Volume 01 /Issue 04



School of Electrical Engineering College of Engineering, UiTM Shah Alam

IN THE SPOTLIGHT



Inspiring Young Innovators: Robotech Sparks STEM Passion in Primary Students

5 October 2024

Robotech, organized by Kelab IC DiDiK and MDEC PDTI, introduced 30 SK Kota Kemuning students to robotics using the ZOOM:BIT Robot Car Kit for micro:bit. This two-day program aimed to spark interest in STEM through handson activities. UiTM facilitators, trained by Ms. Cheryl Ng from Cytron Technologies, guided students in robotics basics, problem-solving, and teamwork. The initiative fostered creativity and early exposure to electronic engineering, highlighting the impact of academic-industry collaboration in inspiring the next generation of innovators.

IC Design Discussion with YB Rafizi

4 October 2024

Assoc Professor Dr Wan Fazlida was involved in a discussion on the topic of IC Design talent and challenges with YB Rafizi along with 10 university representatives and а line of semiconductor industry players, organized by Selangor Information Technology & Digital Economy Corporation (Sidec) and Al Nusantara during the Malaysia Semiconductor Day on the 4th of October 2024.



IN THE SPOTLIGHT

Industry Training for Selected Topics

I I October - 6 December 2024

8 Semester CEE222 B.Ena Electronics Engineering students of Microelectronics and Computer Engineering specialization had the opportunity to follow industry training on topics relevant to electronics design for EEE640 Selected Topics. This is a part of CREST strategic initiatives in strengthening talent pool in avionics design. This excellent opportunity exposed the students to learn directly from Dr Royan Ong, a professional trainer on embedded C, FPGA and high-speed PCB design.



SCHOOL OF ELECTRICAL ENGINEERING OCTOBER 2024 - JANUARY2025

EEE640 Selected Topics Semester 8: CEEE222 (Microelectronics and Computer Engineering)









As part of Collaborative Research in Engineering, Science G Technology (CREST) initiative to bolster Hardware (FPGA) Design Engineer and Embedded System Development Engineer talent pool in avionics/aerospace industry

TERMOLOGI Propagant

Industry driven topics*

1) Embedded C 2) Fundamentals of Digital Systems Development with FPGAs 3) High-Speed PCB Design

Venue, Date and Time

Venue: Makmal Mikroelektronik (TBC)

Venue: Makmal Mikroelektronik (TBC) Briefing and registration session: 11 Oct (Friday 9-Tlam) 1) Embedded C-3 days • 18 Oct IFriday). 19 Oct (Saturday). 25 Oct (Friday), 26 Oct ISaturday) 21 Fundamentals of Digital Systems Development with FPGAs: 3 days • 1 Nov (Friday). 2 Nov (Saturday). 8 Nov (Friday). 9 Nov (Saturday) 3) High-Speed PCB Design: 2 days • 29 Nov (Friday). 30 Nov (Saturday). 6 Dec (Friday - to be confirmed) All Fridays are half days (Bam-12pm). All Saturdays are full day trainings. (Bam-12pm, 2-Spm)

Professional Trainer

Dr Royan Ong, Principal Consultant for Software and Embedded Systems, and the Director of Operations, with ProvenPac Sdn Bhd (<u>www.provenpac.com</u>).

Attendance & Assessment

Physical presence is compulsory for this hands-on training Every training module will have a hands-on assessme exercise contributing to the final grade.

Lecturers in charge Associate Professor Dr Wan Fazlida Hanim Abdullah, +6019-2217347

Embedded C Training Program

18 - 26 October 2024

PKF concluded an outstanding Embedded C training program for the Part 5 and 8 PKE undergraduates on October 18, 19, 25, and 26, 2024. Part of the EEE640 Selected Topics in Microelectronics Computer and Engineering electives, the program recorded students developing libraries scratch under the expert from guidance of Dr. Royan Ong from ProvenPac. This initiative, а collaboration between CREST and UiTM, is designed to foster talent in avionics design and further enhance students' technical skills in the field.

IN THE SPOTLIGHT



Robotech Wizard: UiTM Students Empower Young Minds in STEM Outreach

I I November 2024

School of Electrical Engineering students from CEEE241M7A and CEEE241T7A led ROBOTECH WIZARD ACADEMIA at SK Sungai Kantan through the SULAM program. Under Ir. Dr. Maizatul Zolkapli, 18 student facilitators guided 50 primary students in robotics and coding using the EDU: BIT kit and TINY: BIT Robot Car.

Students explored sensors, LEDs, and robot navigation, blending theory with hands-on practice. The outreach aimed to ignite interest in STEM while enhancing PKE students' leadership and teaching abilities. Supported by IEEE EDS and IEEE EMBS, the program underscored the value of interactive STEM education and strengthened ties between academia and the community.

Enhancing Program Quality

5-6 November 2024

School of Electrical Engineering received an external examiner visit by Prof. Ir. Dr. Ahmad Ashrif A Bakar for the Bachelor of Electronics Engineering with Honors program (EE241/CEEE241/CEEE222) with the main purpose of getting feedback to improve the quality of teaching and learning for the related program.







CONFERENCE

SCOReD 2024: Where Innovation Meets Real-World Impact.

19-20 December 2024

The College of Engineering, Universiti Teknologi MARA (UiTM), Shah Alam, became the focal point of the engineering and technology world as it hosted the 2024 IEEE 22nd Student Conference on Research and Development (SCOReD 2024). Under the theme "Bridging the Future: From Research to Real-World Impact," the conference was organized by the IEEE Malaysia Section in collaboration with the IEEE UiTM Student Branch. SCOReD 2024 was chaired by Assoc. Prof. Ir. Dr. Nur Ashida Salim, supported by a dedicated committee of 26 lecturers and 15 students from the IEEE UiTM Student Branch.

Keynote speakers included Ir Azril Hisham (ELSA Berhad) on venture building in Southeast Asia, Prof. Ir. Dr. Siti Fauziah Toha (IIUM) on electric motorcycles for sustainable mobility, and Assoc. Prof. Dr. Shahrol Mohamaddan (Shibaura Institute) on ergonomics in biomedical engineering.

An engaging forum featured industry and academic leaders discussing the collaboration needed to translate research into practical solutions. With 132 research papers presented on AI, IoT, renewable energy, and robotics, the event fostered knowledge exchange, industry partnerships, and advancements in technological innovation.





Congratulations Associate Professor Dr. Muhammad Murtadha Othman on his appointment as Head of Research Initiative Group (RIG) Research and Innovation, College of Engineering.

Congratulations to Dr. Nik Hakimi Nik Ali on his appointment as Consultant for Technical Evaluations of TNB Distribution Products (MV/HV) at TNB Labs Sdn. Bhd.



Congratulations to Ts. Dr. Mohamad Farid Misnan on receiving the Phase 3 Industry Matching Program Research Grant Scheme (IMaP 3.0) for 2024, alongside team members for the project titled "Advancing Aquaponic Filtration Through IoT-Driven Hybrid Systems for Nitrate and Ammonia Control" with a grant amount of RMI42,700.00.



DR. NIK HAKIMI NIK on your appointment as

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Growing the Future of Cattle Farming.

Congratulations to Prof. Madya Dr. Wan Fazlida Hanim Abdullah and her team who have secured а Strategic Research Partnership grant worth RM30,000 to investigate onsite barley grass growth for Malaysian farms. This cattle groundbreaking research will pave the way for more sustainable and efficient livestock operations.





Precision Agriculture: A Step Towards Sustainable Fodder Production

Congratulations Dr. Zulfakri Mohamad and team on their groundbreaking project, "Design of Multilayer Hydroponic System Control with Scheduled Sensing Intended for Temperate Climate Fodder Growth," which has been awarded an RM20,000 grant from Strategic Research Partnership. This innovative research will advance hydroponic technology for sustainable agriculture.

Boosting Pressure Sensor Sensitivity

Researchers, led by Ir. Ts. Anees Abdul Aziz, secure RM59,200 grant to enhance flexible MEMS capacitive pressure sensors.



Driving Innovation: EV Power Breakthrough

Congratulations to Associate Prof. Ir. Rahimi Bin Baharom for securing a RM220,000 IMaP Phase 2/2024 grant for his groundbreaking project: Optimizing High-Efficiency Wireless Power Transfer from Grid to Vehicle using a Single-Phase Matrix Converter for Electric Vehicles.



Smart Aquaponics: A Sustainable Solution for the Teluk Bahang Rehabilitation Center

Prof. Madya Ir. Ts. Dr. Suzi Seroja Sarnin and her team receive a RMI14,900 grant for a smart aquaponics project to assist people with disabilities at the Teluk Bahang Community Rehabilitation Center.



Powering AI Innovations

Kudos to Ts. Dr. Lucyantie Mazalan, Prof. Madya Ir. Ts. Dr. Fadhlan Hafizhelmi Kamaru Zaman, Ir. Dr. Syahrul Afzal Bin Che Abdullan, and Prof. Madya Ir. Ts. Dr. Husna Zainol Abidin for securing a consultancy project with MIMOS Berhad. Their expertise drives the Development of an Edge-Based Al Video Analytics Platform with DeepStream—a testament to innovation and impactful collaboration.





Automated Concrete Pole Manufacturing: Dr. Norhafizah Leads the Way

Congratulations to Dr. Norhafizah Burham for leading the RM67,500 IMaP Phase 2/2024 grant on developing an Automated Weight Measurement and Control System for Concrete Pole Manufacturing using advanced piezoelectric load sensor technology.

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PROF. IR. TS.DR. MOHAMAD HAFIZ MAMAT

GOLD AWARD

in cluster TECHNOLOGY & ENGINEERING -GREEN TECHNOLOGY

For an innovation entitled P2E GREENCELL: TRANSFORMING WASTE INTO SUSTAINABLE ENERGY THROUGH HYDROGEL INNOVATION

Congratulations

ASSOC. PROF. IR. DR. SUZI SEROJA SARNIN

> for winning the GOLD AWARD in cluster AGRICULTURE & AQUACULTURE -AGROTECHNOLOGY at the contact the co

for an innovation entitled IOT-OPTIMIZED CANISTER FILTRATION NFT AQUAPONICS: A STEP TOWARD ZERO HUNGER

Congratulations TS. MOHD FUAD ABDUL LATIP

for winning the GOLD AWARD in cluster EDUCATION AND HUMAN DEVELOPMENT

iide 2024

for an innovation entitled

CUTTING-EDGE FYP MANAGEMENT SYSTEM FOR STREAMLINED ACADEMIC EXCELLENCE -

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Heartiest Congratulations to our award winners at IIDEX2024.

GOLD AWARD

I. Prof. Ir. Ts. Dr. Mohamad Hafiz Mamat: P2E Greencell: Transforming Waste into Sustainable Energy through Hydrogel Innovation.

2. Assoc. Prof. Ir. Dr. Suzi Seroja Sarnin: IoT-Optimized Canister Filtration NFT Aquaponics: A Step Toward Zero Hunger.

3. Ts. Mohd Fuad Abdul Latip: Cutting-Edge FYP Management System for Streamlined Academic Excellence.

SILVER AWARD

I. Harnani Hassan: Low Cost, Portable 3D Printed Head-Chin Rest for Eye Screening and Monitoring.

2. Ts. Dr. Fatimah Zaharah Ali: SpaceHub: Portable Internet-of-Space Module.

BRONZE AWARD

I. Assoc. Prof. Ir. Dr. Hasmaini Mohamad: Optimal Charging Coordination of Electric Vehicles Considering Users Charging Behavior Using Particle Swarm Optimization.

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Community Service Excellence Recognized

Congratulations to Ir. Ts. Dr. Maizatul Zolkapli on her outstanding achievement in receiving the Best Community Service Network Award at the Anugerah Akademik Universiti.



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Rising Star in Science & Technology Shines Bright

Dr. Arni Munira Markom won the Anugerah Ahli Akademik Harapan for Science & Technology at the Anugerah Akademik Universiti, setting a stellar example of academic excellence. Here's to even greater achievements ahead.



Congratulations to Ts. Dr. A'zraa Afhzan Ab Rahim and Dr. Naimah Binti Mat Isa on the remarkable achievement of earning a Doctor of Philosophy (PhD).



Congratulations to Dr A Shamsul Rahimi A Subki for successfully obtaining the Tuanku Chancellor's Outstanding Doctoral Award (Best UiTM Graduate Award 2024).

APPOINTMENTS

Visiting Professor

We are proud to share that Assoc. Prof. Ts. Dr. Murizah Kassim has been appointed as a Visiting Professor at L.N. Gumilyov Eurasian National University in Astana, Kazakhstan. This prestigious appointment reflects her dedication and expertise in her field. We wish her continued success as she embarks on this significant academic role.





Visiting Professor

A big round of applause to Prof. Ts. Dr. Azlina Idris, CEng for her appointment as Visiting Professor at the Department of Management, Universitas Brawijaya. We are proud of her achievement and know that she brings valuable insights and expertise in her new role.

APPOINTMENTS

Adjunct Professor

Congratulations to Ts. Dr. Mohamad Farid Misnan on his appointment as Adjunct Professor at the Lombok Institute of Technology (LIT), Indonesia. Wishing him all the best in his new academic role.



<image><image>

Member at Large for Diversity, Equity, & Inclusion

Leading with Purpose: Prof. Ir. Dr. Zuhaina Hj. Zakaria reappointed to the IEEE PES Governing Board as Member at Large for Diversity, Equity, & Inclusion 2025. An inspiring force for progress.



EDITORIAL ADVISOR: ASSOCIATE PROFESSOR IR DR HASMAINI MOHAMAD CHIEF EDITOR: TS. DR A'ZRAA AFHZAN AB RAHIM EDITOR: DR NAJIDAH HAMBALI IR DR WAN ROSMARIA WAN AHMAD SCHOOL OF ELECTRICAL ENGINEERING, COLLEGE OF ENGINEERING, UITM SHAH ALAM