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<td><strong>Technical Session: TS1-R1</strong></td>
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<td><strong>Chairperson:</strong> Assoc. Prof. Ir. Dr Siti Anom Ahmad</td>
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| 106 | Invited Speaker 1: Assoc. Prof. Dr. Siti Norul Huda Sheikh Abdullah  
*Universiti Kebangsaan Malaysia (UKM)*  
**Multilevel Thresholding of Brain Tumor MRI Images: Patch-Levy Bees Algorithm versus Harmony Search Algorithm**  
*Farah Aqilah Bohani, Ashwaq Qasem, Siti Norul Huda Sheikh Abdullah, Khairuddin Omar, Shahnorbanan Sahran, Rizuana Iqbal Hussain, Syaza Sharis (Universiti Kebangsaan Malaysia & Hospital Canselor Tuanku Muhriz)* |
| 108 | *Calcification Detection using Convolutional Neural Network Architectures in Intravascular Ultrasound Images*  
*Hannah Sofian, Joel Chia Ming Than, Suraya Muhammad, Norliza Mohd Noor (Universiti Teknologi Malaysia & Universiti Kuala Lumpur)* |
| 118 | *A Colour Recognition Device for the Visually Disabled People*  
*Norazila Othman, Mohd Zarhamdy Md. Zain, Iskandar Shah Ishak, Abd Rahim Abu Bakar, Mastura Ab Wahid, Maziah Mohamad(University Teknologi Malaysia)* |
| 135 | *Wavelet Transform based Features of Skin Blood Flow Response Signal for Pressure Ulcer Evaluation*  
*Saliza Ramli, Raja Mohd Kamil Raja Ahmad, Siti Anom Ahmad, Norhafizah Mohtarrudin, Rozi Mahmud(University Putra Malaysia)* |
| 136 | *A Review on Different Steganalysis Techniques*  
*Muhamad Fadhil Ahmad Zaki, Haslina Md Sarkan, Nurulhuda Firdaus Mohd Azmi, Saiful Adli Ismail, Ribhan Zafira Abdul Rahman(University Teknologi Malaysia & Universiti Putra Malaysia)* |
| **Technical Session: TS1-R2** | Room: Titan 1 |
| **Chairperson:** Assoc. Prof. Ir. Dr Mohd Khair Hassan | |
| 127 | Invited Speaker 2: Assoc. Prof. Dr. Shamsul Aizam Zulkifli  
*Universiti Tun Hussein Onn Malaysia (UTHM)*  
**Investigation of Multilevel Inverter for Next Distributed Generation Using Low Cost Microcontroller**  
*Shamsul Aizam Zulkifli, Epha Yusriyanna Riyandra, Suriana Salimin, Ahmed Naji Zaidan (Universiti Tun Hussein Onn Malaysia)* |
| 126 | *Robust Operation of Microgrid Energy System Under Uncertainties and Demand Response Program*  
*Sahar Seyyedeh Barghagh, Behnam Mohammadi-Ivatloo, Kazem Zare, Ali Frazannia(University of Tabriz & Universiti Malaysia Sabah)* |
| 103 | *Energy Management System in Battery Electric Vehicle Based on Fuzzy Logic Control to Optimize the Energy Consumption in HVAC System*  
*Abdulhadi Abdulsalam Abulifa, Azura Che Soh, Mohd Khair Hassan, Raja Mohd Kamil Raja Ahmad, Mohd Amran Mohd Radzi(University Putra Malaysia)* |
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| 116   | Design of Fuzzy Logic Based Load Shedding for Home Energy Management Base on Battery Level in Standalone System  
Oyinkanola Lateef Adewale, Sawal Hamid Bin MD Ali Aremu Olaosebikan A (Universiti Kebangsaan Malaysia & The Polytechnic, Ibadan, Nigeria) |
| 157   | Hybrid Signal Processing and Machine Learning Algorithm for Adaptive Fault Classification of Wind Farm Integrated Transmission Line Protection  
Osaji Emmanuel, Mohammad Lutfi Othman, Hashim Hizam, Muhammad M. Othman, Eljadi Aker, Okeke Chidiebere. A, T Nwagbara Samuel .O(Universiti Putra Malaysia & Universiti Teknologi MARA) |

**Technical Session: TS1-R3**  
Time: 14:00-15:30  
Room: Titan 2  
Chairperson: Assoc. Prof. Ir. Dr Raja Mohd Kamil Raja Ahmad

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| 149   | Invited Speaker 3: Assoc. Prof. Ir. Dr. Hazlina Selamat  
Universiti Teknologi Malaysia (UTM)  
Crowd Modeling and Simulation for Safer Building Design  
Hazlina Selamat, Nurulaqilla Khamis, Nuritaasma Mohd Ghani (Universiti Teknologi Malaysia) |
| 130   | Implementation of Swarm Intelligence Algorithm for Dynamic System Modelling  
Muhammad Sukri Hadi, Siti Khadijah Ali, Intan Zaurah Mat Darus (Universiti Teknologi MARA, Universiti Putra Malaysia & Universiti Teknologi Malaysia) |
| 110   | Shortest Path Algorithm for Guidance System Based on Dijkstra-Ant Colony Algorithm  
Karimeh Ibrahim Mohammad Ata, Azura Che Soh, Asnor Juraiza Ishak, Haslina Jaafar(Universiti Putra Malaysia) |
| 141   | An Improved Control Rod Selection Algorithm for Core Power Control at Reaktor TRIGA PUSPATI  
Mohd Sabri Minhat, Nurul Adilla Mohd Subha, Fazilah Hassan, Norjulia Mohamad Nordin (Malaysian Nuclear Agency & Universiti Teknologi Malaysia) |
| 144   | Prediction model of Leptospirosis Occurrence for Seremban (Malaysia) using Meteorological Data  
Fariq Rahmat, Asnor Juraiza Ishak, Zed Zulkafli, Hazlina Yahaya, Afiqah Masran(Universiti Putra Malaysia) |

**Technical Session: TS2-R1**  
Time: 16:00-17:30  
Room: Dewan Musytari  
Chairperson: Dr Siti Khadijah Ali

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| 151   | Invited Speaker 4: Dr. Mohamad Hanif Md Saad  
Universiti Kebangsaan Malaysia (UKM)  
CA-Annotator : A Manual Video Annotator Tool for Assisting the Development of Event Detection Algorithm from CCTV Feed  
Mohamad Hanif Md Saad, Rabiah Adawiyah Shahad & Aini Hussain (Universiti Kebangsaan Malaysia) |
| 101   | Exploited Contour Based Tracking for Driveway Entrance Counting System  
Siti Norul Huda Sheikh Abdullah, Abbas Salimi Zaini, Bedir Yilmaz, Azizi Abdullah, Nor Sakinah binti Md Othman, Shariffuddin Basiron(Universiti Kebangsaan Malaysia & Synergy Saver (M) Sdn Bhd ) |
| 148   | Development of Fall Detection and Activity Recognition using Threshold Based Method and Neural Network |
### Technical Session: TS2-R2

**Room:** Titan 1

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| **152** | Invited Speaker 5: Dr. Julia Abdul Karim  
*Malaysian Nuclear Agency (ANM)*  
**Preliminary Study of Pipe Failure Rate in the Water-Cooled Reactors (WCR) Using Fault Detection of Simulated Test-Rig**  
Julia Abdul Karim, Tonny Lanyau, Mazleha Maskin, Mohd Azrul Syafiee Anuar, Azura Che Soh, Ribhan Zafira Abdul Rahman (*Malaysian Nuclear Agency & Universiti Putra Malaysia)* |
| **128** | *Wild Goats Optimization Approach for Capacitor Placement Problem*  
Hamid Teimourzadeh, Behnam Mohammadi-Ivatloo, Ali Frazamnia (*University of Tabriz, Iran & Universiti Malaysia Sabah)* |
| **147** | *Artificial Neural Network Model and Fuzzy Logic Control of Dissolved Oxygen in a Bioreactor*  
Nor Hana Mamat, Samsul Bahari Mohd Noor, Laxshan A/L Lamar, Azura Che Soh, Farah Saleena Taip, Ahmad Hazri Ab. Rashid (*Universiti Putra Malaysia, TATI University College & SIRIM Berhad)* |
| **150** | *Random Missing Tooth Error Detection in Crankshaft Function of an Engine Control Unit*  
| **142** | *The Comparison of Bound-Constrained and Positivity-Constrained Optimization Method to Estimate Head Tissue Conductivities by Scalp Voltage Information*  
Chollanant Khattiyawech, Natnicha Keatsiritawon, Taweechai Ouypornkochagorn (*Srinakharinwirot University, Thailand)* |

### Technical Session: TS2-R3

**Room:** Titan 2

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| **109** | *A Comparative Study of LQR Based and Sliding Mode Control Strategies for Tracking Control of Robotic Manipulators*  
N. M. H. Norsahperi, K. A. Danapalasingam (*Universiti Putra Malaysia & Universiti Teknologi Malaysia)* |
<p>| <strong>138</strong> | <em>Development of Real-time Electromyography Controlled 3D Printed Hand Robot Prototype</em> |</p>
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| 137   | Development of Translation and Rotational Movement for Tremor Test Rig to Imitate Human Hand Tremor  
Reem Musab, Azizan As’arr, Hesham Ahmed Abdul Mutaleb, Khairil Anas Md Rezali,  
Nawal Aswan Abdul Jalil, Raja Mohd Kamil Raja Ahmad(Universiti Putra Malaysia) |
| 143   | Modelling and Controlling of Lower Limb Exoskeleton  
Naagajoothi A\P Adin Naraina, Asnor Juraiza Ishak, Azura Che Soh, Siti Anom Ahmad,  
Mohd Razali Mohammad Sapiee, Madihah Binti Mohd Zin(Universiti Putra Malaysia &  
Universiti Teknikal Malaysia Melaka) |
| 154   | Modelling and validation of an Electronic Wedge Brake system with realistic Quarter Car Model for Anti-Lock Braking System Design  
Mehrullah Soomro, Mohd Khair Hassan, Fauzi Ahmad(Universiti Putra Malaysia &  
Universiti Teknikal Malaysia Melaka) |
| 158   | Modelling of Lower Limb Exoskeleton Robot for Walking Simulation  
M.R. Sapiee, M.A.A. Wahit, M.H. Marhaban, A.J Ishak, M.F. Miskon(Universiti Putra  
Malaysia & Universiti Teknikal Malaysia Melaka) |

Day 2: Tuesday, 2\textsuperscript{nd} April 2019

Technical Session: TS3-R1

Time: 14:00-15:30  
Chairperson: Dr Hafiz Rashidi Harun @ Ramli  
Room: Dewan Musytari

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| 146   | Invited Speaker 6: Dr. Slamet Riyadi  
Universitas Muhammadiyah Yogyakarta (UMY)  
Classification of Mangosteen Surface Quality Based on Image Processing Using Support Vector Machine  
Slamet Riyadi, Cahya Damarijati, Nuri Primas, Tony K. Hariadi, Indira Prabasari, Nafi Ananda Utama, Ku Ruhana Ku-Mahamod(Universitas Muhammadiyah Yogyakarta & Universiti Utara Malaysia) |
| 105   | Texture Based Image Splicing Forgery Recognition Using Passive Approach  
Asif Hassan, V K Sharma(Bhagwant University, Ajmer, India) |
| 111   | A Review of Hybrid Indoor Positioning System Using WLAN Fingerprint and Image Processing  
Firdaus, Noor Azurati Ahmad, Shamsul Sahibuddin(Universiti Teknologi Malaysia & Universitas Islam Indonesia) |
| 115   | Comparison on BER Performance of OFDM Signal under Difference Modulation and Fading Channels  
Ali Farzamnia, Wong Jenn Hoe, Ervin Gubin Moun(Universiti Malaysia Sabah) |
| 122   | Characterization of Local Perennial Herbs Growth for Smart Vertical Farming  
Nooryani Abdul Salim, Marsyita Hanafi, Siti Mariam Shafie, Syamsiah Masohor, Norhashila Hashim(Universiti Putra Malaysia) |

Technical Session: TS3-R2

Time: 14:00-15:30  
Chairperson: Dr Ribhan Zafira Abdul Rahman  
Room: Titan 1

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| 155   | Invited Speaker 7: Dr. Zalhan Bin Mohd Zin  
Universiti Malaysia Kuala Lumpur France Institute (UniKL MFI) |
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| 156   | Improvement of LMS Adaptive Noise Canceller Using Uniform Poly-Phase Digital Filter Bank  
       | Alaa Hadi Mohammad, Azura Che Soh, Noor Faezah Ismail, Ribhan Zafira Abdul Rahman,  
       | Mohd Amran Mohd Radzi (Universiti Putra Malaysia) |
| 145   | Smart automatic irrigation and watering system using IoT  
       | A. T. Mohammed, A. J. Ishak, M. I. Al-Hiyali (Universiti Putra Malaysia) |
| 107   | Chest X-Ray Image Classification on Common Thorax Diseases using GLCM and AlexNet Deep Features  
       | Tengku 'Afiah Mardhiah Tengku Zainul Akmal, Joel Chia Ming Than, Hasilailee Abdullah,  
       | Norliza Mohd Noor (Universiti Teknologi Malaysia) |
| 153   | A Promising Wavelet Decomposition – NNARX Model to Predict Floods: Application to Kelantan River Flood  
       | Mohd Azrol Syafiee Anuar, Ribhan Zafira Abdul Rahman, Samsul Bahari Mohd, Azura Che Soh, Zed Dijana Zulkafli (Universiti Putra Malaysia) |

**Technical Session: TS3-R3**

Time: 14:00-15:30  
Chairperson: Mr. Mohd Izhwan Mohamad  
Room: Titan 2

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| 117   | Acceptance of Electronic Health Records in Traditional Malay Medicine: An Exploratory Prototyping Approach  
       | Raja Rina Raja Ikram, Mohd Khanapi Abd Ghani, Lizawati Salahuddin, Mohd Hariz Mohd Noim, Ariff Idris, Nor Afirdaus Zainal Abidin, , Nadiah Ishak, Noor Raihan Ab Hamid, Syazwani Itri Amran (Universiti Teknikal Malaysia Melaka, City University Malaysia & UNITAR) |
| 119   | A Conceptual Integrated Health Information Systems Framework in Postnatal Care for Modern and Traditional Malay Medicine  
       | Raja Rina Raja Ikram, Mohd Khanapi Abd Ghani, Lizawati Salahuddin, Mohd Hariz Mohd Noim, Ariff Idris, Nor Afirdaus Zainal Abidin, , Nadiah Ishak, Noor Raihan Ab Hamid, Syazwani Itri Amran (Universiti Teknikal Malaysia Melaka, City University Malaysia & UNITAR) |
| 134   | Improving Convolutional Neural Network (CNN) Architecture (miniVGGNet) with Batch Normalization and Learning Rate Decay Factor for Image Classification  
       | Asmida Ismail, Siti Anom Ahmad, Azura Che Soh, Khair Hassan, Hazreen Haizi Harith (Universiti Putra Malaysia & Universiti Perguruan Sultan Idris) |
| 131   | Design and Calibration of Pinch Force Measurement Using Strain Gauge for Post-Stroke Patients  
       | Abdallah Alsayed, Raja Kamil, Hafiz Rashidi Ramli, Azizan As’arry (Universiti Putra Malaysia) |
| 139   | A Comparative Study for Bandwidth on Demand Using ONOS Reactive and Intent Forwarding  
       | Fathul Arif Kamarudin, Megat Norulazmi Megat Mohamed Noor, Fuead Ali (Universiti Kuala Lumpur) |