technology

Mechatronics Engineering student **Seifelden Hatim Kamal Abdelmonem** secured **the Gold award** for his individual project titled **AirVista: Redefining Heads-Up Mobile Interaction Through Wearable Technology.**

AirVista introduces a wearable interaction concept designed to enhance mobile usability during everyday activities. By enabling hands-free, heads-up interaction, the system allows users to remain aware of their surroundings while accessing essential mobile functions. Addressing the risks associated with continuous screen dependency particularly in mobility-intensive contexts the project prioritizes intuitive interaction and user safety.

Rather than remaining conceptual, Seifelden validated the system through functional demonstrations and structured technical reporting, ensuring the idea translated into a workable prototype with practical relevance.

"This experience has inspired me to continue developing solutions that genuinely enhance people's daily lives," Seifelden shared.

"Competing internationally challenged me to think more critically about usability, feasibility and impact. I am deeply grateful to Dr Reena for her guidance and for encouraging me to take the first step in this innovation journey."

Advancing Smart Agriculture Through Data and Automation

Silver award winners of "EcoSense-AgriNet: Autonomous Farming and Data Analytics for Smart Agriculture", developed by a multidisciplinary team from SoE, pose for a photograph with their mentor, Ir Ts Dr Reena Sri Selvarajan (right), Senior Lecturer at SoE, APU.

Securing the Silver award was a multidisciplinary team comprising Mechatronics Engineering, Electrical & Electronic Engineering and Computer Engineering students; **Mushfiq Bin Mahmud Khan, Muhammad Diniy Hazman Bin Hamdan, Rudwan Ismail Adan, Ragushin Aleksandr, Shahan Khan** and **Ammaar Patel.**

Their project, **EcoSense-AgriNet:** Autonomous Farming and Data Analytics for Smart Agriculture, presented a forward-looking precision agriculture solution.

The system integrates data-driven monitoring with intelligent automation to support better decision-making in agricultural environments. Through real-time environmental insights and autonomous observation, EcoSense-AgriNet assists farmers in identifying crop conditions early, optimizing resource utilization and reducing reliance on manual intervention.

Strongly aligned with the United Nations Sustainable Development Goals (SDGs), particularly in agriculture and healthcare, the project demonstrates how Artificial Intelligence can be embedded into scalable, real-life applications addressing pressing societal challenges.

Ammaar Patel reflected on the learning process: "*Participating in this competition taught us the true value of building a structured workflow and translating ideas into action within a clear project timeline. International evaluation required us to be rigorous, disciplined and solution-focused.*"

He added, *"Throughout the journey, we strengthened not only our research capabilities but also our critical thinking and problem-solving skills. We learned to communicate technical ideas clearly and validate our system's real-world applicability. This experience has shaped us into more resilient, creative and collaborative engineers, ready to take on future challenges with confidence."*

From Concept to Credible Impact

A distinguishing feature of both projects was their validation-driven approach. The students did not stop at conceptual proposals; they refined, tested and communicated their innovations through comprehensive video-based technical reporting. By demonstrating functional relevance, usability and societal impact, they aligned their work with industry expectations and enhanced credibility on an international platform.

Dr Reena underscored the broader significance of this approach. *"Engineering education must move beyond theoretical excellence to solution-oriented relevance. When students experience how their ideas evolve into validated outcomes, they begin to see themselves not just as learners, but as contributors to society."*

Together, the **Gold and Silver** recognitions **at iRISE2025** underscore a powerful message: when curiosity, purposeful innovation and structured academic guidance converge, undergraduate projects can transcend the classroom and become meaningful contributions with real-world relevance.

For APU's engineering undergraduates, this achievement is not merely a competition victory. It is the beginning of a lifelong journey in applied research, interdisciplinary collaboration and impact-driven engineering one that demonstrates how early exposure to global standards can empower students to shape solutions for a rapidly evolving world.

Congratulations to our award-winning students on this outstanding international achievement. May your passion for innovation continue to inspire future breakthroughs.

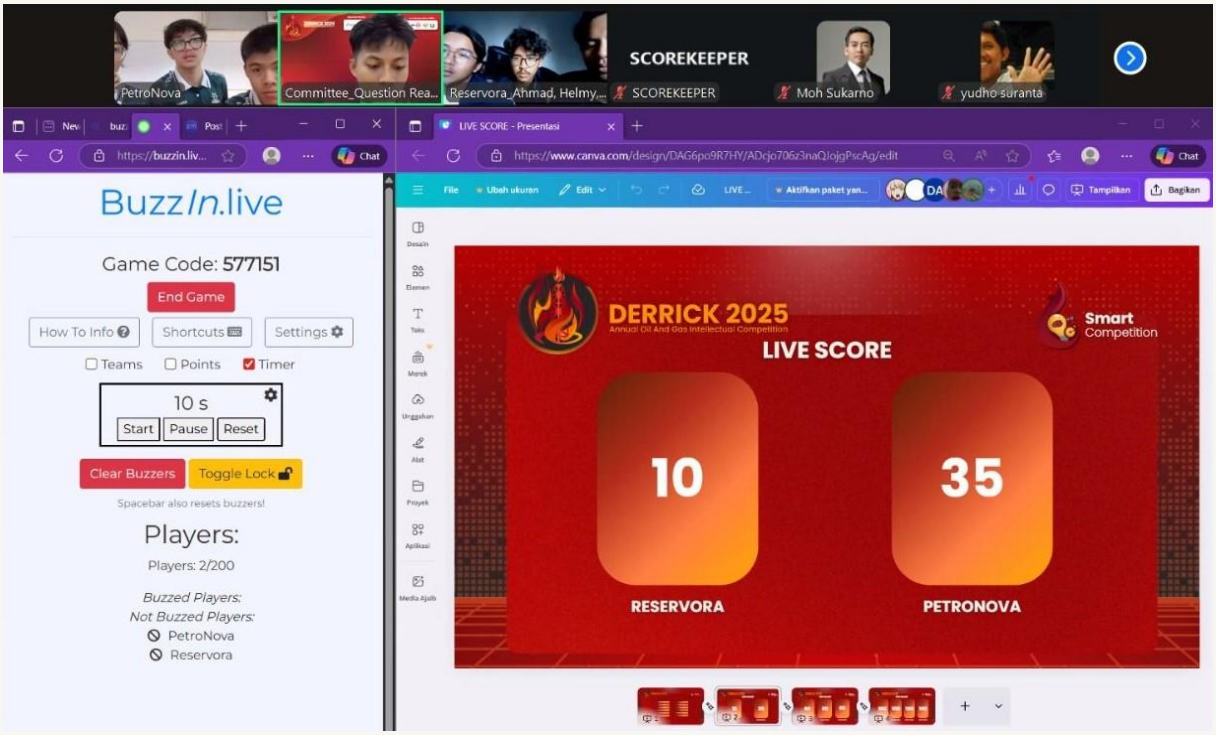
Apu Petroleum Engineering Students Showcase Competitive Spirit At Derrick 2025

Recently, three Petroleum Engineering students from Asia Pacific University of Technology & Innovation (APU), secured a **Top 8** placement in a **PetroBowl-style** competition held as part of **DERRICK 2025,** organised by Politeknik Energi dan Mineral (PEM) Akamigas.

Representing APU under Team Petronova were **Lucas Chiong Ju Wynne, Muhammad Satria Raafi Irvia,** and **Maahika Kamal Malkani.**

The team was mentored and supported by **Ir Dr Juhairi Aris Muhamad Shuhili** (Lecturer, School of Engineering at APU) **and Mr Muhammad Safri Basruddin** (Lecturer cum Engineering Lab Technician, School of Engineering at APU), alongside Petroleum Engineering students; **Salsabila Hukma Shabiyyah** and **Israa Mohammed Ibrahim,** whose guidance and commitment played an important role in the team's preparation.

The competition follows a **PetroBowl-**style format, where teams from various participating universities across the region are challenged through a fast-paced quiz that tests both technical knowledge and industry awareness, covering petroleum engineering concepts, energy sector developments, and broader global oil and gas issues, while requiring quick thinking and effective teamwork under pressure.



Despite having only a few months to prepare, the team demonstrated strong teamwork, adaptability, and technical understanding throughout the competition.

Through this experience, the team had the opportunity to:

1. Strengthen their understanding of petroleum engineering concepts in a competitive setting.
2. Develop critical thinking and teamwork skills under time pressure.
3. Gain exposure to a regional-level academic competition environment.

In addition to that, the team benefited from engaging with peers from other universities, exchanging insights, and experiencing the dynamics of a high-level academic competition.

While the team did not secure a podium finish, their achievement reflects a commendable effort.

Their performance underscores the importance of dedication, resilience, and effective collaboration, while also demonstrating how perseverance, strategic thinking, and continuous learning can enable students to excel in challenging, competitive academic environments.

Well done on securing a Top 8 placement. Wishing you continued success in future competitions!

APU Research Breakthrough Drives Autonomous Robotics Innovation into Industry

SwarmGuard, an AI-powered autonomous mobile robot system developed through APU's research ecosystem, secures national recognition and accelerates commercialisation through a university spin-off emerging from its IoT research hub.

The team behind IoTech Solutions celebrates this milestone achievement. From left to right: Mr Krishna Ravinchandra, Gayatri Reshma Penjarla, Harshayn Vythilingam, Prof Dr Vinesh Thiruchelvam, Ir Narendran Ramasenderan, Chin Kah Min and Sin Jun Yan

A breakthrough in autonomous robotics developed within the Asia Pacific University of Technology & Innovation (APU) research ecosystem has earned national recognition at the **Hardtech Deeptech Commercialisation Accelerator (HDCA) 2025**, where SwarmGuard, an AI-infused autonomous mobile robot (AMR) system designed for semiconductor manufacturing inspection, received an **RM5,000 Support Grant.**

The project was spearheaded by IoTech Solutions, a technology spin-off emerging from **APU's Centre of Excellence for Research & Development of IoT (CREDIT).** The award was announced during the HDCA 2025 programme finale, held on 30 January 2026, organised by Digital Penang in collaboration with 1337 Ventures, powered by **Cradle Fund Sdn Bhd (CRADLE)** Malaysia's focal point agency for early-stage technology startups under the **Ministry of Science, Technology and Innovation (MOSTI**) and supported by the **Malaysian Business Angel Network (MBAN).**

This recognition caps an intensive nine-month journey through the HDCA programme, where IoTech Solutions was selected as a finalist to pitch its SwarmGuard system to industry leaders, investors and technology mentors from across Malaysia's rapidly expanding semiconductor ecosystem.

Autonomous Robotics for Semiconductor Manufacturing

SwarmGuard represents a new generation of AI-driven autonomous inspection systems tailored for semiconductor fabrication facilities, where precision, safety and operational continuity are paramount.

The system leverages swarm intelligence and AI-powered machine vision, enabling a coordinated fleet of mobile robots to autonomously patrol and inspect complex manufacturing environments. By integrating thermal imaging, acoustic sensing and predictive maintenance analytics, SwarmGuard can detect anomalies and defects in real time while significantly reducing human exposure to hazardous production environments.

Among its key capabilities are:

1. Multi-robot coordination through distributed AI, allowing collaborative inspection across large industrial facilities
2. Real-time anomaly detection with more than 94 per cent accuracy
3. SLAM-based navigation that enables millimeter-level positioning precision
4. Predictive maintenance analytics, capable of reducing unplanned equipment downtime by up to 80 per cent

These capabilities position SwarmGuard as a promising solution for semiconductor manufacturers seeking to strengthen operational resilience while maintaining stringent quality control standards.

A University Spin-off Bridging Research and Industry

The innovation behind SwarmGuard is the result of collaboration between APU researchers and engineering students, reflecting the university's strong emphasis on applied research and industry engagement.

Student developers of IoTech Solutions, a technology spin-off emerging from APU's Centre of Excellence for Research & Development of IoT (CREDIT), proudly receive the HDCA Support Grant for SwarmGuard, an AI-infused autonomous mobile robot (AMR) system. Here, the team poses with the grant plaque and the system prototype. From left to right: Gayatri Reshma Penjarla, Harshayn Vythilingam, Chin Kah Min and Sin Jun Yan.

The team behind IoTech Solutions includes:

1. **Dipl-Ing Inv Ir Narendran Ramasenderan** – Founder and Chief Executive Officer
2. **Mr Krishna Ravinchandra** – Operations Manager
3. **Prof Ir EUR ING Dr Vinesh Thiruchelvam** – Advisor
4. **Sin Jun Yan** (Mechatronics Engineering student) – Robotics Systems Specialist
5. **Chin Kah Min** (Computer Engineering student) – Software Stack Specialist
6. **Harshayn Vythilingam** (Electrical and Electronic Engineering student) – Associate Systems Engineer
7. **Gayatri Reshma Penjarla** (Electrical and Electronic Engineering student) – Associate Systems Engineer

As a university spin-off, IoTech Solutions serves as a bridge between academic discovery and industrial application, translating research outputs into deployable technologies capable of addressing real-world challenges.

The company originated from CREDIT, APU's dedicated IoT research hub, which drives interdisciplinary innovation across the university's academic community of more than 25,000 students.

Beyond SwarmGuard, the company has also developed the MediGuard AI Rover, an autonomous healthcare robotics platform that was recognized as a **Top 10 Best Invention** globally at the **iCAN Toronto 2025** international innovation exhibition.

From Research Lab to Real-World Deployment

With the HDCA Support Grant secured, IoTech Solutions is now preparing to move SwarmGuard toward commercial proof-of-concept trials, targeting collaborations with semiconductor multinational corporations operating in Penang's Batu Kawan industrial cluster, one of Southeast Asia's most important semiconductor manufacturing hubs.

Reflecting on the journey through the accelerator programme, **Ir Narendran Ramasenderan,** Co-Founder and Chief Executive Officer of IoTech Solutions, emphasised the value of industry mentorship and ecosystem exposure.

"*The HDCA programme provided invaluable exposure to Penang's semiconductor ecosystem and mentorship from industry veterans," he said. "This support grant fuels our next phase of development as we pursue pilot deployments with semiconductor manufacturers in the Northern Corridor."*

Strengthening APU's Innovation and Commercialisation Ecosystem

For APU, the success of IoTech Solutions demonstrates the university's growing strength in translating research breakthroughs into impactful technologies through innovation-driven entrepreneurship.

Prof Ir EUR ING Dr Vinesh Thiruchelvam, Chief Innovation and Enterprise Officer (CIEO) at APU and now Advisor to IoTech Solutions, highlighted the importance of nurturing university-industry collaborations that accelerate technology commercialisation.

"APU's research philosophy has always centered on turning knowledge into impact," he explained. *"Through platforms such as CREDIT and initiatives that encourage student-researcher collaboration, we are cultivating innovations that can move beyond the laboratory and deliver tangible solutions for industry."*

He added that university spin-offs play a critical role in strengthening Malaysia's Deeptech ecosystem.

"By supporting ventures like IoTech Solutions, we are not only empowering our researchers and students to pursue entrepreneurial pathways but also contributing to Malaysia's ambition to become a global hub for advanced technologies, including robotics, artificial intelligence and semiconductor innovation."

Advancing the Next Generation of Deeptech Innovation

The emergence of IoTech Solutions underscores APU's commitment to research excellence, technological innovation and industry relevance. By enabling researchers and students to collaborate on cutting-edge projects and translate them into commercial ventures, the university continues to expand its role in shaping Malaysia's future innovation landscape.

With SwarmGuard now moving closer to industrial deployment, the project stands as a powerful example of how university-driven research can evolve into transformative technologies, delivering value not only for industry but also for the broader digital economy.

Congratulations on this breakthrough achievement of advancing innovation beyond the lab!

Gold Medal Glory and Presidential Honour

APU Shines with a Double Triumph at the 67th IEM Annual Dinner

The Institution of Engineers, Malaysia (IEM) 67th Annual Dinner and Awards Night proved a momentous occasion for Asia Pacific University of Technology and Innovation (APU), as Mechatronics Engineering graduate **Chung Yu Qin** was honored with the **IEM Gold Medal Award 2025,** while **Assistant Professor from the School of Engineering and Visionary AI Studio Lead, Asst Prof Ir EUR ING Ts Dr Lau Chee Yong**, received the **Presidential Award of Excellence (PAOE).**

Held on 18 April 2026, the evening stood as a testament to the calibre of engineering talent nurtured at APU, with both a distinguished academic and an outstanding graduate securing prestigious accolades that celebrate the very best of Malaysia's engineering fraternity.

(From left to right) APU CIEO Prof Ir EUR ING Dr Vinesh Thiruchelvam congratulating two outstanding engineering talents from APU's School of Engineering—Chung Yu Qin and Dr Lau Chee Yong.

The **Gold Medal** is among the most distinguished student honours conferred by **IEM**, awarded to graduates who exemplify exceptional academic excellence and strong professional potential. **Chung** received the accolade from **IEM President Ir Yau Chau Fong.**

For Chung, the recognition marks a fitting culmination of years of dedication, discipline, and passion for engineering a defining milestone not only for him, but also for the wider APU community.

Further elevating the university's achievement, **Dr Lau** was recognized with **the Presidential Award of Excellence (PAOE)** by the **Electrical Engineering Technical Division (EETD)** of IEM. The award honours outstanding contributions to the engineering profession, reflecting Dr Lau's sustained commitment to advancing research, innovation, and engineering education.

(From left to right) Asst Prof Ir EUR ING Ts Dr Lau Chee Yong and Chung Yu Qin congratulating each other on their achievements with the IEM EETD's Presidential Award of Excellence (PAOE) and the IEM Gold Medal Award 2025.

APU's Chief Innovation and Enterprise Officer (CIEO**), Professor Ir EUR ING Dr Vinesh Thiruchelvam,** extended his warmest congratulations to both recipients. *"These achievements reflect the spirit of excellence that APU strives to instill in every student and academic. Chung Yu Qin's Gold Medal is a shining testament to what our graduates can accomplish when supported by the right environment, mentorship, and opportunities to excel,"* he remarked.

Echoing this sentiment, Head of the School of Engineering, Professor **Ir Dr Siva Kumar Sivanesan**, expressed equal pride. *"We are immensely proud of Chung Yu Qin and Dr Lau Chee Yong. Chung's national recognition by IEM reflects the strength and quality of engineering education at APU. It reaffirms our commitment to producing graduates who are not only technically proficient, but also professionally distinguished,"* he said.

This double triumph at the 67th IEM Annual Dinner and Awards Nightstands as a powerful affirmation of APU's position as a premier institution for engineering education in Malaysia where academic excellence and professional recognition go hand in hand.

Chung Yu Qin proudly holds the parchment and medal of the IEM Gold Medal Award 2025—a testament to his dedication, discipline, and passion for engineering

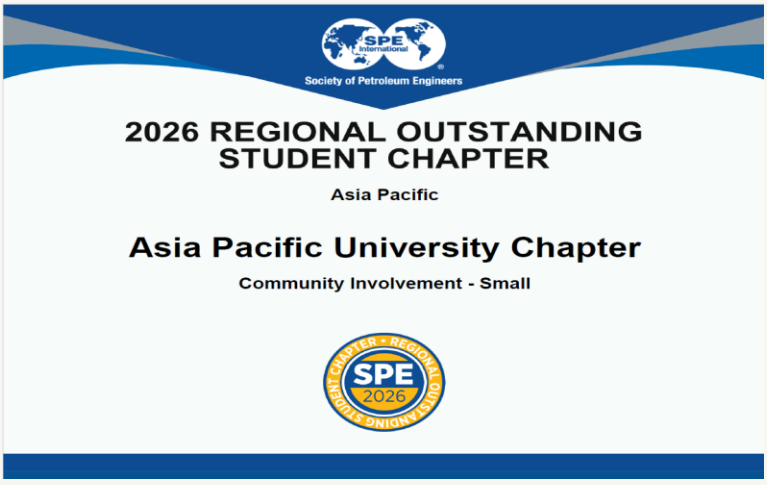
Congratulations on your remarkable success! May your achievements continue to inspire future engineers.

APU Student Engineers Earn International Recognition for Advancing Engineering with Purpose

SPE International Honours APU Chapter for Community Impact and Sustainable Engineering Outreach.

The **Asia Pacific University Society of Petroleum Engineers Student Chapter (APUSPESC)** has achieved a remarkable milestone by securing the **2026 Regional Outstanding Student Chapter Award** for the Asia Pacific Region, under the Community Involvement category (Small Size Group), conferred by **SPE International**. This prestigious recognition reflects the chapter's strong commitment to meaningful community engagement, sustainability, and engineering outreach beyond the classroom. This achievement also propels the chapter to the global round for the **SPE Presidential Award**, positioning APU prominently on the international engineering education stage.

A key contributing factor to this success was the strong academic guidance and mentorship provided by the chapter advisor, **Ir. Dr. Wong Siew Fan,** whose leadership played an instrumental role in shaping the vision, execution, and impact of the chapter's activities.



2026 SPE Regional Outstanding Student Chapter Award (Asia Pacific) – by SPE International

2026 SPE Regional Outstanding Student Chapter Award (Asia Pacific) – by SPE KL

Academic Leadership and Advisory Contribution

As the Advisor of the Asia Pacific University SPE Student Chapter (APUSPESC), **Ir. Dr. Wong Siew Fan** provided strategic direction, continuous mentorship, and quality assurance across all major initiatives conducted by the chapter. Her guidance ensured that each programme was not only well structured and aligned with SPE's objectives but also reflected the School of Engineering's emphasis on ethical practice, community service, and experiential learning.

Through close engagement with student leaders, Ir. Dr. Wong supported:

- The planning and governance of community and outreach programmes,
- The integration of engineering concepts into age-appropriate STEM activities,
- Continuous reflection and improvement to ensure scalability and sustainability of initiatives,
- The development of student leadership, professionalism, and teamwork.

Her advisory role helped bridge academic engineering knowledge with real world community needs, ensuring that the chapter's work delivered measurable social impact while maintaining technical relevance.

Engineering Beyond Technical Boundaries

What set the APU SPE Student Chapter apart was its ability to translate engineering knowledge into tangible societal impact. Throughout the year, under the guided framework and mentorship of Ir. Dr. Wong Siew Fan, the chapter successfully delivered a series of well structured, inclusive, and scalable initiatives that integrated STEM education, social responsibility, and environmental stewardship, while simultaneously nurturing leadership, professionalism, and teamwork among its members.

Key Programs Contributing to the Award

1. STEM Outreach Program – SK Marian Convent

The chapter's flagship initiative involved engaging over 200 primary school students through hands-on STEM activities such as building towers, bridges, and remote-controlled cars.

This program emphasized experiential learning, allowing students to develop creativity, teamwork, and problem-solving skills. By introducing engineering concepts in an accessible and engaging manner, the initiative successfully sparked interest in STEM among young learners, making it highly impactful and easily replicable.

This program stands out as an award-winning initiative due to its high impact, low cost, and scalable format, making it easily replicable by other student chapters seeking to deliver meaningful STEM outreach.

APUSPESC conducted a STEM Outreach Programme at SK Marian Convent to inspire young learners through hands-on engineering and STEM activities.

2. Children's Home Visit

Another meaningful initiative was the visit to a local children's home, where six volunteers from APUSPESC spent quality time with the girls through conversations, interactive activities, and creative self-made games. These activities helped create a warm and supportive environment while giving members the opportunity to contribute directly to the community.

To align the visit with SPE's educational mission, the volunteers also conducted a simple STEM-based experiment on fluid viscosity and density using different drinking liquids. This made scientific concepts easier to understand and helped spark curiosity among the children in an engaging and relatable way.

In addition to the activities, the chapter contributed approximately RM700, which had been collected through a Ramadan charity drive, to further support the children's home. This initiative stood out because it combined compassion, education, and community service in a simple yet meaningful format that could be replicated by other student chapters.

APUSPESC organised a meaningful visit to a local children's home, engaging the children through interactive activities and STEM-based learning experiences.

3. Beach Cleanup Program

The beach cleanup initiative, conducted in collaboration with the university's African Society, brought together 33 volunteers to remove waste and promote environmental awareness.

This program highlighted the importance of sustainability, cross-community collaboration, and proactive environmental responsibility while demonstrating that simple initiatives can create lasting impact.
This initiative is considered worthy as it demonstrates strong collaboration, sustainability awareness, and the ability to create significant environmental impact through simple and scalable actions.

APUSPESC conducted a beach cleanup initiative alongside APU's African Society to promote environmental awareness and collective responsibility

4. Energy4Me Outreach Program

The Energy4Me program involved visits to multiple primary schools, where students participated in interactive experiments such as density towers, oil sweep, and balloon-powered cars.

This initiative supported SPE's mission of promoting energy education while inspiring curiosity and critical thinking among young students.

Its structured and curriculum-aligned approach ensures consistent impact, making it a highly effective and replicable outreach model across different schools and communities.

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5. Tree Planting Initiative

In collaboration with the **Free Tree Society**, the chapter organized a tree planting program aimed at promoting environmental sustainability.

Participants gained hands-on experience in planting and composting while developing a deeper appreciation for ecological conservation. The initiative also encouraged long-term responsibility by allowing participants to adopt plants.

This initiative is considered worthy as it demonstrates strong collaboration, sustainability awareness, and the ability to create significant environmental impact through simple and scalable actions.

A tree-planting programme organised by APUSPESC encourages ecological conservation and promotes long-term environmental stewardship.

A key contributing factor to this success was the strong academic guidance and mentorship provided by the chapter advisor, **Ir. Dr. Wong Siew Fan,** whose leadership played an instrumental role in shaping the vision, execution, and impact of the chapter's activities. Her leadership played an instrumental role in shaping the direction, execution, and long-term impact of the chapter's initiatives.

Through her guidance, student leaders were empowered to design programmes that not only aligned with SPE's objectives but also reflected APU's emphasis on ethical engineering practice, experiential learning, and community-driven innovation.

Commenting on the achievement, **Professor Ir EUR ING Dr Vinesh Thiruchelvam**, Chief Innovation and Enterprise Officer at APU, said, *"This international recognition reflects the true purpose of engineering education, that is to develop individuals who apply knowledge with empathy, responsibility, and vision.*

"Through APUSPESC, our students are not only trained as future engineers, but as compassionate leaders and changemakers capable of creating meaningful impact for communities and the environment. Their success demonstrates how technical excellence, when guided by strong values and social consciousness, can become a powerful force for nation-building and global progress."

A Proud Moment for SOE and APU

This award is a testament to the engineering ethos championed by the School of Engineering at APU that engineers are not only problem solvers, but also educators, innovators, and responsible global citizens. The success of the **APU SPE Student Chapter** showcases how student led initiatives can create tangible societal benefits while enriching professional and leadership development.

As the chapter advances to the global Presidential Award stage, it carries with it the spirit of engineering with purpose, inspiring the wider SOE community to continue applying technical expertise for the betterment of society.

Congratulations on your achievement!
May your dedication continue to create meaningful impact in communities around the world.

APU Researcher Secures Design Patent for AI-Based Secure Communication Device

Dr. Padmesh Tirunelveli Narayana Pillai from the School of Engineering, Asia Pacific University of Technology and Innovation, together with his collaborators from several universities in India, has achieved a significant research milestone with the successful grant of a design patent by the **Intellectual Property Office of India** for the innovation titled **“AI Based Secure Authentication Device for Communication Network,”** officially registered on 14 January 2026.


ORIGINAL
Serial No. : 220181
INTELLECTUAL PROPERTY INDIA
पेटेंट कार्यालय, भारत सरकार | The Patent Office, Government Of India
डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No. : 480568-001
तारीख / Date : 17/11/2025
पारस्परिकता तारीख / Reciprocity Date* :
देश / Country :

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-02 in respect of the application of such design to AI BASED SECURE AUTHENTICATION DEVICE FOR COMMUNICATION NETWORK in the name of 1.Dr. I. S. Srinivasa Rao 2. Dr. Parthasarathy V 3.Mrs. Aswini Mula 4.Dr. Padmesh Tirunelveli Narayanapillai 5.Dr S Prayla Shyry 6.Ms. Agnes Treesa J 7.Ms. Revathi R.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

Date of Issue: 14/01/2026

Controller General of Patents, Designs and Trade Marks

The design patented invention introduces a sophisticated cyber-physical authentication platform that combines artificial intelligence-enabled identity verification with multilayer cryptographic security protocols to strengthen communication network integrity and data protection.

The system integrates advanced machine learning methodologies, including behavioral biometric modelling, anomaly detection mechanisms, and pattern-recognition-based access control frameworks, allowing continuous surveillance of user interaction behavior, encryption response patterns, and communication data flow.

Through the integration of embedded edge-computing architecture, the device enables decentralized authentication processes that minimize network latency, improve bandwidth efficiency, and enhance protection against complex cyber threats such as spoofing, replay attacks, and distributed network intrusions across emerging communication infrastructures, including 5G networks, Industrial Internet of Things (IIoT) ecosystems, telemedicine communication systems, smart city digital platforms, financial network security systems, and defense communication technologies.

The innovation also highlights strong interdisciplinary collaboration, particularly through the incorporation of chemical engineering principles in the design and development of advanced functional materials and system stability components.

These contributions include the utilization of nanostructured conductive materials, polymer-based sensing interfaces, corrosion-resistant protective coatings, and thermally robust encapsulation technologies that collectively enhance electronic signal responsiveness, environmental resistance, and long-term device reliability.

Furthermore, chemical engineering approaches support sustainable material engineering, energy-efficient device configuration, and advanced sensor fabrication methodologies that facilitate device miniaturization and environmentally responsible manufacturing processes.

The patented technology plays a crucial role in advancing global digital transformation while supporting key **United Nations Sustainable Development Goals (SDGs),** including promoting resilient industrial innovation and infrastructure development (SDG 9), enabling secure and intelligent smart city communication frameworks (SDG 11), strengthening cybersecurity governance and institutional data protection systems (SDG 16), and fostering economic development through secure and dependable digital communication technologies (SDG 8).

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This accomplishment underscores **Dr. Padmesh** and his team's dedication to developing transformative, interdisciplinary technological solutions that reinforce cyber-physical security while generating sustainable industrial, societal, and community-driven impact

Congratulations on your achievement, Dr Padmesh! May your dedication continue to create meaningful impact around the world.

APU Breaks New Ground with Historic MCMC Grant Achievement

In a momentous achievement for Asia Pacific University of Technology and Innovation (APU), **Assistant Professor Dr. Lau Chee Yong**, Head of the **Visionary AI Studio at APU**, has successfully secured a prestigious **Digital Society Research Grant (DSRG)** from the **Malaysian Communications and Multimedia Commission (MCMC),** marking APU's first MCMC grant after six years of persistent efforts.

The award letter was formally presented by **Emeritus Prof Dr. Tharek Abdul Rahman,** Advisor to MCMC, at the **MCMC Symposium 2025** on August 20, 2025, at Sama Sama Hotel, representing a significant milestone in APU's research trajectory.

The ceremony was also graced by other distinguished figures including Ms. Shirley Kuan Chien Hui, Head of Research Enterprise and Scholarship Department, and Ms. Malini Ramalingam, Head of MCMC Academy Division.

Dr. Lau's groundbreaking research project, titled **"Optimizing Malaysia's Parcel Delivery Resources through a Work-Sharing Model: An Industry Readiness Assessment,"** addresses critical challenges in Malaysia's courier industry. The Digital Society Research Grant, totaling RM30,000 after matching funds from APU, will support the development of a Collaborative Last-Mile Network (CLMN) model that enhances sustainability, optimizes resources, and supports national delivery infrastructure goals.

The significance of this achievement was emphasized by **Prof Murali**, Deputy Vice-Chancellor of APU, who congratulated Dr. Lau on this remarkable success. Prof Murali highlighted that among more than 100 applicants, predominantly from public universities with only a few from private institutions, Dr. Lau emerged as the top recipient. This recognition underscores the exceptional quality of the research proposal and APU's growing reputation in the academic research landscape.

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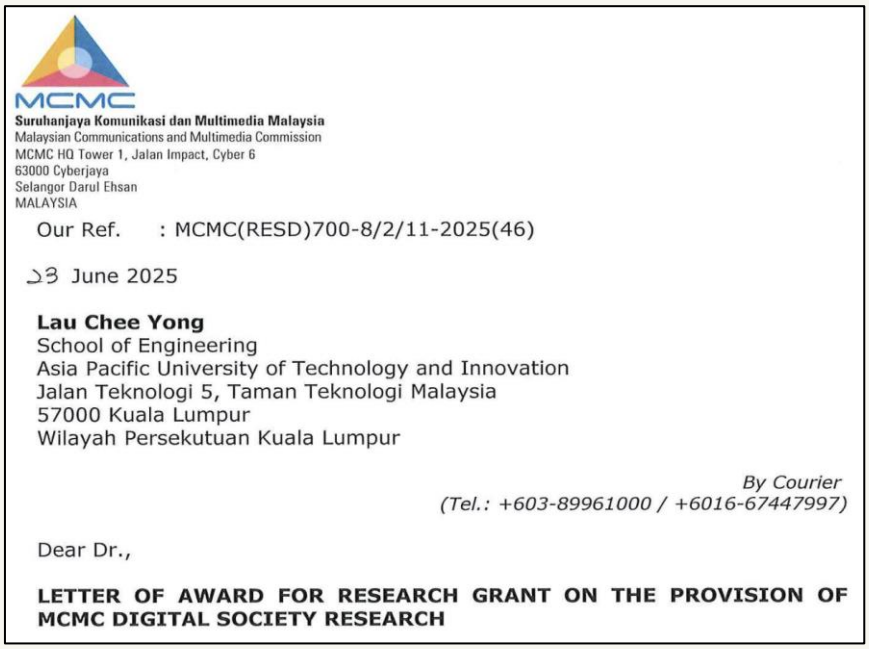
The research project demonstrates remarkable industry engagement, with Dr. Lau conducting comprehensive interviews with key stakeholders across Malaysia's logistics sector. Notable industry leaders participating in the study include Fiona Liao, Group Chief Marketing, Communications & Sustainability Officer, Chin Khee Hsien, Manager of Operations at FedEx Express, and Cheah Lee Sun, Director of SPX Express. These partnerships underscore the practical relevance and industry impact of the research..

Supporting Dr. Lau in this endeavor are **Prof Vinesh Thiruchelvam** and **Ms. Hema Latha Krishna Nair**, whose expertise and collaboration have been instrumental in developing the comprehensive research framework. The research team is further strengthened by four dedicated student research assistants: **Darren Ong Khang Xuan, Yong Shin Cheng, Ng Jing Wei, and Lau Yi Jing.** Their combined efforts represent APU's commitment to interdisciplinary research excellence and industry-relevant solutions.

The research focuses on addressing critical inefficiencies in Malaysia's parcel delivery ecosystem, including resource duplication across multiple providers, environmental impact concerns, and operational inconsistencies. The proposed work-sharing model promises to revolutionize last-mile delivery operations, with last-mile delivery currently accounting for 41% of total supply chain losses.



MCMC

Suruhanjaya Komunikasi dan Multimedia Malaysia
Malaysian Communications and Multimedia Commission
MCMC HQ Tower 1, Jalan Impact, Cyber 6
63000 Cyberjaya
Selangor Darul Ehsan
MALAYSIA

Our Ref. : MCMC(RESD)700-8/2/11-2025(46)

23 June 2025

Lau Chee Yong
School of Engineering
Asia Pacific University of Technology and Innovation
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By Courier
(Tel.: +603-89961000 / +6016-67447997)

Dear Dr.,

LETTER OF AWARD FOR RESEARCH GRANT ON THE PROVISION OF MCMC DIGITAL SOCIETY RESEARCH

This achievement reflects Dr. Lau's distinguished research portfolio as Head of the Visionary AI Studio at APU, which includes multiple successful grants totaling over RM400,000 in funding from various agencies including the Ministry of Higher Education, Malaysia Productivity Corporation, and Intel Malaysia. His expertise in artificial intelligence, machine learning, and renewable energy systems positions him as a leading researcher in technology innovation.

The MCMC grant success represents more than just funding; it validates APU's research capabilities and establishes the university as a key contributor to Malaysia's digital society initiatives. This achievement paves the way for future collaborations between APU and national agencies, reinforcing the institution's role in addressing Malaysia's technological and societal challenges.

As APU celebrates this historic milestone, the university continues to strengthen its position as a premier private institution driving innovation and research excellence in Malaysia. Dr. Lau's success serves as an inspiration to the entire APU research community and demonstrates the institution's commitment to pursuing impactful research that addresses real-world challenges.

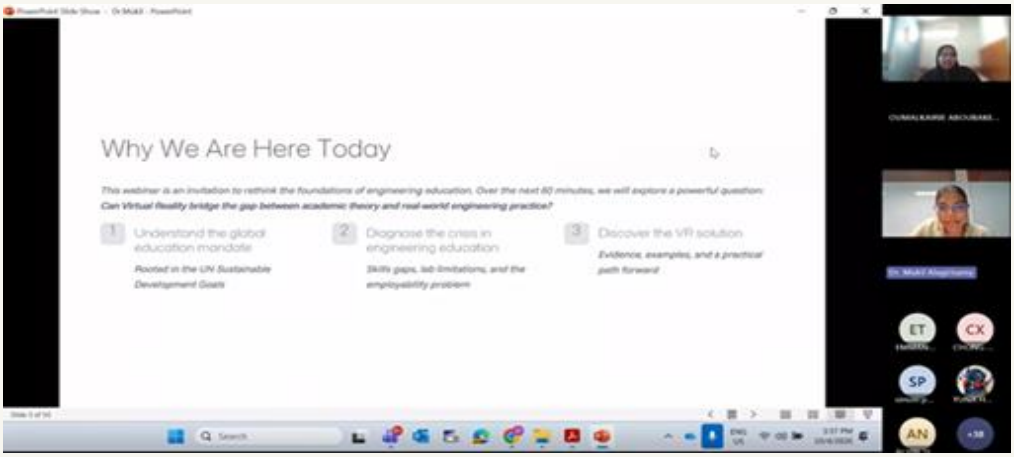
Congratulations on your achievement, Dr Lau!

WORKSHOP

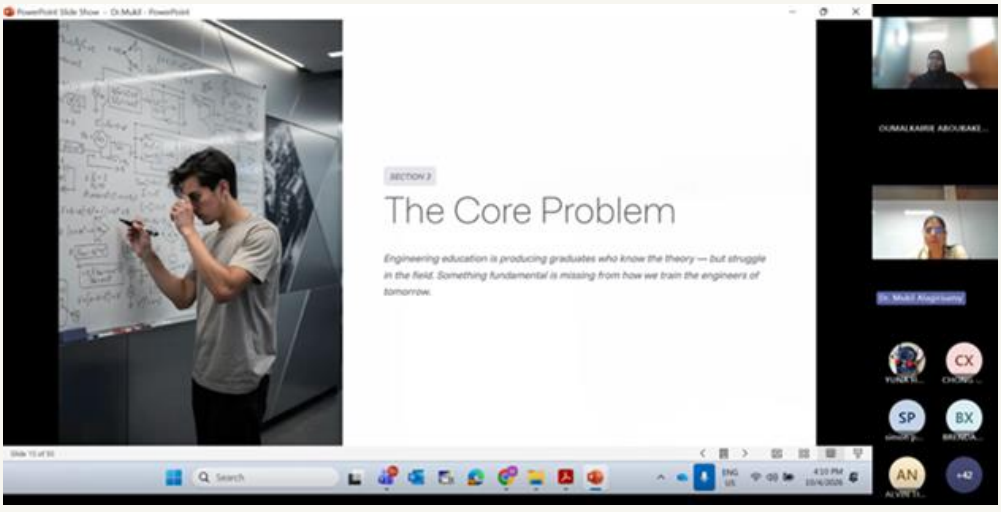
Beyond Traditional Labs: Exploring Virtual Reality For Engineering Skills And Employability At Apu

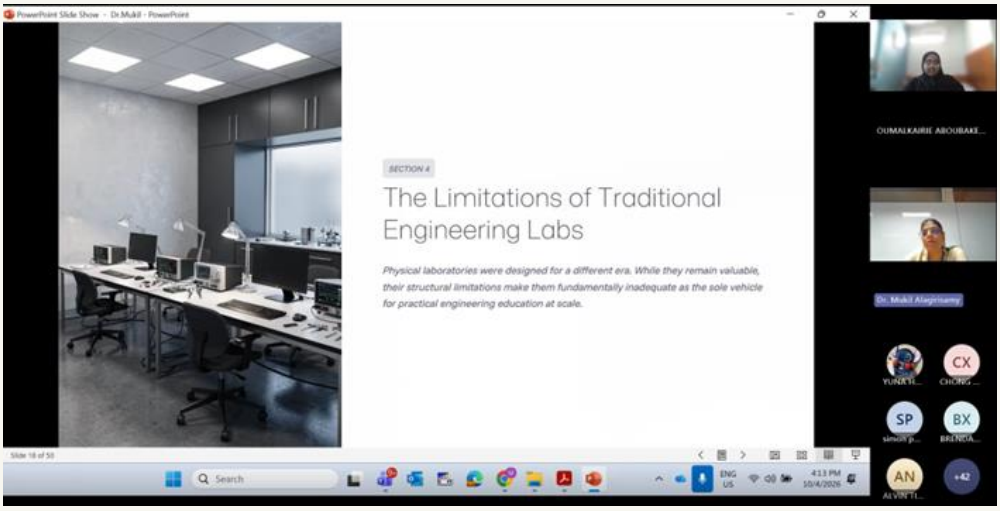
Asia Pacific University of Technology & Innovation (APU) recently hosted an insightful webinar titled **"Beyond Traditional Labs: Virtual Reality for Engineering Skills and Employability"** on 10th April 2026. The session featured **Dr. Mukil Alagirisamy** as the guest speaker and aimed to discuss current employment trends and the challenges faced by engineering students, particularly the gap between theoretical learning in universities and the practical skills expected by industry.

The webinar also highlighted the importance of Sustainable Development Goal 4.4, which focuses on equipping learners with relevant technical and vocational skills for employment and explored how innovative tools such as Virtual Reality (VR) can help students build practical competencies to meet industry requirements. The session was mainly targeted at university students from APU as well as participants from other universities who joined the webinar virtually.



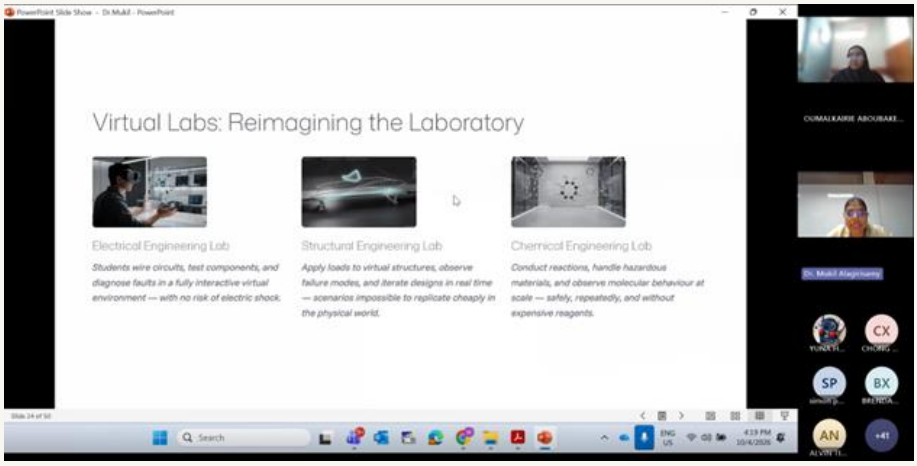
During the session, Dr. Mukil explained how the industrial landscape has changed significantly with the rise of Industry 4.0 technologies such as artificial intelligence, automation, robotics, and immersive systems. Despite these changes, many universities still rely heavily on classroom-based teaching, where theory is given greater emphasis than practical exposure. She highlighted that in many cases, engineering education remains largely theoretical, with about 70% focused on theory and only 30% on practical learning. This imbalance can make it difficult for students to confidently apply their knowledge in professional environments after graduation.





The webinar also explored the limitations of traditional physical laboratories. Dr. Mukil pointed out that practical learning is often restricted by high equipment costs, limited access to lab facilities, safety concerns, and the difficulty of allowing students to repeat experiments freely.

In many situations, students are unable to gain enough independent hands-on experience because experiments require supervision or involve costly and potentially hazardous equipment. As a result, students may understand concepts well in theory but still feel unprepared when faced with real engineering or computing challenges in the workplace.



To address these challenges, Dr. Mukil introduced Virtual Reality (VR) as a learning tool that can complement traditional teaching methods. She explained that VR enables students to enter immersive simulation environments where they can carry out practical tasks such as assembling circuits, testing structures, or exploring engineering systems in a safe and controlled way.

These virtual environments also allow students to repeat activities, identify errors, and improve their understanding through guided practice. The session further introduced different forms of VR, including non-immersive, semi-immersive, and fully immersive systems, showing how these technologies can support more accessible and scalable practical learning experiences.

An important message throughout the talk was that VR should not completely replace physical laboratories but rather support them by giving students more opportunities to practised and strengthen their technical confidence.

Dr. Mukil emphasized that by integrating VR into engineering education, universities can enhance students' practical competence, improve learning retention, and better prepare graduates for employment in an increasingly technology-driven world. In this way, VR has the potential to contribute meaningfully to SDG 4.4 by promoting quality, relevant, and skills-based education.

Student Reflections

Braxton Choo Ying Shun mentioned that the webinar provided useful insights into how Virtual Reality (VR) can improve practical learning for engineering students. He noted that VR-based simulations can help students apply theoretical knowledge in a safe environment and better prepare for industry expectations.

Paola Wan Rou mentioned that integrating innovative technologies like VR into engineering education can support continuous skills development. The ability to practise and repeat tasks in a virtual setting may improve students' confidence in solving real-world engineering problems.

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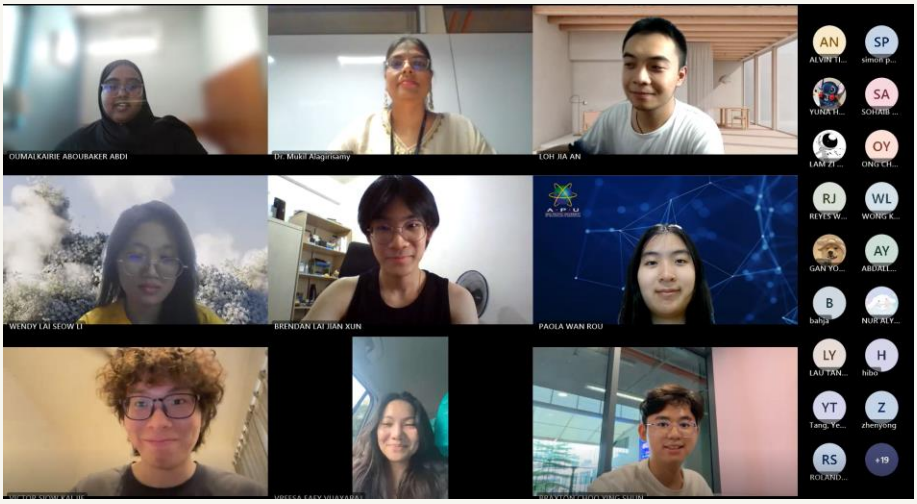
Teoh Wei Lun expressed appreciation to the organisers for choosing this topic, as it addressed one of the key challenges faced during their studies by highlighting how VR can bridge the gap between theory and practical skills.



Overall, the webinar provided students with valuable exposure to the future direction of engineering education and the role of immersive technologies in closing the gap between theory and practice. Dr. Mukil's session encouraged students to think beyond conventional learning methods and to consider how innovation can be used responsibly to improve both technical training and employability.

Dr. S. Reena Advocates Innovation-Driven Research in International Expert Lecture Series

Ir. Ts. Dr. Reena Sri Selvarajan from the School of Engineering recently delivered an invited online expert lecture titled **"From Biosensors to Intelligent Self-Sustaining Systems: Engineering the Future of Smart Devices"** for students of the Department of Electrical and Electronics Engineering at Coimbatore Institute of Technology.

The session aimed to expose students to the fundamentals of biosensors while exploring the future direction of smart and self-sustaining sensing systems. The lecture highlighted how biosensor technologies are evolving beyond conventional detection systems into intelligent platforms capable of autonomous operation, real-time monitoring, and sustainable functionality through energy harvesting and integrated smart systems.

In addition to technical knowledge, students were encouraged to appreciate the importance of developing meaningful Final Year Project (FYP) ideas that can contribute to impactful research, innovation, and societal advancement. The discussion also emphasized existing research gaps and the increasing global demand for advanced biosensing technologies in healthcare, environmental monitoring, and wearable electronics.

The session further inspired students to view research not only as an academic exercise, but as a pathway toward real-world solutions through intellectual property development, innovation commercialization, and start-up ventures.

By bridging engineering principles with practical applications, the lecture sought to cultivate future innovators capable of engineering technologies that contribute positively to humanity and sustainable development.

The interactive session concluded with active engagement from students, reflecting strong interest in emerging technologies and future-oriented engineering research.

EVENTS

Igniting Young Minds through STEM engagement

Recently, the School of Engineering (SoE) at Asia Pacific University of Technology & Innovation (APU) reaffirmed its commitment to nurturing future innovators through a three-day mission-driven **Science, Technology, Engineering, and Mathematics (STEM)** outreach initiative held in collaboration with **Sekolah Kebangsaan Marian Convent (SKMC), Setapak.**

Led by **Ms Fatin Ayuni Mohd Suhaimi** (Lecturer, SoE at APU), the structured STEM knowledge transfer programme aimed to spark early interest in engineering, while bringing engineering concepts to life through engaging, hands-on learning experiences, aligning with Sustainable Development Goal 4, 9, and 17 (SDG 4, SDG 9, and SDG 17).

The programme also received support from:

1. **Ir Dr Wong Siew Fan** (Senior Lecturer, SoE at APU)
2. **Ir Ts Dr Reena Sri Selvarajan** (Senior Lecturer, SoE at APU)
3. **Mr Muhammad Safri Basruddin** (Lecturer cum Engineering Lab Technician, SoE at APU)
4. **APU Society of Petroleum Engineers Student Chapter** (APU SPE SC) committee members

Day One: Kickstarting Curiosity

The programme began with an engaging STEM briefing and demonstration session led by lecturers from SoE, who introduced fundamental engineering concepts in a way that was both accessible and inspiring for young learners.

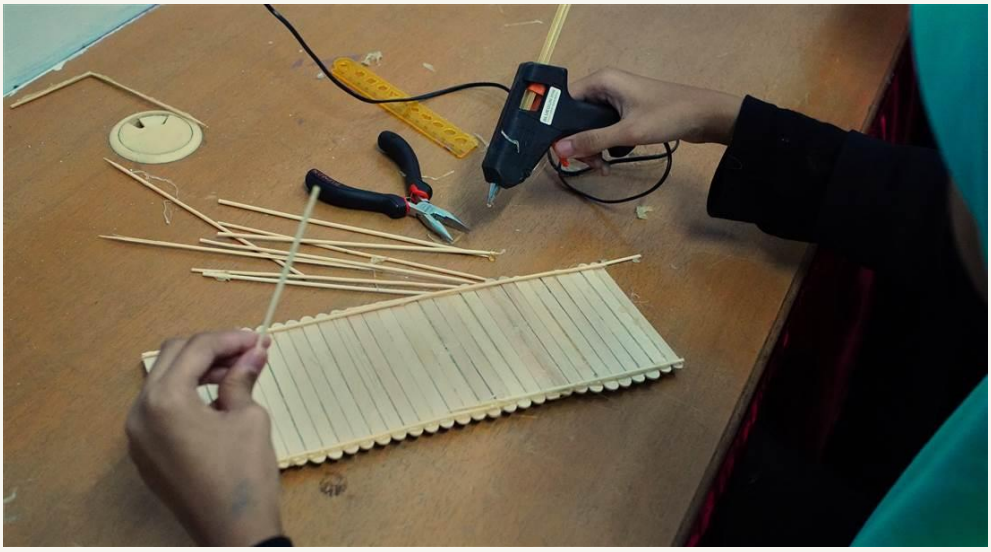
Through interactive explanations and real-time demonstrations, students were able to see abstract ideas come to life, sparking their curiosity and encouraging them to ask questions.

The session also offered students a preview of the hands-on challenges they would tackle in the second day, helping them connect theoretical concepts with practical applications.

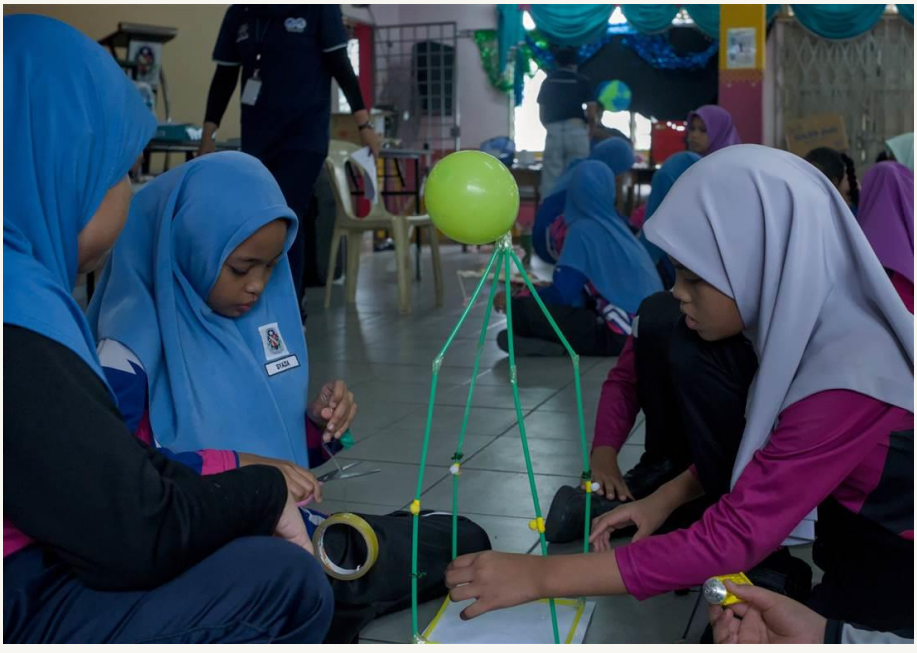
This dynamic introduction successfully set the stage for the subsequent activities, igniting enthusiasm and laying a solid foundation for creative exploration and problem-solving throughout the programme.

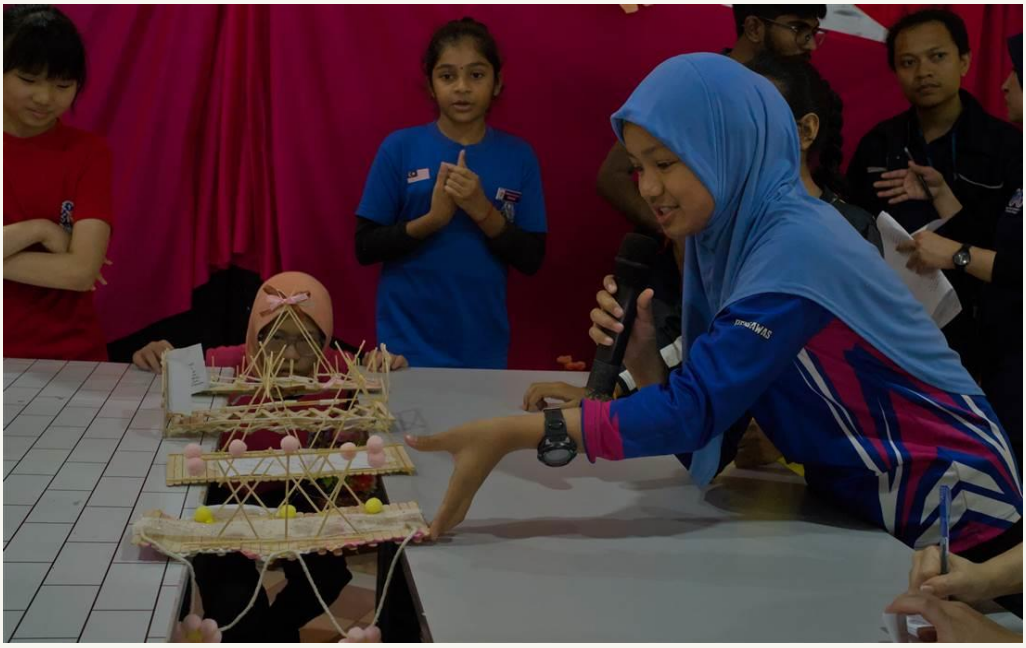
Day Two: From Ideas to Action

The second day of the programme was filled with dynamic, hands-on challenges designed to engage different age groups and encourage students to put engineering principles into practice; creatively and collaboratively.



Standard 4 students tackled the **Balloon and Straw Tower Challenge**, experimenting with balance, stability, and structural design, as they constructed free-standing towers.

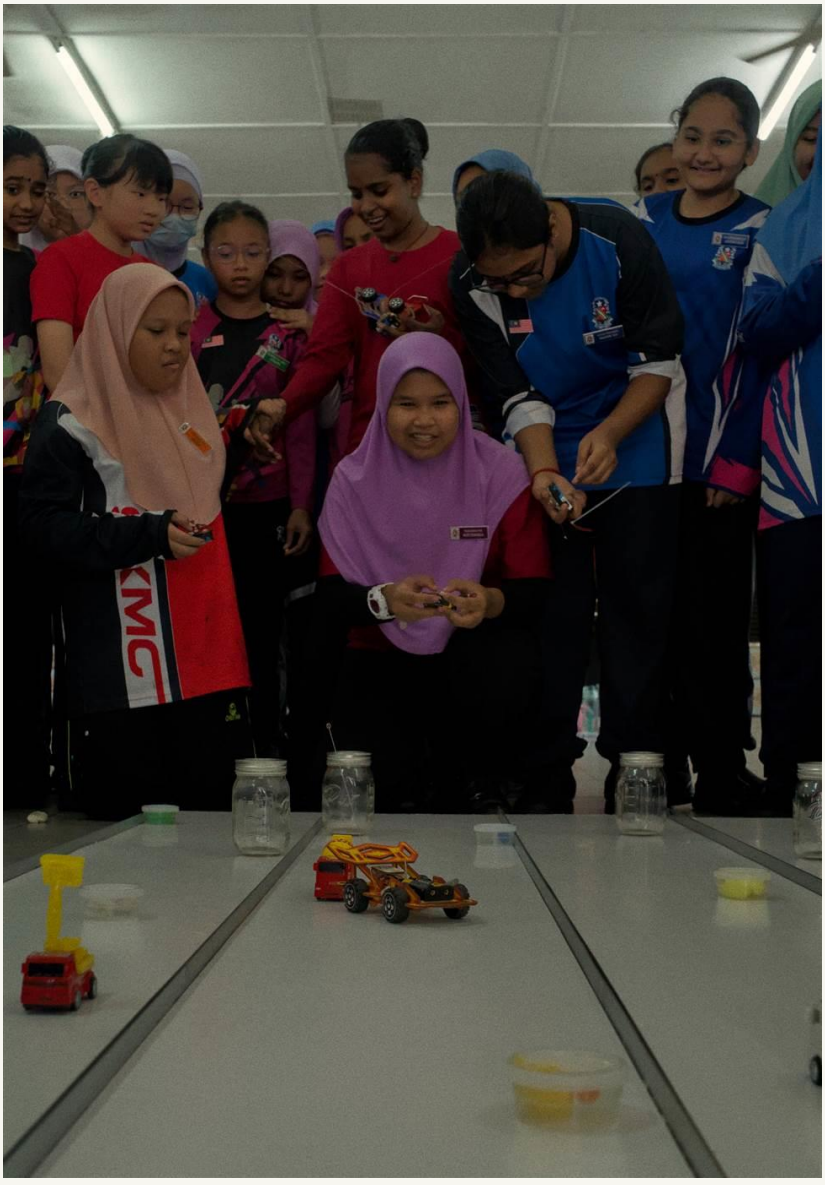




Standard 5 students participated in the **Bridge Building Challenge**, where they designed and assembled bridges using ice cream sticks, learning firsthand about load distribution, tension, and structural strength.

Standard 6 students faced the **Motorized Car Obstacle Challenge, assembling Direct Current (DC) motor-powered cars** and testing them along a two-metre obstacle course, applying mechanical and electrical engineering concepts in a fun, interactive setting.

Throughout the challenges, students displayed remarkable teamwork, creativity, and problem-solving skills.



These activities provided an immersive platform for experiential learning, reinforcing theoretical concepts, while giving students the satisfaction of seeing their ideas transformed into tangible, functioning projects.

Day Three: Celebrating Achievements

Following the excitement and hands-on learning from the STEM briefing, demonstrations, and challenges on the previous days, the programme concluded with a meaningful closing ceremony, certificate presentation, and summary session.

The Principal of SKMC formally presented a **Certificate of "Jalinan Kerjasama"** to APU, in recognition of the successful collaboration and commitment to advancing STEM education.

The ceremony celebrated not only the hard work and accomplishments of the participating students, but also the strong and ongoing partnership between APU and SKMC in nurturing young learners' interest in innovation.

It provided an opportunity to reflect on the programme's overall impact, highlighting how experiential learning, teamwork, and creativity had empowered students to explore STEM concepts in a practical and engaging way.

A shared Commitment to Sustainable Education

The STEM knowledge transfer programme was a meaningful initiative that brought together academic expertise and community engagement to inspire young learners, which, according to **Assoc Prof Ir Dr Siva Kumar Sivanesan** (Head, SoE at APU), successfully fostered early interest in STEM education through practical and experiential learning.

"By integrating hands-on activities with real-world applications, the programme not only enhanced students' confidence in STEM education but also reinforced the importance of nurturing future-ready skills."

Echoing this commitment to impactful and future-focused education, **Professor Ir EUR ING Ts Dr Vinesh Thiruchelvam**, APU's Chief Innovation & Enterprise Officer, emphasised that programmes such as this reflects APU's broader dedication to driving innovation through meaningful community engagement, while highlighting the vital role of educators in shaping future generations of problem-solvers and innovators.

"The dedication shown by the lecturers and student volunteers in delivering engaging and impactful STEM activities has been instrumental in inspiring young minds.

"This not only strengthens community partnerships but also contributes meaningfully to nurturing the next generation of innovators and future-ready individuals," he said.

Dr. Reena Represents APU at the National Young Scientists Colloquium : Embracing Mission-Oriented Research

Ir. Ts. Dr. Reena Sri Selvarajan, an **Affiliate Member of the Young Scientists Network** – Academy of Sciences Malaysia (YSN ASM), was selected to participate in the prestigious YSN ASM Colloquium 2025, a three-day national platform uniting young scientists across Malaysia. The colloquium brought together dynamic researchers aligned under a shared vision of nation building through science, purpose, and innovation.

Guided by Puan Azami, CEO of YSN ASM, participants underwent comprehensive training grounded in the Mission Oriented Approach; a strategic framework that positions research to solve high priority societal challenges and deliver measurable impact.

Through this programme, Dr. Reena gained critical insights on:

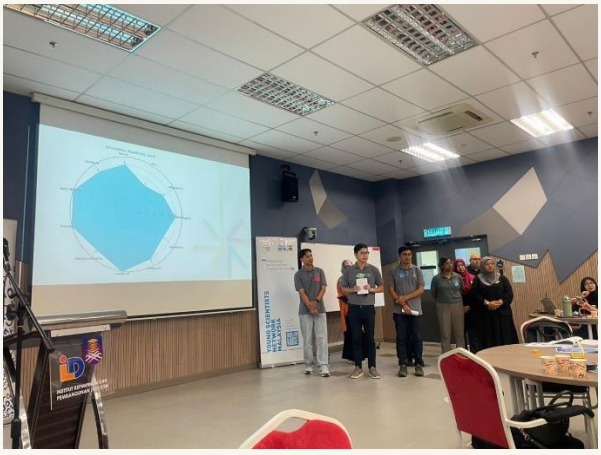
- Embedding mission aligned thinking into research planning
- Strengthening the quality and competitiveness of grant applications
- Assessing and tailoring postgraduate and undergraduate project topics for relevance and national value
- Driving research excellence with clarity, accountability, and long-term direction

Dr. Reena Represents APU at the National Young Scientists Colloquium : Embracing Mission-Oriented Research

In tandem with the colloquium, **Dr. Reena** also contributed to **"10–10 MySTIE" (Malaysia Science, Technology, Innovation & Economy Framework)** a national blueprint connecting STI capabilities with socio economic transformation. Her engagement reaffirmed the importance of aligning research with Malaysia's national missions, priority sectors, and innovation pathways.

Returning to university, she carries forward actionable strategies to nurture mission-oriented mindsets among students, elevate research outputs, and align institutional capabilities with national priorities.

The YSN ASM Colloquium 2025 marks an important milestone, one that strengthens her commitment to shaping impactful research, fostering scientific leadership, and contributing meaningfully to Malaysia's innovation ecosystem.

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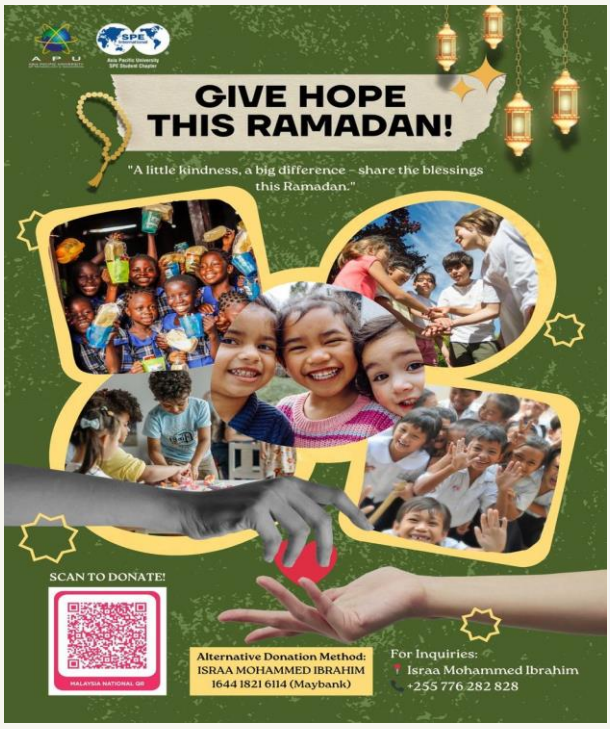
Ramadan Fundraising & Iftar Gathering



During the holy month of Ramadan, beginning on the 19th of February 2026, the Asia Pacific University's Society of Petroleum Engineers Student Chapter (APUSPESC) organized a fundraising initiative aimed at supporting the **BRDB Rotary Children's Residence**.

This meaningful initiative was conducted under the guidance and advisory support of **Ir. Dr. Wong Siew Fan**, Senior Lecturer at the School of Engineering, and Advisor of the APUSPESC. Her academic expertise, leadership, and continuous mentorship played a vital role in ensuring the smooth planning and successful execution of the programme, reinforcing the chapter's commitment to social responsibility and community engagement.

The campaign was carried out throughout the entire month of Ramadan, encouraging students and the wider community to contribute towards a meaningful cause. The fundraising effort included both monetary and clothing donations, with participants able to contribute through direct donations as well as online transfers via QR code for added convenience. In addition to monetary contributions, a clothing donation drive was also organized.

Donors were encouraged to provide clean and well-maintained clothes suitable for children aged between 4 to 17 years old. The initiative received strong support from the university community, reflecting a shared spirit of compassion and generosity.

The collected clothing donations were packed into bags and prepared for distribution to the orphanage.

By the end of the fundraising period, a total of **RM 1,500** was successfully collected an achievement that highlighted the collective effort, dedication, and generosity of everyone involved.

As part of the initiative, an iftar gathering was held on the 16th of March 2026, bringing together committee members in a warm and welcoming environment to break their fast together. The gathering served as an opportunity to strengthen team bonds, reflect on the progress of the fundraising campaign, and finalize preparations for the upcoming visit to the orphanage.

Overall, the Ramadan fundraising initiative successfully fostered a spirit of unity, compassion, and social responsibility. With the strong advisory support of Ir. Dr. Wong Siew Fan, the programme not only achieved its fundraising goals but also reinforced the importance of leadership, teamwork, and meaningful community outreach within the APU SPE Student Chapter.

APUSPESC Orphanage Visit CSR

On the 3rd of April 2026, members of the Asia Pacific University Society of Petroleum Engineers Student Chapter (APUSPESC) carried out a community outreach visit to the BRDB Rotary Children's Residence, located at PP-01, Seksyen 5, Jalan BS 5/5, Taman Bukit Serdang, 43300 Seri Kembangan, Selangor. This visit marked the culmination of the Ramadan fundraising initiative conducted from 19th February 2026 throughout the month of Ramadan.

The CSR activity was successfully conducted under the guidance of **Ir. Dr. Wong Siew Fan**, Advisor of the APU SPE Student Chapter, whose continuous support and mentorship played a significant role in the planning and execution of the initiative. The event was also strongly supported by **Ms. Fatin Ayuni**, Lecturer of the School of Engineering (SOE), whose encouragement and involvement contributed to the success of this meaningful outreach programme.

Upon arrival, the team was warmly welcomed by the management of the residence. A total of **RM1,500** in collected funds, along with donated clothing items, were officially handed over to support the welfare and daily needs of the children.

In addition to financial and material contributions, the team prepared and distributed gift packages containing stationery items and small treats. These gifts were generously sponsored by Asia Pacific University and thoughtfully arranged to provide added joy and encouragement to the children.

The visit also included volunteer activities, during which APUSPESC members assisted in cleaning and maintaining the orphanage compound. This effort helped create a cleaner and more conducive living environment, demonstrating the students' commitment to hands-on community service beyond monetary donations.

Following the volunteer activities, the team was given a guided tour of the residence. This experience allowed members to gain a deeper understanding of the facilities, daily operations, and living conditions of the children, further reinforcing the importance of community support and sustained engagement.

Reflecting on the successful completion of the initiative, **Prof. Ir. Eur. Ing. Dr. Vinesh A/L Thiruchelvam** expressed his appreciation and support, stating:

"Very proud of the APUSPESC team of students and mentors for the continuous CSR initiatives that are not only exposure for our APU talents but also essential for building trust, enhancing brand reputation, and fostering long term sustainability from a corporate ESG perspective. This comprehensive completed activity delves into the core SDG principles, learning benefits, implementation strategies as planned by the talents, and CSR initiatives based on advisory by the academic mentors."

The visit concluded on a positive and meaningful note, leaving participants with a strong sense of gratitude, fulfillment, and social awareness. Overall, the initiative successfully embodied the values of empathy, teamwork, and social responsibility, further strengthening the role of APUSPESC, under the leadership and support of its advisors and lecturers, in giving back to the community.

APU Students and Faculty Embark on Industry Immersion Visit to ASEM, Infinecs, JumpWin, and Alphaswift

The APU delegation poses for a group photograph at ASEM (Asia Semiconductor Ecosystem Malaysia), Cyberjaya.

Asia Pacific University of Technology and Innovation (APU) recently organised a meaningful industry immersion visit to four prominent technology companies within the **Malaysia Semiconductor IC Design Park (MSIC Design Park) in Cyberjaya**. The visit brought together students and faculty members for a first-hand look into the thriving semiconductor and technology ecosystem that Malaysia has been actively cultivating as part of its national digital economy agenda. The programme proved to be an enriching experience, bridging the gap between classroom learning and the realities of industry practice

A Warm Welcome at ASEM

The visit commenced at **ASEM (Asia Semiconductor Ecosystem Malaysia),** where the delegation was warmly received and treated to an engaging briefing session. Representatives from ASEM presented a comprehensive overview of Malaysia's semiconductor industry landscape, highlighting the government's strategic initiatives under **Sidec (Selangor Information Technology and Digital Economy Corporation)** to position Malaysia as a globally competitive hub for IC design talent and innovation. The session sparked thought-provoking discussions on career pathways, industry challenges, and the vast opportunities awaiting graduates in the semiconductor space.

Students and faculty members engage in an insightful briefing session hosted by the ASEM team at the Sidec meeting room.

A heartfelt appreciation is extended to **Ms Angel Low, Mr Tawfiqur, and Ms Tiffla from ASEM,** whose gracious hospitality, meticulous planning, and unwavering dedication made the entire day's programme run seamlessly. Their passion for nurturing talent and their generosity in sharing industry knowledge left a lasting impression on the entire delegation. The effort they invested in coordinating visits across multiple companies within the park is truly commendable, and the APU team is deeply grateful for their warmth and professionalism.

Exploring Infinecs – Innovating Frontiers Together

The delegation then moved on to Infinecs, a dynamic IC design company located within the same technology park. The Infinecs team delivered an engaging presentation covering the company's capabilities, including chip design expertise, layout design services, and mixed-signal design strategies. Students were given the opportunity to tour the company's open-plan workspace and gain a genuine appreciation of what it means to work within a professional IC design environment. The interactive nature of the session inspired visible enthusiasm among students, many of whom were experiencing such a specialised workplace for the very first time.

Students gather for a group photograph with the Infinecs team after an engaging company briefing session

JumpWin Technologies – Precision in Every Signal

A JumpWin representative presents the company's diverse application areas spanning consumer, automotive, industrial, and communications sectors.

The group subsequently visited **JumpWin Technologies**, a fabless analog and mixed-signal IC design company headquartered in Cyberjaya. With a vision to become the most trusted and agile global provider of high-performance analog and mixed-signal platforms, JumpWin impressed the delegation with its impressive technical depth and breadth. Presenters walked students through the company's extensive product families, covering applications in consumer electronics, automotive systems, industrial automation, and communications technology. The session also highlighted career opportunities at JumpWin, encouraging students to consider roles in application engineering, field application engineering, and layout design a timely nudge for those on the verge of entering the workforce.

Alphaswift – Technology in Motion

Students receive a guided tour of Alphaswift's facility, gaining insight into the company's drone design and modification capabilities

The final stop of the day was Alphaswift, where students witnessed the exciting practical application of drone and embedded technologies. The team at Alphaswift demonstrated how they design, modify, and deploy drone systems for a variety of commercial purposes, offering a compelling glimpse into Malaysia's growing unmanned aerial vehicle **(UAV)** industry. The hands-on nature of the demonstration resonated strongly with students, who were eager to explore the technology up close and ask detailed questions about real-world deployment scenarios.

Reflection and Takeaways

The industry immersion visit was a resounding success, providing students with invaluable exposure to real-world technology companies at the forefront of **Malaysia's semiconductor and technology ecosystem**. Visits such as this exemplify APU's commitment to delivering industry-relevant education equipping students not only with technical knowledge but also with the professional awareness and inspiration needed to thrive in their future careers. The delegation returned with a deeper appreciation for the exciting opportunities available within Malaysia's rapidly evolving technology landscape and a renewed sense of purpose in their academic journey.

Offshore Technology Conference Asia (OTC) 2026

Joint Student Participation by APU SPE Student Chapter (APUSPESC) and APU IEM Student Section (IASS)

On 1 April 2026, students from Asia Pacific University (APU) participated in the **Offshore Technology Conference (OTC) Asia 2026**, held at the Kuala Lumpur Convention Centre. This academic–industry exposure initiative was jointly organised by Asia Pacific University **Society of Petroleum Engineers Student Chapter (APUSPESC)** in collaboration with the **APU Institution of Engineers Malaysia (IEM)** Student Section, reflecting a strong interdisciplinary partnership across engineering disciplines.

The delegation comprised 35 undergraduate and postgraduate students, representing Petroleum Engineering and other engineering programmes affiliated with the IEM Student Section. The students were jointly guided by APUSPESC Advisor **Ir. Dr. Wong Siew Fan** and APU IEM Student Section Advisor **Ir. Ts. Subhashini Gopal Krishnan**, with additional faculty support from the School of Engineering, including **Ir. Dr. Harvin Kaur** and **Ms. Fatin Ayuni**.

OTC Asia 2026 featured over 200 technical presentations, exhibition booths, and professional networking opportunities, focusing on cutting-edge offshore energy technologies. Students attended keynote sessions covering deepwater exploration, carbon capture, utilization, and storage (CCUS), and emerging trends in sustainable offshore energy systems.

The collaboration between APUSPESC and the APU IEM Student Section enabled participants to gain exposure from both specialised and multidisciplinary engineering perspectives. Technical paper presentations highlighted reservoir engineering challenges, including porosity and permeability optimization, while interactive exhibitions showcased innovations in subsea robotics, AI-enhanced flow assurance systems, integrated digital monitoring, and offshore wind technologies. These sessions reinforced theoretical principles taught across petroleum, mechanical, electrical, and civil engineering courses.

In line with the **United Nations Sustainable Development Goals (SDGs),** this collaborative participation supports SDG 4 (Quality Education) by enhancing experiential and industry-based learning beyond the classroom, SDG 7 (Affordable and Clean Energy) through exposure to cleaner offshore technologies and energy transition initiatives, SDG 9 (Industry, Innovation and Infrastructure) by familiarizing students with advanced offshore engineering systems and digital innovations, and SDG 13 (Climate Action) through knowledge sharing on carbon capture, utilization and storage (CCUS) and sustainable offshore development. Collectively, these engagements reinforce APU's commitment to developing globally competent engineers who are equipped to address contemporary energy, infrastructure, and environmental challenges.

Students also engaged with industry representatives from **Petronas, Shell,** and other international energy organizations, gaining insights into career pathways, industry expectations, and research collaboration opportunities. Faculty-led discussions emphasised the practical implementation of multidisciplinary engineering solutions, such as offshore data acquisition and monitoring systems, which are closely aligned with ongoing APU laboratory work and research initiatives.

This joint participation successfully broadened students' technical competencies, strengthened industry engagement, and fostered collaboration between APU's engineering student bodies. The partnership between **APUSPESC** and the **APU IEM Student Section** demonstrates APU's commitment to holistic engineering education and professional development. The organisers extend their sincere appreciation to the advisors and faculty members for their continuous guidance and support in facilitating this impactful learning experience.

Championing Graphene Research & Reviewer Development: Dr. Reena's Dual Impact at IEEE CONFERENCE

October closed on a high note as **Dr. Reena Sri Selvarajan** represented the School of Engineering at the distinguished **IEEE Region 10 TENCON Conference,** held in East Malaysia. Her active contributions not only reinforced the university's research presence but also demonstrated her commitment to nurturing a collaborative and growth driven academic ecosystem.

As part of the conference activities, Dr. Reena served as a reviewer for the IEEE TENCON technical tracks, supporting the rigorous evaluation of international research submissions. In alignment with her philosophy of shared growth, she extended the reviewer opportunity to six staff members from both SoC and SoE, ensuring wider exposure to global research quality, peer review practices, and scholarly engagement.

This collective participation strengthened the university's footprint within the IEEE community and empowered staff to develop deeper research insights.

Dr. Reena also presented her ongoing research work on Graphene-Based Field Effect Transistors; a continuation of her doctoral and postdoctoral studies focused on advanced nanoelectronic devices.

Her presentation showcased progress in graphene applications, sparking interest among researchers and industry participants alike. The presentation was dedicated to her former FYP student and first author, Paramasudhen Ravendran, whose excellent work and transition to the industry stand as a proud reflection of her mentorship and collaborative research culture.

Throughout her engagement at TENCON, Dr. Reena reinforced one key message: *Research grows stronger when opportunities are shared. Her commitment to uplifting colleagues, mentoring students, and contributing meaningfully to the wider research community reflects her leadership in fostering a culture where growth, impact, and innovation are achieved together.*

IMechE HANDOVER CEREMONY

The **IMechE Handover Ceremony**, held on 7 May 2026 (Wednesday) at Auditorium 7, Level 3, APU, was successfully conducted with approximately 36 participants attending the event. The ceremony marked the official transition of responsibilities from the previous committee to the new committee members of IMechE APU.

The event featured speeches delivered by the former President Amogha Seelan, Academic Liaison Officer of APU IMechE Student Chapter**: Ts. Dr. Arun Seeralan**, and special guest **Prof. Ir. EUR ING Dr. Vinesh Thiruchelvam,** who shared words of appreciation, encouragement, and guidance for the incoming committee members.

The speakers emphasized the importance of strengthening collaboration and bonding among IMechE student chapters across Malaysia, organizing more impactful activities and projects. It is also reminded that we need to keep an excellent professional standard and prepare for the upcoming Design Skill Competition.

During the ceremony, the newly appointed President, Shiddarrtana Soorace, and Vice President, Emma Reese Hoff and Mariam Mazhar, were officially announced as part of the new leadership lineup for the upcoming term.

Highlights of the event included the official handover session and certificate presentation ceremony for the outgoing committee members in recognition of their dedication and contributions throughout their tenure.

Overall, the event served as a platform to ensure leadership continuity, strengthen networking among engineering students and encourage the newly appointed committee to continue driving IMechE APU towards greater achievements.

Key Takeaways:

1. Understood the importance of leadership transition and teamwork within student organizations.
2. Learned the value of professionalism, punctuality, and responsiveness in handling reports and events.
3. Encouraged stronger collaboration and networking among IMechE student chapters nationwide.
4. Gained motivation to organize more impactful engineering-related events and projects.

1. Increased awareness and preparation towards the upcoming Design Skill
2. Competition and future IMechE activities.
3. The new hierarchy of IMechE APU.


PROF. IR. EUR. ING. TS. DR.
VINESH THIRUCHELVAM
CHIEF INNOVATION & ENTERPRISE OFFICER
AND CHIEF SUSTAINABILITY OFFICER AT
ASIA PACIFIC UNIVERSITY OF TECHNOLOGY
AND INNOVATION (APU / APIIT)


HEAR FROM OUR VICE PRESIDENT
SUPPORTING PROGRESS, TOGETHER
APU IMECHE STUDENT CHAPTER

Raya Bersama SPEKL 2026: Strengthening Industry–Student Engagement

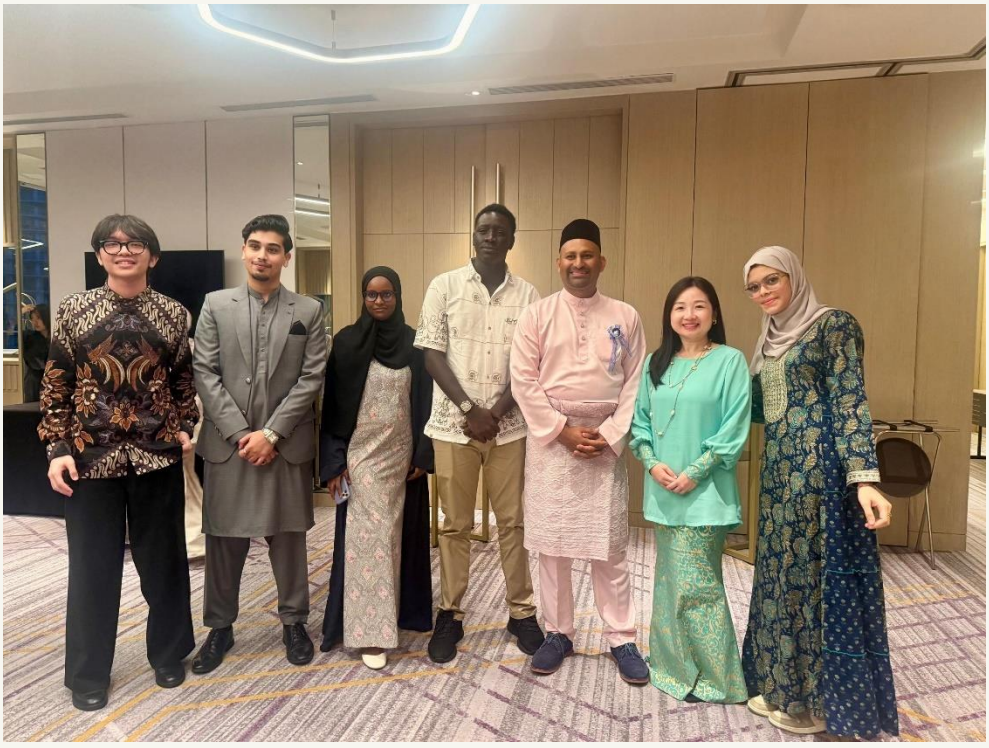
On 3rd April 2026, members of the **Asia Pacific University Society of Petroleum Engineers Student Chapter (APUSPESC)** participated in the **Raya Bersama SPEKL** event organized by the **Society of Petroleum Engineers Kuala Lumpur Section (SPEKL).** The event was held from 4:00 PM to 8:00 PM at the Crowne Plaza Hotel, Kuala Lumpur, bringing together SPE members and student chapters from across Malaysia in celebration of Hari Raya Aidilfitri.

APUSPESC was among several universities invited to attend, alongside SPE UTP, SPE UTM, SPE UM, SPE UCSI, and SPE UMPSA. Upon arrival, participants were welcomed into a vibrant and festive setting, with décor reflecting the spirit of Hari Raya, creating a warm and engaging environment for interaction and networking.

A key highlight of the event was the opportunity for the APUSPESC committee to meet and interact with Ms. Jennifer L. Miskimins, the 2026 President of the Society of Petroleum Engineers (SPE) International, USA. This meaningful engagement provided students with valuable exposure to global leadership within the petroleum engineering profession.

Group photographs were taken featuring **Ms. Jennifer L. Miskimins** alongside the APUSPESC committee, **Ts. Anwarudin Saidu Mohamed**, President of the SPE Kuala Lumpur Section, **Ir. Dr. Wong Siew Fan**, Advisor of APUSPESC, as well as representatives from the APUSPESC committee, including **Ms. Fatin Ayuni, Ir. Ts. Subhashini Gopal Krishnan and Ir. Dr. Harvin Kaur.**

Ms. Jennifer L. Miskimins, 2026 President of the Society of Petroleum Engineers (SPE) International, USA (fifth from right), pictured with members of the APUSPESC during the Raya Bersama SPEKL event.



Ts. Anwarudin Saidu Mohamed, President of the Society of Petroleum Engineers Kuala Lumpur Section (third from right), pictured with APUSPESC members during the Raya Bersama SPEKL event.

Throughout the evening, attendees actively engaged with fellow students and representatives from various institutions, fostering knowledge exchange, professional networking, and inter-university collaboration within the petroleum engineering community. The relaxed and celebratory atmosphere encouraged open discussions and helped strengthen relationships among student chapters and industry representatives.

The event concluded on a positive and memorable note, leaving participants with meaningful connections and insights into the broader SPE network. Overall, **Raya Bersama SPEKL 2026** served as an impactful platform for promoting unity, inclusivity, and professional engagement among future petroleum engineers, while reinforcing the strong ties between academia and the global SPE community.

Engineering Meets Data And Sports Science: An Interactive Guest Lecture At APU

The School of Engineering at Asia Pacific University of Technology & Innovation (APU) recently hosted an inspiring guest lecture for final year engineering students on 10th February 2026. The session was initiated by **Professor Vinesh Thiruchelvam**, Chief Innovation & Enterprise Officer of APU, who invited the distinguished speaker **Dr. Habib Noorbhai**, a visiting **Professor in Health and Sports Science** at the **MIT Institute for Data, Systems, and Society (IDSS).**

The session was attended by the Head of the School of Engineering - **Professor. Dr. Siva Kumar Sivanesan**, along with Academic Leader - **Associate Professor. Dr. Sathish Kumar Selvaperumal**, Senior Lecturer **Mr. Suresh Gobee** and **Assistant Professor Dr. Mukil Alagirisamy**, and final year engineering students of APU. Their presence reflected the strong support of the faculty and leadership in promoting interdisciplinary learning and exposure to global perspectives.

During the lecture, Dr. Habib Noorbhai introduced a highly interactive and engaging approach to learning. Unlike traditional lecture formats that rely heavily on slides and lengthy explanations, the session emphasized active participation, discussion, and real-time problem solving.

This innovative approach encouraged students to think critically, collaborate with their peers, and explore how data, technology, and analytical thinking can be applied across diverse fields such as engineering, health, and sports science.

The talk provided students with valuable insights into the importance of interdisciplinary thinking and data-driven decision making, highlighting how engineering principles can contribute to solving complex real-world challenges.

Overall, the session was both thought-provoking and inspiring, leaving the students with a deeper appreciation of how engineering knowledge can intersect with other domains to create impactful solutions.

The class was divided into small groups of two to three students and given only ten minutes to brainstorm and prepare a short presentation. An additional rule made the challenge even more demanding: They were not allowed to use any AI tools.

This condition forced them to depend entirely on their own understanding, communication skills, and teamwork. The atmosphere in the room quickly shifted from passive listening to intense discussion. Every group was deeply engaged, exchanging ideas and evaluating what would be feasible outside the classroom.

One of the groups decided to focus on designing a rehabilitation glove for patients recovering from hand injuries or strokes.

They discussed how regaining fine motor skills is often one of the most difficult aspects of rehabilitation. Instead of proposing a complex robotic exoskeleton, they thought about a lightweight glove equipped with simple mechanical support and basic motion sensors.

The purpose of the glove would be to assist patients in repeating controlled finger movements during therapy, helping to rebuild strength and coordination gradually. The group emphasized affordability and ease of use, suggesting that the device should be adjustable for different hand sizes and simple enough for patients to use independently at home.

By making it portable and cost-effective, the glove could reduce the need for constant clinical supervision while still supporting consistent rehabilitation. Other groups presented equally interesting ideas.

Some explored modular exoskeleton components that could be shared across sports facilities to minimize cost. Others proposed wearable supports for knees and ankles that could help prevent sports injuries in schools and training academies. There were also ideas centered on elderly care, such as balance-support wearables, fall-detection systems, and simplified mobility aids that integrate basic sensors without becoming too expensive.

A common theme across all presentations was the importance of balancing innovation with practicality. Rather than focusing solely on advanced technology, students considered manufacturing costs, maintenance, accessibility, and user comfort.

Dr. Habib's guidance throughout the session played a major role in shaping the quality of our discussions. He consistently encouraged students to justify ideas, question assumptions, and think about long-term sustainability. What made his session particularly impactful was the way he connected technical concepts to real human experiences. He shared an example of how assistive technology had enabled an athlete to regain movement after a severe setback. This example shifted the focus from abstract design to real-world impact. It reminded the students that technological development in health and sports science ultimately revolves around improving quality of life.

His delivery style was engaging yet grounded. He challenged us without making the environment feel overwhelming, and he treated our ideas seriously regardless of how simple or ambitious they were. His combination of academic expertise and practical experience made him especially suited to lead a discussion on this topic. The session demonstrated how interdisciplinary thinking combining sports science, health data, engineering concepts, and social awareness is essential for developing meaningful solutions.

Overall, the lecture was both intellectually stimulating and practically insightful. It encouraged the students to move beyond theoretical knowledge and consider how innovation can be applied responsibly in real settings.

More importantly, it reinforced the idea that impactful solutions often begin with identifying genuine problems and understanding the people affected by them. The session provided not only technical insight but also a broader perspective on how future professionals can contribute thoughtfully to society through innovation.

Exploring Semiconductor fabrication Technology at MIMOS Berhad

Recently, the School of Engineering (SoE) at Asia Pacific University of Technology & Innovation (APU) organised an enriching industrial visit to **MIMOS Berhad**, Malaysia's national applied research and development (R&D) centre.

Led by **Ir Ts Dr Reena Sri Selvarajan** (Senior Lecturer, SoE at APU), the visit brought together engineering students for an immersive learning experience into semiconductor fabrication and advanced microelectronics technologies, aligning with **Malaysia's National Semiconductor Strategy (NSS),** aimed at nurturing skilled talent to support the country's growing semiconductor ecosystem.

Activity 1: Understanding Wafer fabrication Processes

Welcomed by Ms Zalina Sayuti, representative from MIMOS Berhad, the visit commenced with a comprehensive technical briefing on wafer fabrication processes.

Students were introduced to the fundamentals of semiconductor manufacturing, including cleanroom environments, process flows, and key fabrication equipment.

This session provided valuable insights into how raw silicon is transformed into high-performance integrated circuits (ICs) that power modern electronic devices.

Additionally, students gained a clearer understanding of the precision and complexity involved in semiconductor production.

Activity 2: Hands-On exposure to Advanced Laboratories

Following the briefing, students were given the opportunity to explore MIMOS' state-of-the-art laboratories.

They engaged in hands-on learning experiences within the failure analysis and test labs, where they observed advanced characterization and diagnostic tools such as Transmission Electron Microscopy (TEM) and electron scanning systems.

This exposure enabled students to witness the intricate processes involved in semiconductor analysis, testing, and quality assurance, further reinforcing their theoretical knowledge with real-world applications.

Activity 3: Observing Semiconductor Devices and Testing Systems

In the final part of the visit, students were guided through a laboratory tour, where they observed various machines and semiconductor devices developed using MIMOS' in-house technologies.

Through this session, students gained insight into how fabricated components undergo rigorous testing and validation to ensure performance, reliability, and compliance with industry standards, to which it deepened their understanding of the semiconductor lifecycle, but also reinforced the importance of quality assurance in real-world engineering applications.

Student Perspective

Mohammed Sameer Gammal, Bachelor of Mechatronic Engineering with Honours: *"The visit was insightful as it exposed me to semiconductor research and IC development, helping me bridge theoretical knowledge with real-world applications, particularly in understanding IC testing and validation processes that ensure the performance and reliability of semiconductor devices, while also strengthening my ability to connect concepts from electronics and communication systems with industrial applications."*

Developing Industry-Relevant Engineering Skills

Dr Reena highlighted that the industrial visit provided a meaningful platform for students to connect classroom learning with practical industry exposure.

"By engaging with advanced technologies, exploring specialised facilities, and interacting with industry professionals, students gained deeper insights into semiconductor processes, quality assurance, and innovation.

"More importantly, the experience inspired students to consider career pathways in semiconductor technologies, particularly in IC design and fabrication, whilst equipping them with both strong theoretical foundations and practical competencies," she said.

Knowledge Transfer Seminar on Impactful FYPs (From Research Planning to Intellectual Property)

The FYP Committee led by **Ir. Ts. Dr. Reena Sri Selvarajan** organised a Knowledge Transfer Seminar titled "**From Award-Winning FYP to Real-World Autonomy",** highlighting the transformation of Final Year Projects (FYPs) into impactful real-world systems. The seminar featured an autonomous drone implementation using OpenCV and LiDAR, offering students valuable exposure beyond conventional academic frameworks.

The session was delivered by **Mr. Kareshmen Maheswaran**, an award-winning FYP graduate and proud alumnus of APU's Mechatronics Engineering programme and moderated by Ir. Ts. Dr. Reena Sri Selvarajan, FYP Manager at the School of Engineering. Through his sharing, students gained firsthand insights into the realities of implementing autonomous systems, including technical challenges, design trade-offs, and solution strategies grounded in real project experience.

The seminar placed strong emphasis on building solid research foundations. Participants were guided through essential research competencies, including systematic literature review techniques, research planning methodologies, and intellectual property (IP) awareness the key elements often overlooked in early-stage research projects.

The seminar, originally scheduled for one hour, extended to nearly two hours due to high student engagement, with 32 undergraduate participants actively contributing through questions, discussions, and reflections. The interactive nature of the session highlighted students' eagerness to move beyond theoretical learning and to develop practical research skills aligned with real-world needs.

Reflecting on the session, Ir. Ts. Dr. Reena Sri Selvarajan shared that the seminar was designed to empower students to think critically, work systematically, and approach research with confidence. The discussions encouraged participants to envision their FYPs not merely as academic requirements, but as platforms for innovation, societal impact, and future career development.

Key discussion areas included:

- Bridging theory and real-world implementation
- Identifying emerging research trends through structured reviews
- Strategically leveraging internship experiences to strengthen FYP outcomes
- Understanding IP application processes and associated challenges

The School of Engineering extends its sincere appreciation to Mr. Kareshmen Maheswaran for his meaningful knowledge sharing and commitment to student development. The seminar stands as a testament to APU's ongoing efforts in fostering knowledge transfer, experiential learning, and research excellence among its students.

With the seeds of curiosity, strategy, and impact now planted, the School of Engineering looks forward to seeing these ideas grow into innovative and impactful Final Year Projects.

Participants of the Knowledge Transfer Seminar with the speaker Mr. Kareshmen Maheswaran and FYP Manager Ir. Ts. Dr. Reena Sri Selvarajan.

(a) Mr. Kareshmen Maheswaran explaining systematic literature review techniques and research gap identification, and
(b) (b) certificate presentation by FYP manager.

Dr. Reena Serves as External Judge at EURECA 2025 : Empowering the Next Generation of Innovators

Ir. Ts. Dr. Reena Sri Selvarajan was honored to serve as an External Judge at the **EURECA 2025 International Engineering Research Conference,** hosted by Taylor's University. In this prestigious role, she evaluated submissions for the Poster Competition, where students from diverse engineering fields showcased their research innovations.

Representing both academic excellence and industry relevance, Dr. Reena assessed the posters based on research depth, innovation quality, technical rigor, and potential real-world impact. Her expertise helped ensure a fair, high standard evaluation aligned with international research expectations. Beyond assessment, Dr. Reena engaged with the participants to broaden their perspectives on research translation, innovation, and early-stage startup thinking. She provided practical insights to help students strengthen their research foundations and refine the future direction of their projects.

A standout moment was her engagement with students working on real-life problem-solving projects, including those addressing community needs at Al Hallaniyat Island, demonstrating how engineering research can create meaningful societal impact.

Her contribution not only elevated the quality of the judging process but also empowered students to level up their R&D journey, encouraging them to think boldly and pursue impactful research directions.

3rd International Conference on Digital Technologies for Sustainable Agriculture

From the 20th to the 21st of April 2026, IMechE and APCORE collaborated to host the **3rd International Conference on Digital Technologies for Sustainable Agriculture (ICDTSA).** This event aimed to bring together researchers, industry experts, policymakers, and practitioners to explore and advance the integration of digital technologies into agricultural practices. It also aimed to promote innovation that enhances productivity, ensures environmental sustainability, strengthens food security, and empowers farming communities through knowledge exchange and global collaboration.

ICDTSA-2026 was held with support from **AGRHI consortium** and sponsored by **Erasmus+ and Marble Arches**. Partners for this event included not only APCORE, but also **MDECTM, JP Global Engineering,** and **Agroz®.**

The event was a resounding success, with both days of the event diving deep into the transformation of the agricultural landscape via digital technologies and innovations from various countries. Participants were left satisfied with event committee's hospitality, and many insights regarding technology in agriculture was shared.

Highlights:

Day One: April 20th – Opening and Foundations

Grand opening by APUs' Vice Chancellor Chin Kuan Ho and Conference Advisor Prof Dr Ir EUR ING Vinesh Thiruchelvam, officiating the conference and followed by visionary keynotes from Prof. Siva K Balasundram and Riyaz Ahamed A.H regarding the evolving landscape of smart farming.

Parallel presentation sessions were held, where groundbreaking research presentations on precision farming technologies were introduced to the judges and university students alike. Twenty-six papers were presented, showing how academic theory and field implementation in researching and innovating can intertwine and produce something outstanding.

A tour of the Agri-Hub and the APU campus was held for day 1 participants, along with networking over lunch and dinner.

A roundtable with Erasmus was held to close the day, focusing on creating implementation strategies for global agricultural challenges.

Day Two: April 21st – Innovation and Implementation

The day opened with morning keynotes regarding AI in agriculture. The keynotes consisted of the following below:

Ts. Navin Sinnathamby (Malaysia Digital Economy Corporation (MDEC): Delivered an impactful session on the national AgTech landscape, highlighting how digital adoption is driving economic strength and food security in Malaysia

Dr. Bawatharani Raveendrakumaran: Provided a vital global perspective on large-scale business innovation, focusing on the practical implementation of technology within the sector.

High-Energy Panel Discussion: Moderated by Dr. Adeline Sneha, this session sparked a deep dive into the realities of Digital Transformation in Agriculture, bridging the gap between research and industry.

An awards ceremony was held, recognizing the contributions of participants of the parallel sessions. **Best Paper Awards** were given for groundbreaking research and technical contribution, as well as **Best Presenter Awards f**or exceptional clarity and engagement in sharing their insights.

A tour of the Agri-Hub and the APU campus for day 2 participants was held, along with networking over lunch.

Workshops were held for conference participants and APU university students, consisting of the following below:

- AI Vision for agriculture: The power of visual data in farming is introduced and put into practice.

- Hands-on IoT Sensor Deployment: A deep dive into real-time environmental monitoring.

- Drone technology in Farming: Showcasing and practicing drones for advanced crop management.

A tour of the Agri-Hub and the APU campus was held for day 2 participants, showcasing real-time intelligence networks and sustainable tech.

A trip to Batu Caves (Selangor, Malaysia) was provided for participants to experience and enjoy a part of Malaysia's culture.

Key Takeaways:

- Insights regarding the improvement of digital technology in sustainable agriculture.

- Development of strategies and cooperation regarding the situation of global agriculture in both technological and economic sense.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for International
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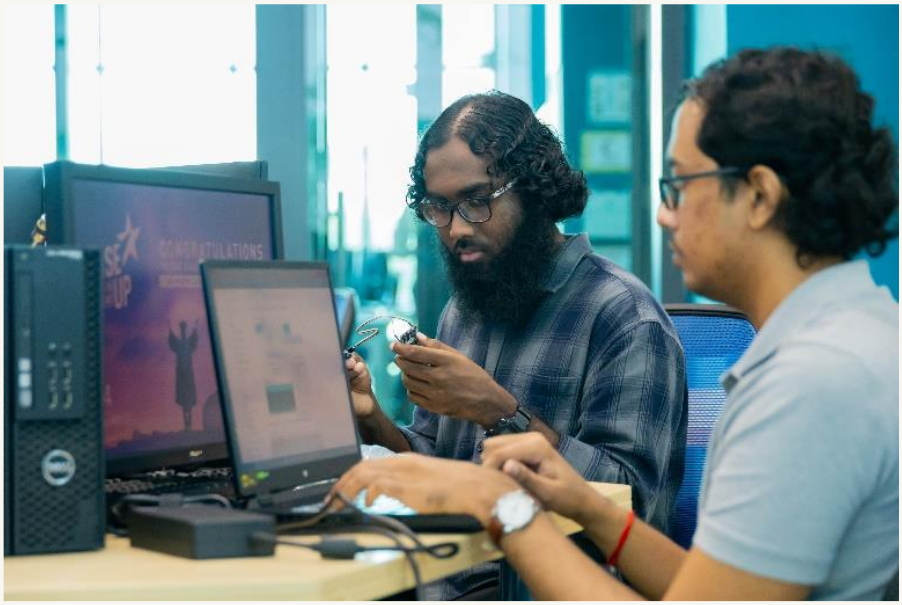
FUTURE
> AREAS OF STUDY @ APU
• Engineering
• Computing & Technology
JPioT
Smart Agriculture System


AGRHI
Technology
Hub


KELUAR
HEAD OF DEPARTMENT, DIGITAL AGRICULTURE TECHNOLOGY (AGTECH), DIGITAL ADOPTION DIVISION IN MDEC, MALAYSIA
TS. NAVIN SINNATHAMBY
SPEAKER 1


PANEL DISCUSSION
DIGITAL TRANSFORMATION IN AGRICULTURE

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CONGRATULATIONS


BATU CAVES


ICDTSA
2026
3rd INTERNATIONAL CONFERENCE ON DIGITAL TECHNOLOGIES FOR SUSTAINABLE AGRICULTURE
Asia Pacific University of Technology & Innovation (APU)
20 - 21 APR
Theme Highlights


AGRHI
AGRHI Technology Hub


GreenPulse
INTELLIGENT ALGAL PHOTOBIOREACTOR SYSTEM

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ENGINEERS INSIGHT