

Technical Program

Parallel Session A

13 September 2022

10:45 – 12:15 MYT

A1: Pattern Recognition and Classification (I)

Session Chair: Dr. Lorita Angeline

Time	Papers
10:45 - 11:00	31: Rice (<i>Oryza Sativa</i>) Grading Classification Using Hybrid Model Deep Convolutional Neural Networks – Support Vector Machine Classifier <i>Kevin Marc Bejerano, Carlos Hortinela IV and Jessie Jaye Balbin</i>
11:00 - 11:15	33: Classification of Lanzones Tree Leaf Diseases Using Image Processing Technology and a Convolutional Neural Network (CNN) <i>Noel Linsangan and Adzmer Muhali</i>
11:15 - 11:30	52: Hand-Foot-Mouth Disease classification Using Features from Fibre Grating Biosensor Spectral Data <i>Atif Mahmood, Saaidal Razalli Azzuhri, Adnan N. Qureshi, Palwasha Jaan and Iqra Sadia</i>
11:30 - 11:45	53: Medicinal Plant Classification Using Convolutional Neural Network and Transfer Learning <i>Daryl Valdez, Chris Jordan Aliac and Larmie Feliscuzo</i>
11:45 - 12:00	79: Hand Gesture Recognition for Filipino Sign Language Under Different Backgrounds <i>Mark Christian Ang, Karl Richmond Taguibao and Cyrel Manlises</i>
12:00 - 12:15	44: Classification of Contaminants in Glass Recycling Using Hybrid CNN-SVM Model <i>Juliana Ho Qiu Ann, Novita Sakundarini and Lim Chin Seong</i>

A2: Intelligent Control and Robotics (I)

Session Chair: Ir. Dr. Chua Bih Lii

Time	Papers
10:45 - 11:00	20: Four Wheeled Mobile Robots: A Review <i>Jovina Seau Ling Leong, Hou Pin Yoong and Kenneth Tze Kin Teo</i>
11:00 - 11:15	21: A Review of SCARA Robot Control System <i>See Han Tay, Hou Pin Yoong and Wai Heng Choong</i>
11:15 - 11:30	60: A Microcontroller-Based and Cost-Efficient Computer Numerical Control (CNC) Soldering Station <i>Renann Baldovino and Angelino Pimentel</i>
11:30 - 11:45	125: A PI Controller-Based Water Supplying and Priority Based SCADA System for Industrial Automation using PLC-HMI Scheme <i>Ahsan Kabir Nuhel, Mir Mohibullah Saqid, Kaushik Ahmed and Md Yeasib Bin Hassan</i>
11:45 - 12:00	91: Smart Wheelchairs: A Review on Control Methods <i>Norheliena Aziz, Zulkifli Mohamed, Nurul Syuhadah Khusaini, Aminuddin Hamid, Ya'Akob Yusof and Mohd Rozaiman Aziz</i>
12:00 - 12:15	239: A Safe Overtaking Control Scheme for Autonomous Vehicles Using Rapid-Exploration Random Tree <i>Yincong Ma, Kit Guan Lim, Min Keng Tan, Helen Sin Ee Chuo, Lorita Angeline and Kenneth Tze Kin Teo</i>

A3: Machine Learning (I)

Session Chair: Dr. Tan Soo Fun

Time	Papers
10:45 - 11:00	246: Computing Non-Contactable Drowsiness Monitoring System with Mobile Machine Vision <i>Alixson Polumpung, Lorita Angeline, Helen Sin Ee Chuo, Min Keng Tan, Kit Guan Lim and Kenneth Tze Kin Teo</i>
11:00 - 11:15	3: Comparing Machine Learning Models for Heart Disease Prediction <i>Stephanie Chua, Valerine Sia and Puteri Nor Ellyza Nohuddin</i>
11:15 - 11:30	13: Rice Leaf Disease Detection Using Covolutional Neural Network Architecture with Transfer Learning Approach <i>A.K.M. Salman Hosain, Sanowar Hossain Raja, Md. Manik Hossain, Sifat Moonjerin, Tamanna Jahan Jerin, Shafayet Mahmud, Sabira Roshid Toma, Humayra Ferdoushi, Shadab Iqbal, Md Humaion Kabir Mehedi and Annajiat Alim Rasel</i>
11:30 - 11:45	25: Performance Evaluation of Human-Machine Interaction Based on Analytic Hierarchy Process and Grey Relational Theory for Graphical User Interface <i>Jian Bang Liu, Mei Choo Ang, Jun Kit Chaw and Kok Weng Ng</i>
11:45 - 12:00	28: Wasserstein Generative Adversarial Networks with Meta Learning for Fault Diagnosis of Few-shot Bearing <i>Noramalina Abdullah and Ouyang Chengda</i>
12:00 - 12:15	92: Analysis and Forecasting of Blockchain Based Cryptocurrencies and Performance Evaluation of TBATS, NNAR and ARIMA <i>Iqra Sadia, Atif Mahmood, Miss Laiha Binti Mat Kiah and Saaidal Razalli Bin Azzuhri</i>

Parallel Session B

13 September 2022

14:00 – 15:00 MYT

B1: Pattern Recognition and Classification (II)

Session Chair: Dr. Suraya binti Alias

Time	Papers
14:00 - 14:15	242: Optimizing High-Density Aquaculture Rotifer Detection Using Deep Learning Algorithm <i>Alixson Polumpung, Kit Guan Lim, Min Keng Tan, Sitti Raehanah Muhamad Shaleh, Renee Ka Yin Chin and Kenneth Tze Kin Teo</i>
14:15 - 14:30	81: Health Classification System of Romaine Lettuce Plants in Hydroponic Setup Using Convolutional Neural Networks (CNN) <i>Jerome Martin Desiderio, Angelo John Tenorio and Cyrel Manlises</i>
14:30 - 14:45	127: Improving Dynamic Hand Gesture Recognition based IR-UWB using Offline Data Augmentation and Deep Learning <i>Djazila Korti and Zohra Slimane</i>
14:45 - 15:00	134: Voice Recognition System for User Authentication Using Gaussian Mixture Model <i>Novario Perdana, Dyah Herwindiati and Nor Sarmin</i>

B2: Intelligent Control and Robotics (II)

Session Chair: Dr. Lim Kit Guan

Time	Papers
14:00 - 14:15	177: Real-Time Trajectory Tracking Control of an Electro-Hydraulic System Using a Fuzzy Logic Sliding Mode Controller <i>Muhamad Fadli Ghani, Rozaimi Ghazali, Hazriq Izzuan Jaafar, Chee Soon Chong and Ahmad Zawawi Jamaluddin</i>
14:15 - 14:30	204: Efficient Distributed Consensus Algorithm for Swarm Robotic <i>Sathishkumar Ranganathan, Muralindran Mariappan and Karthigayan Muthukaruppan</i>
14:30 - 14:45	236: UAV Path Planning Using Rotated TOR in Structured Environment <i>Shaliza Hayati A. Wahab, Azali Saudi, Nordin Saad and Ali Chekima</i>
14:45 - 15:00	198: Artificial Intelligence-based Safety Helmet Recognition on Embedded Devices to Enhance Safety Monitoring Process <i>Sharjeel Anjum, Syed Farhan Alam Zaidi, Rabia Khalid and Chansik Park</i>

B3: Machine Learning (II)

Session Chair: Dr. Aroland Kiring

Time	Papers
14:00 - 14:15	47: Discrete Wavelet Transform based EEG Feature Extraction and Classification for Mental Stress using Machine Learning Classifiers <i>Kah Kit Ng, Hafeez Ullah Amin and Ahmad Rauf Subhani</i>
14:15 - 14:30	73: Computer-assisted Table Tennis Posture Analysis using Machine Learning <i>Mel Jay Llanos, Jecce Ryn Obrero, Lhora Mae Alvarez, Chun-Hung Yang and Chris Jordan Aliac</i>
14:30 - 14:45	83: K-Zones: a Machine Learning-Based System to Estimate Social Distancing Violations During Pandemic Eras <i>Mohammad SaatiAlsoruji and Eihab SaatiAlsoruji</i>
14:45 - 15:00	85: Open Agricultural Burning Detection with Natural Inspired Swarm-based Detection Platform <i>Liew Jia Jun, Kian Meng Yap, Kok Seng Eu and Qiang Ni</i>

Parallel Session C

13 September 2022

15:15 – 16:15 MYT

C1: Pattern Recognition and Classification (III)

Session Chair: Dr. Norazlina binti Khamis

Time	Papers
15:15 - 15:30	122: Chicken Meat Freshness Classification Based on VGG16 Architecture <i>Mary Bettina P. Garcia, Eugene A. Labuac and Carlos C. Hortinela IV</i>
15:30 - 15:45	137: Classification of Defects in Robusta Green Coffee Beans Using YOLO <i>Vince Amiel Luis, Marc Vincent Quiñones and Analyn Yumang</i>
15:45 - 16:00	152: Ripeness Classification of Cacao Using Cepstral-based Statistical Features and Support Vector Machine <i>Juvy Amor Galindo, Jamie Eduardo Rosal and Jocelyn Villaverde</i>
16:00 - 16:15	153: Comparing Zero-Shot Text Classification and Rule-Based Matching in Identifying Cyberbullying Behaviors on Social Media <i>Wei Jiek Chong, Hui Na Chua and May Fen Gan</i>

C2: Intelligent Transportation System (I)

Session Chair: Dr. Tan Min Keng

Time	Papers
15:15 - 15:30	82: Development of a Virtual Vehicle Identification for Tracking Hit-and-Run Vehicle <i>Khoo Boon Sheng, Associate Professor Dr. Abdullah Aziz Bin Saad and Dr. Mohamad Khairi Bin Ishak</i>
15:30 - 15:45	202: VO-Based Vehicle Lane-Changing Detection <i>Dayang Nur Salmi Dharmiza Awang Salleh, Emmanuel Seignez and Kuryati Kipli</i>
15:45 - 16:00	121: A Low-Cost Prototyping Approach for Autonomous Unmanned Ground Vehicle for Real-Time Surveillance <i>Vishnu S, Anil Kumar M, Manjesha G M, Zaheer Pasha and Madhu S</i>
16:00 - 16:15	172: Vehicle Type Classification and Counting Using YOLOv4 Algorithm <i>Ana Lowela Lucas, Samuel li Imperial and Meo Vincent Caya</i>

C3: Machine Learning (III)

Session Chair: Dr. Florence Sia Fui Sze

Time	Papers
15:15 - 15:30	89: Comparisons of Histone Sequences Representation Methods for Convolutional Neural Networks Modelling <i>Shu En Chia and Nung Kion Lee</i>
15:30 - 15:45	93: Optimizing Deep Learning Inference to Detect PCB Soldering Defects <i>Mau-Luen Tham, Boon Yoong Chong, Yu Han Tan, Yen Khai Wong, Swee Ling Chean and Wei Kun Tan</i>
15:45 - 16:00	111: Determination of Tomato Fruit Stages Using Principal Component Analysis and Fuzzy Logic Algorithm <i>Cochise Alfonso Dela Cruz, Erson Macatangay and Jocelyn Villaverde</i>
16:00 - 16:15	117: Fast Blind Source Separation with Fast Iterative Shrinking Threshold and Adaptive Initialization <i>Yangjie Wei, Zhongqi Hu, Ke Zhang and Ben Niu</i>

Parallel Session D

14 September 2022

10:15 – 11:15 MYT

D1: Pattern Recognition and Classification (IV)

Session Chair: Dr. Farashazillah binti Yahya

Time	Papers
10:15 - 10:30	163: Dense-par-AttNet: An Attention Based Deep Learning Model For Skin Lesion Classification By Transfer Learning Approach <i>Mohammad Rakin Uddin and Talha Ibn Mahmud</i>
10:30 - 10:45	186: Fall and Normal Activity Classification via Multiple Wearable Sensors <i>Rabia Khalid, Sharjeel Anjum and Chansik Park</i>
10:45 - 11:00	12: Bengali Speech Recognition: An Overview <i>Mashuk Arefin Pranjol, Farhin Rahman, Ehsanur Rahman Rhythm, Rajvir Ahmed Shuvo, Tanjib Ahmed, Bushra Yesmeen Anika, Md. Abdullah Al Masum Anas, Jahidul Hasan, Saiadul Arfain, Shadab Iqbal, Md Humaion Kabir Mehedi and Annajiat Alim Rasel</i>
11:00 - 11:15	15: Bangladeshi Paper Currency Recognition Using Lightweight CNN Architectures <i>Tazwar Mohammed Shoumik, Sartaj Jamal Chowdhury, Tanzim Mostafa, Adib Muhammad Amit, Oyshik Ahmed Aadi, Shah Abul Hasnat Chowdhury, Sifatul Amin, Shadab Iqbal, Md Humaion Kabir Mehedi and Annajiat Alim Rasel</i>

D2: Intelligent Transportation System (II)

Session Chair: Dr. Helen Chuo Sin Ee

Time	Papers
10:15 - 10:30	244: On-Demand Priority Traffic Optimizer with Fuzzy Logic Microcontroller <i>Helen Sin Ee Chuo, Yee En Seah, Min Keng Tan, Kit Guan Lim, Chung Fan Liau and Kenneth Tze Kin Teo</i>
10:30 - 10:45	248: Traffic Signal Optimization Using Cultural Algorithm <i>Min Keng Tan, Hon Yang Yun, Helen Sin Ee Chuo, Kit Guan Lim, Soo Siang Yang and Kenneth Tze Kin Teo</i>
10:45 - 11:00	250: Local Traffic Network Formulation and Signalisation via Benchmark Webster Model <i>Helen Sin Ee Chuo, Min Keng Tan, Kit Guan Lim, Lorita Angeline, Tienlei Wang and Kenneth Tze Kin Teo</i>
11:00 - 11:15	168: Efficient Spectrum Allocation in Cognitive Radio Using Multi-Objective Yellow Saddle Goatfish Algorithm <i>Debashree Brahma, Swati Swayamsiddha and Ganapati Panda</i>

D3: Machine Learning (IV)

Session Chair: Dr. Ali Farzamnia

Time	Papers
10:15 - 10:30	123: Toxic Voice Classification Implementing CNN-LSTM & Employing Supervised Machine Learning Algorithms Through Explainable AI-SHAP <i>Mahmudul Hasan Shakil and Md. Golam Rabiul Alam</i>
10:30 - 10:45	184: Detection of Social Media Hashtag Hijacking Using Dictionary-Based and Machine Learning Methods <i>Wei Ling Cheah and Hui Na Chua</i>
10:45 - 11:00	197: Highway Surveillance System Using Deep Learning Artificial Neural Networks <i>Chuan-Hsian Pu and Chun-Shen Sea</i>
11:00 - 11:15	227: Improved Performance in Distributed Estimation by Convex Combination of DNSAF and DNLMS Algorithms <i>Ahmad Pouradabi, Amir Rastegarnia, Azam Khalili and Ali Farzamnia</i>

Parallel Session E

14 September 2022

11:30 – 12:30 MYT

E1: Pattern Recognition and Classification (V)

Session Chair: Dr. Herwansyah bin Lago

Time	Papers
11:30 - 11:45	22: Snail Recognition Using YOLO <i>Juan Ricardo Borreta, Justin Bautista and Anlyn Yumang</i>
11:45 - 12:00	151: Depression Detection on Social Media With User Network and Engagement Features Using Machine Learning Methods <i>Aik Seng Liaw and Hui Na Chua</i>
12:00 - 12:15	49: Optical Character Recognition of Baybayin Writing System using YOLOv3 Algorithm <i>Angel Mikaela Ligsay, John Rivera and Jocelyn Villaverde</i>
12:15 - 12:30	58: Real Time Bangla License Plate Recognition with Deep Learning Techniques <i>Mahmudol Tusar, Md. Bhuiyan, Md. Hossain, Anika Tabassum and Riasat Khan</i>

E2: Smart Energy (I)	
Session Chair: Dr. Nur Aqilah binti Mohamad	
Time	Papers
11:30 - 11:45	30: Energy Saving and Safety Street Lighting System <i>Yii Sze Hang, Nurfaeza Jali, Cheah Wai Shiang, Suriati Khartini Jali and Lim Phei Chin</i>
11:45 - 12:00	90: A GA Optimization Model for the Appliance Category-based Electricity Consumption of Philippine Households <i>Renann Baldovino and Justin Bernard Carlos</i>
12:00 - 12:15	103: Conceptualizing a Battery Swapping Station: A Case Study in Malaysia <i>Elvin E.S. Cheah, Christina Chin May May, Novita Sakundarini and Akhil Garg</i>
12:15- 12:30	181: Energy Efficient Scheduling in Smart Home using Deep Reinforcement Learning <i>Fauzun Abdullah Asuhaimi, Muhammad Akram Roslann and Khairul Nabilah Zainul Ariffin</i>

E3: Machine Learning (V)	
Session Chair: Dr. Nooralisa Mohd Tuah	
Time	Papers
11:30 - 11:45	209: Environment-Based Oil Palm yield Prediction Using K-Nearest Neighbour Regression <i>Nuzhat Khan, Mohamad Anuar Kamaruddin, Muhammad Paend Bakht, Usman Ullah Sheikh and Yusri Yusup</i>
11:45 - 12:00	220: River Water Level Prediction for Flood Risk Assessment using NARX Neural Network <i>Mazlina Mamat, Zizi Zulaikha Zulkifli and Hoe Tung Yew</i>
12:00 - 12:15	1: Prediction of Maximum Temperatures by Time Series and Artificial Neural Networks (Case Study: Isfahan Station) <i>Mohammad Heydari, Hamed Benisi Ghadim and Mohammad Salarian</i>
12:15- 12:30	148: A Hybrid TDNN-HMM Automatic Speech Recognizer for Filipino Children's Speech <i>John Andrew Ing, Ronald Pascual and Francis Dimzon</i>

Parallel Session F
14 September 2022
15:15 – 16:30 MYT

F1: Pattern Recognition and Classification (VI)	
Session Chair: Dr. Rosalyn R Porle	
Time	Papers
15:15 - 15:30	142: A Real-Time Approach to Classify the Water Quality of the River Ganga at Mehandi Ghat, Kannauj <i>Abhishek Bajpai, Srishti Chaubey, Bdk Patro and Abhineet Verma</i>
15:30 - 15:45	143: Detection and Identification of Intestinal Parasites on Dogs Using AlexNet CNN Architecture <i>Carlos Hortinela, Khaye Fajardo and Jerald Gonzales</i>
15:45 - 16:00	144: Bacterial Leaf Blight Identification of Rice Fields Using Tiny YOLOv3 <i>Jeruel Krystian Tulfo, Mc Henry Tan, Analyn Yumang and Jocelyn Villaverde</i>
16:00 - 16:15	50: Intelligent Modular Camera Rig for Classroom Lecture Video Recording System with Automatic Lighting Adjustment <i>Rolland Christopher Gamez and Gio Tolores</i>
16:15 - 16:30	140: Non-Destructive Determination of Sweetness of Philippine Fruits Using NIR Technology <i>Alvin Borrás, Ronald Andrew Ganotisi and Noel Linsangan</i>

F2: Smart Energy (II)

Session Chair: Dr. Chai Chang Yii

Time	Papers
15:15 - 15:30	187: Harmonic Minimization in Multilevel Inverter Using PSO-based Soft-Computing Technique <i>Yee Wei Sea, Wei Teik Chew, Siok Lan Ong, Wui Ven Yong and Jenn Hwai Leong</i>
15:30 - 15:45	188: GA-Optimized Switching Angles for 13-Level Asymmetrical Multilevel Inverter <i>Wei Tik Chew, Yee Wei Sea, Siok Lan Ong, Wui Ven Yong and Jenn Hwai Leong</i>
15:45 - 16:00	241: Efficient Transmission based on Genetic Evolutionary Algorithm <i>Jin Fan, Kit Guan Lim, Min Keng Tan, Helen Sin Ee Chuo, Ali Farzamia and Kenneth Tze Kin Teo</i>
16:00 - 16:15	232: Design and Analysis of Solar Powered Portable Refrigerator Unit <i>Yuslinda Wati Mohamad Yusof, Murizah Kassim and Wan Amir Azrin Wan Shuhaimi</i>
16:15 - 16:30	245: Maximizing Power Generation in Variable Speed Micro-Hydro with Power Point Tracking <i>Min Keng Tan, Norafe Maximo Javinez, Kit Guan Lim, Ahmad Razani Haron, Pungut Ibrahim and Kenneth Tze Kin Teo</i>
16:30 - 16:45	166: Modelling Hydrology Bioretention System with HYDRUS-1D <i>Farrell Nereus Aegidius, Jason Lowell Jitolis and Nurmin Bolong</i>
16:45 - 17:00	87: A Prototype Model of Monitoring Energy Consumption and Optimizing Distribution of Smart Buildings <i>Abdulrahman Shalaby, Manjit Singh Sidhu and Jason Tan</i>

F3: Biomedical Engineering (I)

Session Chair: Dr. Norfarariyanti binti Parimon

Time	Papers
15:15 - 15:30	7: Identification of COVID-19 from Chest CT Scan Using CNN as Feature Extractor and Voting Classifier <i>Ferdib-Al-Islam and Pintu Chandra Shill</i>
15:30 - 15:45	11: A Comparative Study of Chatbot Catered towards Mental Health <i>Pranto Dev, Sameeha Haque, Asmita Noor, Abir Alam Srabon, Mashruk Mohammed Wasik, Sumaiya Mim, Shadman Bin Sharife, Fariha Rahman, Syeda Rifa Syara, Shadab Iqbal, Md Humaion Kabir Mehedi and Annajiat Alim Rasel</i>
15:45 - 16:00	59: A Small Scale COVID-19 Diagnosis Program: A Philippine Perspective <i>Renann Baldovino and Justin Bernard Carlos</i>
16:00 - 16:15	88: Design of a Volume- and Assist-Control Mechanical Ventilator for Moderate COVID-19 Illness <i>Renann Baldovino and Angelino Pimentel</i>
16:15 - 16:30	173: Text Classification of Medical Transcript <i>Kah Win Lee and Keng Hoon Gan</i>

Parallel Session G

15 September 2022

9:15 – 10:30 MYT

G1: Pattern Recognition and Classification (VII)

Session Chair: Dr. Lai Po Hung

Time	Papers
09:15 - 09:30	249: Speech-Based Number Recognition Using KNN and SVM <i>Rosalyn R Porle and Suzanah Embok</i>
09:30 - 09:45	135: Real-time Detection of Aquarium Fish Species Using YOLOv4-tiny on Raspberry Pi 4 <i>Cyril Jay Chan, Ethan James Reyes and Noel Linsangan</i>
09:45 - 10:00	138: A Chinese Business License Text Detection Algorithm Based On Multi-Scale Features <i>Xingxing Sun, Mohan Wu, Boquan Cheng, Aidong Yang, Xiaozhou Ye and Ye Ouyang</i>
10:00 - 10:15	139: Detection of Forged Handwriting Through Analyzation of Handwritten Characters Using Support Vector Machine <i>Ma. Crisanta Jasmin, Mark Jayson Dela Cruz and Analyn Yumang</i>
10:15 - 10:30	56: An Investigation of Automating Fungus Inspection Process of Aircraft Fuel Tank via Image Processing <i>Sin Yee Beh, Veronica Jauw, Chin Seong Lim and Leong Liew Chee</i>

G2: Signal and Image Processing (I)

Session Chair: Dr. Mazlina binti Mamat

Time	Papers
09:15 - 09:30	63: GAN-Based Data Augmentation Considering Correlation with Finger Vein Images <i>Yusuke Matsuda, Tomo Miyazaki and Shinichiro Omachi</i>
09:30 - 09:45	66: Blended QR Code for Digital Advertising <i>Lee-Yeng Ong, Wan-Er Ho and Meng-Chew Leow</i>
09:45 - 10:00	74: A Spoof Detecting Fingerprint Reader Based on a Combination of Total Internal Reflection and Direct Image Capture <i>Noel Linsangan, Bob Laurence Caridad and Ar Jay De Vera</i>
10:00 - 10:15	76: Comparison of Dark Channel Prior and Contrast Limited Histogram Equalization for the Enhancement of Underwater Fish Image <i>Mohd Hanafi Ahmad Hijazi and Jing Mei Leong</i>
10:15 - 10:30	108: Third Eye Hand Glove Object Detection for Visually Impaired Using You Only Look Once (YOLO)v4-tiny Algorithm <i>Angelika Ice Labinay, Jeloux P. Docto and Jocelyn Villaverde</i>

G3: Biomedical Engineering (II)

Session Chair: Dr. Ervin Mung

Time	Papers
09:15 - 09:30	175: An Empirical Model of Classifying Lung Affected Diseases to Detect COVID-19 Using Chest X-ray Employing Convolutional Neural Architecture <i>Ovi Sarkar, Md. Robiul Islam, Tahmim Hossain, Md Khalid Syfullah, Md. Tohidul Islam and Md Moniruzzaman</i>
09:30 - 09:45	194: A Comparative Study of COVID-19 CT Image Synthesis using GAN and CycleGAN <i>Kin Wai Lee and Renee Ka Yin Chin</i>
09:45 - 10:00	212: A Hybrid Biosignal Compression Model for Healthcare Sensor Networks <i>Dheepa T., Sekar K., Satish Kumar Satti and Raja Reddy Gnv</i>
10:00 - 10:15	78: A Comparative Analysis of Lumpy Skin Disease Prediction Through Machine Learning Approaches <i>Dibyso Fabian Dofadar, Hasnat Md. Abdullah, Riyo Hayat Khan, Rafeed Rahman and Md. Sabbir Ahmed</i>
10:15 - 10:30	215: Pre-trained Deep Learning Models for COVID19 Classification: CNNs vs. Vision Transformer <i>Maisarah Mohd Sufian, Ervin Mung, Jamal Dargham, Farashazillah Yahya and Sigeru Omatu</i>

Parallel Session H

15 September 2022

10:45 – 12:15 MYT

H1: Communication Technology

Session Chair: Dr. Megat Muhammad Ikhsan bin Megat Hasnan

Time	Papers
10:45 - 11:00	240: Energy-Efficient Ant Colony Based LEACH Routing Algorithm in Wireless Sensor Network <i>Muhammad Zahir Abd Latif, Kit Guan Lim, Min Keng Tan, Helen Sin Ee Chuo, Tienlei Wang and Kenneth Tze Kin Teo</i>
11:00 - 11:15	243: Adapting Perturbation Voltage for Variable Speed Micro-Hydro Using Particle Swarm Optimization (PSO) <i>Kit Guan Lim, Mohd Izzat Fikri Md Zainal, Min Keng Tan, Ahmad Razani Haron, Chang Yii Chai and Kenneth Tze Kin Teo</i>
11:15 - 11:30	105: Concurrent Architecture of High Speed Viterbi Decoder Using Xilinx HLS Tool <i>Jyoti Zunzunwala and Dr. Atul Joshi</i>
11:30 - 11:45	169: Performance Evaluation of V2V Propagation Channels Under Different Link Types <i>Azlan Abd Aziz, Azwan Mahmud and Nur Asyiqin Amir Hamzah</i>
11:45 - 12:00	211: Sleep-Wake Scheduling Scheme for Small Cell Base Stations: A Review <i>Charis Shwu Chen Kwan, Yeh Ching Low and Kok-Lim Alvin Yau</i>
12:00 – 12:15	205: Factors Promoting Digital Transaction through Adoption of NFC Technology <i>Chinnasamy Agamudainambhi Malarvizhi, Rajee Supramani and Rajee Supramani</i>

H2: Signal and Image Processing (II)

Session Chair: Assoc. Prof. Dr. Renee Chin Ka Yin

Time	Papers
10:45 - 11:00	136: Image Quality Assessment for Wood Images <i>Heshalini Rajagopal, Norrima Mokhtar and Anis Salwa Mohd Khairuddin</i>
11:00 - 11:15	145: Investigating Vision Based Sorting of Used Items <i>Praneel Chand</i>
11:15 - 11:30	150: EZM-AI: A Yolov5 Machine Vision Inference Approach of the Philippine Corn Leaf Diseases Detection System <i>Yolanda C. Austria, Maria Concepcion A. Mirabueno, Dylan Josh D. Lopez, Dexter James L. Cuaresma, Jonel R. Macalisang and Cherry D. Casuat</i>
11:30 - 11:45	162: A Feature-Based Stochastic Morphological Analyzer for Filipino Affixed Words <i>Great Allan Ong and Melvin Ballera</i>
11:45 - 12:00	165: A Hybrid Xception-Ensemble Model for the Detection of Computer Generated Images <i>Sychandran C S and Shreelekshmi R</i>
12:00 – 12:15	84: Classification of Cacao Pod if Healthy or attack by Pest or Black pod Disease Using Deep Learning Algorithm <i>Rey Anthony Godmalin, Chris Jordan Aliac and Larmie Feliscuzo</i>
12:15 – 12:30	45: Simulation of Smart Traffic Light By Using Image Processing and Reinforcement Learning <i>Chin Chun Keat and Sharifah Sakinah Syed Ahmad</i>

H3: Biomedical Engineering (III)

Session Chair: Dr. Yew Hoe Tung

Time	Papers
10:45 - 11:00	101: Diagnosis of Acute Respiratory Syndromes from X-Rays Using Customised CNN Architecture <i>Muthulakshmi M, Palaniappan S, Varshaa Sai Sripriya S and Lalitha Pranathi Amalladonna Rama</i>
11:00 - 11:15	141: Ad-Gency: Hospital Patients' Admission Management Information System and Analytics Development on Health Emergency Situation <i>Alyssa Bautista, Ailah Carelle Bunag, Mariz Menorca and Alfio Regla</i>
11:15 - 11:30	156: Development of Smart Elderly Care Mobile Application for Health Management System <i>Zuraini Dahari, Choong Chee Jun, Poh Jin Ze, Nurul Najwa Mohd Zakir, Mohd Noor Faidhi Mohd Fauzi, Muhammad Hafiz Syazwan Mohamad Azam and Nurhaniza Hamiri</i>
11:30 - 11:45	170: Detection of Sickle Cell Anemia in Blood Smear using YOLOv3 <i>John Paolo De Leon, John Michael Vincent Dayego and Noel Linsangan</i>
11:45 - 12:00	210: Automated Retinal Blood Vessel Feature Extraction in Digital Fundus Images <i>Nasiruddin Zaman Huri, W Mimi Diyana W Zaki, Assyareefah Hudaibah Saad and Nur Asyiqin Amir Hamzah</i>
12:00 – 12:15	65: Web-Based Brain Tumor Detection and Classification Using Convolutional Neural Network <i>Kalab Kiros and Dinesh Kumar</i>

Parallel Session I

15 September 2022

14:00 – 15:30 MYT

I1: Affective Computing

Session Chair: Dr. Chin Pei Yee

Time	Papers
14:00 - 14:15	23: Stock Market Price Prediction: Text Analytics of the GameStop Short Squeeze <i>Ng Wei Xiang and Mohammad Dabbagh</i>
14:15 - 14:30	95: Performance of Content-Based Features to Detect Depression Tendencies in Different Text Length <i>Nur Zareen Zulkarnain, Noor Fazilla Abd Yusof, Sharifah Sakinah Syed Ahmad, Zuraini Othman and Azura Hanim Hashim</i>
14:30 - 14:45	94: Extracting Graphological Features for Identifying Personality Traits using Agglomerative Hierarchical Clustering Algorithm <i>Noor Fazilla Abd Yusof, Nur Zareen Zulkarnain, Sharifah Sakinah Syed Ahmad, Zuraini Othman and Azura Hanim Hashim</i>
14:45 - 15:00	229: Online Journal with Embedded Machine Learning Text Depression Detection Alert <i>Lai Po Hung</i>
15:00 - 15:15	237: Factors Affecting Customer Loyalty on Starbucks Malaysia using Binary Logistics and Probit Model <i>Mohd Saifullah Rusiman, Suparman Suparman, Firdaus Mohamad Hamzah and Nur Ain Ebas</i>

I2: Signal and Image Processing (III)

Session Chair: Assoc. Prof. Dr. Jamal Ahmad Dargham

Time	Papers
14:00 - 14:15	71: Improved VGG Architecture in CNNs for Image Classification <i>Nurzarinah Zakaria and Yana Mazwin Mohamad Hassim</i>
14:15 - 14:30	216: A Comparison of RGB and RGNIR Color Spaces for Plastic Waste Detection Using the YOLOv5 Architecture <i>Owen Tamin, Ervin Mounq, Jamal Dargham, Farashazillah Yahya, Sigeru Omatu and Lorita Angeline</i>
14:30 - 14:45	185: A New Face Image Manipulation Reveal Scheme Based on Face Detection and Image Watermarking <i>Zahraa Aqeel Salih, Rasha Thabit, Khamis A. Zidan and Bee Ee Khoo</i>
14:45 - 15:00	10: GPU Accelerated Metaheuristics for Integrated Production Lot Sizing and Scheduling Problems <i>Attilio Sbrana, Renato Fernandes Cantão and Deisemara Ferreira</i>
15:00 - 15:15	120: Online Courier Management System with Text Blast and QR Code Technology <i>Alfio Regla and Bryan Dadiz</i>
15:15 - 15:30	119: Pick-by-vision of Augmented Reality in Warehouse Picking Process Optimization – A Review <i>Shaliza Jumahat, Manjit Singh Sidhu and Sharulhizam Mohamad Shah</i>

I3: Internet of Things

Session Chair: Dr. Leau Yu Beng

Time	Papers
14:00 - 14:15	34: Performance Evaluation of Machine Learning Algorithms for Intrusion Detection in IoT Applications <i>Yee Jien Ng, Mohammad Tahir, Mohammad Dabbagh and Ali Farooq</i>
14:15 - 14:30	80: IoT-Based Smart Agriculture Monitoring System <i>Riasat Khan, Md Musfiq Us Saleheen, Md Shariful Islam, Rabbul Fahad and Md Jayed Bin Belal</i>
14:30 - 14:45	132: A Real-Time Web-Based Monitoring System for Stingless Bee Farming <i>Bill Acherllys Jailis, Aroland Kiring, Hoe Tung Yew, Liawas Barukang, Yan Yan Farm and Farrah Wong</i>
14:45 - 15:00	222: Evaluation of an Electronic Sensor-Based Agility Test System for Badminton Players' Development <i>J.E.M. Yalin, Hazlihan Haris, Megat Muhammad Ikhsan Megat Hasnan and Ismail Saad</i>
15:00 - 15:15	226: Internet-of-Things for Smart Dryers: Enablers, State of the arts, Challenges, and Solutions <i>Mohd Khairulanwar Rizalman, Ervin Mounq, Jamal Ahmad Dargham, Zuhair Jamain, Nurul'Azah Mohd Yaakub and Sigeru Omatu</i>