



2022 20th Student Conference on Research and Development (SCORed 2022)

08 – 09 November 2022, Malaysia.

Technical Programme

Date	Time (MYT = UTC+8)	Event	Virtual Venue
08 November 2022 Tuesday	8.30 am – 9.00 am	Registration	
	9.00 am – 9.15 am	Welcoming Remarks Chair IEEE Malaysia Section Opening Speech Dean Faculty of Engineering & Built Environment Universiti Kebangsaan Malaysia	Melati Room
	9.15 am – 10.00 am	Keynote 1: Prof. Dr. Brian Yuliarto <i>Bandung Institute of Technology</i> Chair: Dr Iskandar Yahya (UKM)	
	10.00 am – 10.45 am	Keynote 1: Prof. Ir. Dr. Hazlie Mokhlis <i>Universiti Malaya</i> Chair: Ts. Dr. Nor Azwan Bin Mohamed Kamari (UKM)	
	10.45 am – 11.00 am	Group Photo and Tea Break	
	11.00 am – 12.45 pm	Breakout Sessions	
		Session 1-1: Control, Signal Processing & Engineering Intelligent Systems Chair: Dr. Aqilah Baseri Huddin (UKM) / Dr. Seri Mastura Mustaza (UKM)	Melati Room
	11.00 am – 11.30 am	Nasharuddin Zainal (Universiti Kebangsaan Malaysia) Automated Essay Scoring (AES) using English Essay Question	
	11.30 am – 11.45 am	Aminu Zimit (Universiti Teknologi Malaysia) Paths Planning for Agricultural Robots: Recent Development, Taxonomy, Challenges, and Opportunities for Future Research	
	11.45 am – 12.00 pm	Syed Mohd Zahid Syed Zainal Ariffin (Universiti Teknologi MARA) Image Fusion for Single-trait Multimodal Biometrics: A Brief Review	
	12.00 pm – 12.15 pm	Nabilah Ibrahim (University Tun Hussein Onn Malaysia) Heart Sounds Frequency Analysis for Development of Auto Diagnosis System of Heart Disease	
	12.15 pm – 12.30 pm	Gurjeet Singh (University Malaya) Smart Street Lighting with Prediction Algorithm	
	12.30 pm – 12.45 pm	Nur Idora Abdul Razak (Universiti Teknologi MARA) Integrated Invoicing Solution: A Robotic Process Automation (RPA) with AI and OCR Approach	
		Session 1-2: Control, Signal Processing & Engineering Intelligent Systems Chair: Dr. Noraishikin Zulkarnain (UKM) / Dr. Asraf Mohamed Moubark (UKM)	Dahlia II
	11.00 am – 11.30 am	Noor Syazwana Abd Aziz (National Defence Foundation Studies & Centre for Defence Foundation Studies) Smoothing of Kinematics Data Using Functional Data Analysis Approach	
	11.30 am – 11.45 am	Muhammad Adib Zaini Jemani (Universiti Teknologi MARA) Intruder Detection from Video Surveillance Using Deep Learning	

11.45 am – 12.00 pm	Leslie Buli Edwin (Universiti Tenaga Nasional) LoRa System with IOT Technology for Smart Agriculture System	
12.00 pm – 12.15 pm	Siti Salasiah Mokri (Universiti Kebangsaan Malaysia) Segmentation of Brain Glioma in MRI Images Using Deep Learning	
12.15 pm – 12.30 pm	Mostafizur Rahman (Universiti Kebangsaan Malaysia, Malaysia) Tire Condition Classification Based on Tread Depth using Machine Learning	
12.30 pm – 12.45 pm	Mimi Diana Ghazali (Universiti Teknologi MARA) Implementation of Ground Penetrating Radar in Assessing Leachate in Sanitary Landfill	
Session 1-3: Photonics Technologies & Semiconductor Devices Chair: Dr Iskandar Yahya (UKM) / Prof Dr. Huda Abdullah (UKM)		Dahlia III
11.00 am – 11.30 am	Nur Hidayah Azeman (Universiti Kebangsaan Malaysia) Nutrient classification using machine-learning algorithms on optical absorbance data for hydroponics system	
11.30 am – 11.45 am	Hock Leong Chee (University of Nottingham Malaysia) A ReRAM-based Nonvolatile FPGA	
11.45 am – 12.00 pm	Wan Ying Loh (Universiti Malaysia Perlis) Modified March MSS for Unlinked Dynamic Faults Detection	
12.00 pm – 12.15 pm	Muhammad Naziiruddin Hamzah (Universiti Teknologi Malaysia) Negative Bias Temperature Instability Analysis of a 15 nm p-channel Junctionless Fin Field Effect Transistor (p-JLFinFET)	
12.15 pm – 12.30 pm	Zhi Shuang Lee (Universiti Teknologi Malaysia) Simulation of Inkjet Printed MIMCAP for Flexible Electronics Application	
12.30 pm – 12.45 pm	Wan Ying Loh (Universiti Malaysia Perlis) Automated Fault Analyzer for March Algorithm Dynamic Fault Detection Analysis	
Session 1-4: Electrical Power Engineering Chair: Ts. Dr. Muhammad Ammirul Atiqi Mohd Zainuri (UKM) / Dr. Syahirah Abd Halim (UKM)		Dahlia IV
11.00 am – 11.30 am	Afida Ayob (Universiti Kebangsaan Malaysia) Battery Lifespan Prognostics for Sustainable Operation and Management of Battery Storage Systems	
11.30 am – 11.45 am	Siti Nursyafiqah Abdul Ghani (University Malaysia Perlis) Comparison of Energy Encryption Techniques for Near-Field WPT Security Application	
11.45 am – 12.00 pm	Babangida Modu (Universiti Teknologi Malaysia) Hybrid Reaching Law-Based Integral Sliding Mode Control for DC Microgrid	
12.00 pm – 12.15 pm	Ahmad Asrul Ibrahim (Universiti Kebangsaan Malaysia) Optimal Scheduling of Plug-in Electric Vehicles Using Binary Gravitational Search Algorithm with A Suitable Decision Function	
12.15 pm – 12.30 pm	Nor Azwan Mohamed Kamari (Universiti Kebangsaan Malaysia) Economic Load Dispatch Solution via MFPA Approach	
12.30 pm – 12.45 pm	Noor Azlinda Ahmad (Universiti Teknologi Malaysia) Structure and AC Breakdown Performance of Polypropylene/propylene-Based Elastomer Blends	
12.45 pm – 2.00 pm	Lunch	
2.00 pm – 2.45 am	Keynote 3: Prof. Dr. Mohammad Tariquul Islam <i>Universiti kebangsaan Malaysia</i> Chair: Assoc. Prof. Dr. Gan Kok Beng (UKM)	Melati Room

2.45 am – 3.30 am	Keynote 4: Ts. Amiruddin Zahamail <i>Siemens Malaysia Sdn. Bhd.</i> Chair: Prof. Dr. Sawal Hamid Md. Ali (UKM) / Prof. Ir. Dr. Norhana Arsad (UKM)	
3.30 pm – 3.45 pm	Tea Break	
3.45 pm – 5.30 pm	Breakout Sessions	
Session 2-1: Control, Signal Processing & Engineering Intelligent Systems Chair: Dr. Muhammad Faiz Bukhori (UKM) / Assoc. Prof Ir. Dr. Nasharuddin Zainal (UKM)		Melati Room
3.45 pm - 4.15 pm	Mahidur R Sarker (Universiti Kebangsaan Malaysia) Optimized piezoelectric energy harvesting system for Micro-devices application integrated with Internet of Things (IoT) platform toward sustainable energy utilization	
4.15 pm – 4.45 pm	Rosmiwati Mohd Mokhtar (Universiti Sains Malaysia) Model Reduction of Discrete-Time Bilinear Second Order-Structured Systems in Infinite and Finite Frequency Intervals	
4.45 pm – 5.00 pm	Wei Han Lee (University of Nottingham Malaysia) Development of a 4D Printed Variable Stiffness Gripper	
5.00 pm – 5.15 pm	Faza Nur Azizi (Universitas Islam Indonesia) Facial Expression Image based Emotion Detection using Convolutional Neural Network	
5.15 pm – 5.30 pm	Yousif Saad Alshebly (University of Nottingham Malaysia) Control of 4D Printed Actuators Twisting Behavior via Printing Direction	
5.30 pm – 5.45 pm	Seri Mastura Mustaza (Universiti Kebangsaan Malaysia) Variable Stiffness Strategies for Multi-Segment Soft Robot Actuator	
Session 2-2: Sustainable Embedded Technologies Chair: Dr. Siti Salasiah Mokri (UKM) / Prof. Ir. Dr. Norhana Arsad (UKM)		Dahlia II
3.45 pm - 4.15 pm	Rosmina Jaafar (Universiti Kebangsaan Malaysia) Vital signs monitoring, systems, and technologies towards application to Internet of medical things	
4.15 pm – 4.30 pm	Chang Soon Tony Hii (Universiti Kebangsaan Malaysia) Marker Free Gait Analysis using Pose Estimation Model	
4.30 pm – 4.45 pm	Azrif Manut (Universiti Teknologi MARA) Development of Humidity Sensor on Interdigitated Electrode (IDE)	
4.45 pm – 5.00 pm	Md. Mahmudur Rahman (Universiti Kebangsaan Malaysia) Range of Motion Measurement Using Single Inertial Measurement Unit Sensor: A Validation and Comparative Study of Sensor Fusion Techniques	
5.00 pm – 5.15 pm	Raudah Abu Bakar (Universiti Teknologi MARA) Development of Real Time Health Monitoring System	
5.15 pm – 5.30 pm	Jian Xian Kang (Universiti Kebangsaan Malaysia) Morphology and electron circulation of ZTO (Zinc Tin Oxide) on SLG for CZTS thin film solar cell	
Session 2-3: Photonics Technologies & Semiconductor Devices Chair: Dr. Mohd Saiful Dzulkefly Zan (UKM) / Prof. Ir. Dr. Ahmad Ashrif A Bakar (UKM)		Dahlia III
3.45 pm - 4.15 pm	Jumril Yunas (Universiti Kebangsaan Malaysia) High Flow Rate Peristaltic Electromagnetic Micropump Fabricated Using Multiple Photolithography	

4.15 pm – 4.45 pm	Muhammad Idzdihar Idris (Universiti Teknikal Malaysia Melaka) <i>The fabrication of 4H-Silicon Carbide (4H-SiC) FinFET: Challenges and prospects for sustainable power devices</i>	
4.45 pm – 5.00 pm	Qinghua Su (Beijing Wuzi University) <i>Rapid detection of QR code based on Histogram Equalization -Yolov5</i>	
5.00 pm – 5.15 pm	Eric Pradana Putra Amin (Universiti Tenaga Nasional) <i>Power Over Fiber for Phone Charging Application</i>	
5.15 pm – 5.30 pm	Sabiran Abubakar (Monash University Malaysia) <i>Comparison of RGB and white LED Illumination in Honey Imaging System Using Histogram Approach</i>	
5.30 pm – 5.45 pm	Wilson June Xian Ng (University of Nottingham Malaysia) <i>A ReRAM-based Nonvolatile PIM</i>	
Session 2-4: Next Generation Communication & Network Technologies and Others Chair: Assoc. Prof. Dr. Mohd Fais Mansor (UKM) / Dr Noor Syazwana Abd Aziz (UPMM)		Dahlia IV
3.45 pm - 4.15 pm	Nor Fadzillah Abdullah (Universiti Kebangsaan Malaysia) <i>Wireless Airborne IoT Network for Rural Water Quality Monitoring</i>	
4.15 pm – 4.30 pm	Naim Kamarudin (Universiti Kebangsaan Malaysia) <i>Monitoring The Trend of Energy Consumption During The Pandemic</i>	
4.30 pm – 4.45 pm	Shujat Ali (Universiti Kebangsaan Malaysia) <i>A Review of 6G Enabler: Vertical Heterogeneous Network (V-HetNet)</i>	
4.45 pm – 5.00 pm	Sadia Mostofa (University Kebangsaan Malaysia) <i>A GPS TEC-based Ionospheric-M Index over Malaysia</i>	
5.00 pm – 5.15 pm	Asma Abu-Samah (Universiti Kebangsaan Malaysia) <i>Investigation of Incremental Learning for Dynamic Over The Top (OTT) Applications Service Management</i>	
End of Conference		