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Session Time: 15:00 - 17:00

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Session Chair: Hiroyuki Fujioka (Fukuoka Institute of Technology, Japan)

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- 1570468498 Isolating Defects in Light Beam Induced Current Maps of Solar Cells.....1479**
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- 1570468519 Speaker Identification Using Tensor Decomposition of Acoustic Models.....1484**
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Session Time: 15:00 - 17:00

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Session Chair: Dr. Ramneek (ETRI, Korea)

- 1570460150 A Multiple Clock Domain Design of High-radix Montgomery Multiplication for Simplicity.....1489**
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- 1570461421 Scheduling of Malleable Tasks Based on Constraint Programming.....1493**
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- 1570466898 Design and Implementation of the Metadata Modification Concept Minimizing File Modification.....1499**
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- 1570468145 Bandwidth Stealing TDMA Arbitration for Real-Time Multiprocessor Applications.....1504**
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- 1570468278 A Time-Triggered Distributed Computing Environment for Cyber-Physical Systems Based on Physical Time and Logical Time.....1510**
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- 1570468608 Hierarchial Hybrid Solid State Drive.....1516**
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- 1570469122 Runtime Profiling of OpenCL Workloads Using LLVM-based Code Instrumentation.....1520**
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Session Chair: Gerhard P. Tan (Polytechnic University of the Philippines, Philippines)

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- 1570468148 Trust Calculation and Route Discovery for Delay Tolerant Networks.....1533**
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- 1570466783 GPON Performance Analsis for 5G Backhaul Solutions.....1544**
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- 1570468814 End-to-End Delay Analysis Considering Partition Scheduling on a DIMA Platform.....1548**
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Session Chair: Daming Zhang (University of New South Wales, Australia)

- 1570461422 Multi-objective Power Optmization of Micro Grid with Distributed Generation.....1554**
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- 1570461430 Operation of Autonomous AC Microgrid at Constant Frequency and with Reactive Power Generation from Grid-forming,Grid-supporting and Grid-feeding Generators.....1560**
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- 1570466813 Model Predictive Control of Inverters in Microgrid with Constant Switching Frequency for Circulating Current Suppression.....1566**
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- 1570466824 Demand Response for Enhancing Survivability of Microgrids During Islanded Operation.....1572**
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- 1570466839 Diffusion Strategy-Based Distributed Optimization for Operation of Multi-Microgrid System.....1578**
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- 1570469215 Frequency Profile Improvement of a Microgrid Through Aggregated Demand Response.....1584**
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Signal Processing III

Session Time: 10:15 - 11:45

<WED-BIA-I> (2F)

Session Chair: Shashidhar G. Koolagudi (National Institute of Technology Karnataka, India)

- 1570468547 Robust Dialect Identification System Using Spectro-Temporal Gabor Features.....1589**
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- 1570468651 Automatic Speaker Recognition Using Stationary Wavelet Coefficients of LP Residual.....1595**
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- 1570468674 Speech Signal Based Broad Phoneme Classification and Search Space Reduction for Spoken Term Detection.....1601**
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- 1570457320 Early Warning Device for Brown Plant Hopper Detection in Palay Using Wireless Sensor Networks.....1607**
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[Special] 5G & beyond II

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Session Chair: Wonjun Kim (Seoul National University, Korea)

- 1570466268 Energy Efficient Power Control and Relaying for C-RAN Uplink with Wireless Fronthaul.....1612**
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- 1570466820 Fast Uplink Access in TDD Systems for Ultra Reliable and Low Latency Communications.....1616**
Wonjun Kim (Seoul National University, Korea); Hyoungju Ji (Seoul National University & Samsung Electronics. Co., Ltd, Korea); Byonghyo Shim (Seoul National University, Korea)
- 1570466823 New Radio Technologies for Ultra Reliable and Low Latency Communications.....1620**
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- 1570468180 Location-aware Power Adaptation Scheme for UAV Communications.....1624**
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- 1570466874 Greedy Sparse Channel Estimation for Millimeter Wave Communications.....1628**
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[Special] Humanitarian Technologies II

Session Time: 10:15 - 11:45

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Session Chair: Suzana Brown (SUNY Korea, State University of New York & Stony Brook University, NY, Korea)

- 1570468851 Named-Entity Recognition for Disaster Related Filipino News Articles.....1633**
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- 1570461013 BloodBank PH: A Framework for an Android-based Application for the Facilitation of Blood Services in the Philippines.....1637**
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- 1570466781 A Successful Approach to Bus Tracking Using RFID and Low Power Wireless Networks.....1642**
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- 1570468660 Improving GQM+Strategies with Balanced Scorecard's Perspectives: A Feasibility Study.....1647**
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- 1570469087 Development of an Affordable Customisable Upper Extremities Pneumatically-Powered Exoskeleton.....1653**
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- 1570468693 Feedback Control and Monitoring System for a Potable Rainwater and Groundwater Harvester.....1657**
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[Special] Machine Learning III

Session Time: 10:15 - 11:45

<WED-ARA-I> (8F)

Session Chair: JeongYon Shim (Kangnam University, Korea)

- 1570466728 Implementation of Computer-Aided Diagnosis System on Customizable DSP Core for Colorectal Endoscopic Images with CNN Features and SVM.....1663**
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- 1570466762 Automatic Creation of Hyperlinks in AEC Documents by Extracting the Sheet Numbers Using LSTM Model.....1667**
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- 1570468653 Hardware-Based Model of Node Clustering Using Q-Learning for Wireless Sensor Networks.....1673**
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- 1570468555 Development of Improved Acoustic Disdrometer Through Utilization of Machine Learning Algorithm.....1679**
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Robotics & Control Systems III

Session Time: 13:15 - 14:45 <WED-RA2-II> (2F)

Session Chair: Jinkyung Park (Dankook University, Korea)

- 1570461090 Automated Flight Control Surfaces Deflection System Developed for Airship Model Wind Tunnel Study.....1683**
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- 1570467531 Microcontroller-Based Automated Microscope for Image Recognition of Four Urine Constituents.....1689**
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- 1570469092 Payload Lift and Transport Using Decentralized Unmanned Aerial Vehicle Quadcopter Teams.....1695**
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- 1570469283 Design of a Fuzzy-Genetic Controller for an Articulated Robot Gripper.....1701**
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- 1570461590 Sonar-based SLAM Using Occupancy Grid Mapping and Dead Reckoning.....1707**
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Session Time: 13:15 - 14:45 <WED-RA3-II> (2F)

Session Chair: Leena Mary (Kerala Technological University, India)

- 1570459621 Time-frequency Performance Study on Urban Sound Classification with Convolutional Neural Network.....1713**
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- 1570466222 Automatic Optic Disc Localization Using Particle Swarm Optimization Technique.....1718**
Subramanya Jois (INDIAN INSTITUTE OF SCIENCE, India); Harsha Sridhar (Indian Institute of Science, India); Jattenahalli Rajegowda Harish Kumar (Indian Institute of Science, Bangalore, India)



- 1570466414 Deep Trajectory Based Gait Recognition for Human Re-identification.....1723**
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- 1570469320 Design of Multiple Prediction Complexity Configurations for an FPGA-Based H.264 Baseline Profile Encoder.....1727**
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Implementation Issues in Communications

Session Time: 13:15 - 14:45 <WED-RA4-II> (2F)

Session Chair: Ahmad Almadhor (University of Denver, USA)

- 1570460119 Noise Reduction Method for Intra-Body Communication by Using Compensation Electrode.....1733**
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- 1570460429 Delayed Update-Tolerant Web Cache Server for E-learning Support.....1737**
Yudai Kurashita (Soka University & Graduate School of Engineering, Japan); Kazumasa Takami (Soka University, Japan)
- 1570461077 Leveraging Software-Defined Networking (SDN) Capabilities for Improving Health Information Exchange (HIE) Systems Performance.....1743**
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- 1570468731 Empirical Measurements of Antenna Polarization Mismatch and Misalignment Due to Angular Motion.....1749**
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- 1570468802 Modeling TTEthernet Startup Service in SystemC for Verifying Fault-Tolerant Protocol Under Fail-Omission Scenarios.....1753**
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Emerging Technologies I

Session Time: 13:15 - 14:45 <WED-UDO-II> (2F)

Session Chair: Isao Nakanishi (Tottori University, Japan)

- 1570466884 Design and Finite Element Analysis of Customized Local Road Vehicles (CLRV): The Case for the Tricycle and the Philippine Jeepney.....1758**
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- 1570468529 Automated Indoor Drone Flight with Collision Prevention.....1762**
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- 1570468533 Characterization of a Novel Low Leakage Power-Efficient Asymmetric 7T SRAM Cell.....1768**
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- 1570459848 Low-cost Real-time Video Streaming System Using Off-the-Shelf LEDs.....1774**
Mei Yu Soh (Singapore University of Technology and Design & GlobalFoundries Singapore, Singapore); Wen Xian Ng and Qiong Zou (Singapore University of Technology and Design, Singapore); Denise Lee (Singapore University of Technology and Design & Excelitas Technologies, Singapore); T Hui Teo and Kiat Seng Yeo (Singapore University of Technology and Design, Singapore)
- 1570468774 Blockchain Based Energy Trading.....1778**
Ravi Kishore Kodali and Subbachary Yerroju (National Institute of Technology, Warangal, India); Borra Yatish Krishna Yogi (National Institute of Technology, Andhra Pradesh, India)

Other Technologies III

Session Time: 13:15 - 14:45	<WED-CHU-II> (2F)
Session Chair: Babak Beheshti (New York Institute of Technology & Ikanos Communications Corp., USA)	

- 1570485181 A Survey on Lightweight Cryptographic Algorithms.....1784**
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- 1570457332 Retention and Acquisition of New Vocabularies Using Review Value Calculation Technique for English as Secondary Language.....1790**
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- 1570461426 Multi-Agent Approach Traffic Forecast for Planning Urban Road Infrastructure.....1795**
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- 1570465502 IoT Based Solar Smart LED Street Lighting System.....1801**
Maizan Muhamad (Universiti Teknologi MARA (UiTM), Malaysia); Mas Izyani Md Ali (Universiti Teknologi Mara, Malaysia)
- 1570466937 Pasigueño Assistant: An E-Participation Mobile Application Framework for the City of Pasig, Philippines.....1807**
Ivan Aldwin Cristobal (National University - Manila, Philippines); Cesar Karl Cruz (National University, Philippines); Juan Miguel Dela Cruz (National University - Manila, Philippines); Joshua Manalansan and Bernie S Fabito (National University, Philippines); Ramon L. Rodriguez (National University & De La Salle University, Philippines); Manolito Octaviano, Jr. (National University, Philippines)



- 1570468746 Design and Implementation of Reversible Logic Based RGB to Gray Scale Color Space Converter.....1813**
Sithara Raveendran (National Institute of Technology Goa, India); Pranose J Edavoor (N I T, India); Y B N Kumar (National Institute of Technology Goa, India); Vasantha MH and Vivek Sharma (NIT Goa, India)
- 1570445236 Marker-less Stereo-Vision Human Motion Tracking Using Hybrid Filter in Unconstrained Environment.....1818**
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Computational Intelligence III

Session Time: 13:15 - 14:45 <WED-BIA-II> (2F)

Session Chair: JeongYon Shim (Kangnam University, Korea)

- 1570467080 Vehicle Classification Using AKAZE and Feature Matching Approach and Artificial Neural Network.....1824**
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- 1570468879 On Optimizing DNA Sequence Design for DNA Logic AND Circuit.....1828**
Boonsit Yimwadsana (Mahidol, Thailand); Paramita Artiwet (Mahidol University, Thailand)
- 1570477971 FaNDeR: Fake News Detection Model Using Media Reliability.....1833**
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- 1570466903 Classification of Plant Seedling Images Using Deep Learning.....1838**
Catherine Alimboyong (Graduate Programs, Technological Institute of the Philippines, Philippines); Alexander A Hernandez (Technological Institute of the Philippines, Philippines); Ruji Medina (Technological Institute of Technology, Philippines)
- 1570465965 Practical Incremental Gradient Method for Large-Scale Problems.....1844**
Junchu Huang, Zhiheng Zhou and Yifan Wang (South China University of Technology, P.R. China); Zhiwei Yang (China Information and Communication Research Institute, P.R. China)
- 1570467225 The Design of Learning and Reinterpretation System Considering Prior Knowledge Net.....1848**
JeongYon Shim (Kangnam University, Korea)
- 1570466912 A Hybrid Prediction Model Integrating a Modified Genetic Algorithm to K-means Segmentation and C4.5.....1852**
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Computing Technologies

Session Time: 13:15 - 14:45 <WED-TAM-II> (8F)

Session Chair: Yongjun Park (Hanyang University, Korea)

- 1570445696 Exploring Mobile Game Addiction, Cyberbullying, and Its Effects on Academic Performance Among Tertiary Students in One University in the Philippines.....1858**
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- 1570461471 A Flexible Qualitative Data Analytics Dashboard.....1864**
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- 1570461582 A gm/ID Based Algorithm for the Design of CMOS Miller Operational Amplifiers in 65 nm Technology.....1869**
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- 1570461611 FireMe: Development of Gamifying Fire Safety Awareness and Prevention Using a* Algorithm.....1875**
Francis F. Balahadia (Laguna State Polytechnic University, Philippines)
- 1570468503 Recommendation of Web Service Selection Algorithm Based on Web Application Review.....1881**
Ryuichi Takahashi (Ibaraki University, Japan); Kazuma Nishida and Yoshiaki Fukazawa (Waseda University, Japan)
- 1570459660 Automata Generating Mobile Application (A.G.M.A.).....1887**
Francis F. Balahadia (Laguna State Polytechnic University, Philippines)

[Special] Wearable Technologies III

Session Time: 13:15 - 14:45

<WED-HAL-II> (8F)

Session Chair: Younggeun Choi (Dankook University, Korea)

- 1570469208 IoT Based Wearable Device for Workers in Industrial Scenarios.....1892**
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- 1570468623 Prediction of Daily Mental Stress Levels Using a Wearable Photoplethysmography Sensor.....1898**
Jongwoo Park (Ulsan National Institute of Science and Technology, Korea)
- 1570466302 Gait Type Classification Using Smart Insole Sensors.....1902**
Sang-Il Choi, Sung-Sin Lee, Hee-Chan Park and Hyunil Kim (Dankook University, Korea)
- 1570467486 Using a Wearable Device for an Android-based Weight Management System.....1906**
Mary Jane Samonte, Krizzia Rei Naquila, Jericho Camba and Raymond Cristine Ignacio (Mapua University, Philippines)

Biomedical Engineering III

Session Time: 13:15 - 14:45

<WED-ORA-II> (8F)

Session Chair: Kyung Youn Kim (Jeju National University, Korea)

- 1570468418 Portable, Low Cost, Closed-Loop Mechanical Ventilation Using Feedback from Optically Isolated Analog Sensors.....1912**
Sara Zulfiqar, Hamza Nadeem, Zamen Tahir and Minnaam Mazhar (University of Engineering and Technology, Pakistan); K. M Hasan (University of Engineering and Technology, Lahore, Pakistan)



- 1570468781 Deep Learning for Integrated Analysis of Breast Cancer Subtype Specific Multi-omics Data.....1916**
Somnath Rakshit (Jalpaiguri Government Engineering College, India); Indrajit Saha (National Institute of Technical Teachers' Training & Research, Kolkata, India); Subho Chakraborty (National Institute of Technical Teachers' Training and Research, Kolkata, India); Dariusz Plewczyński (University of Warsaw, Poland)
- 1570468890 Biometric Authentication Using CNN Features of Dorsal Vein Pattern Extracted from NIR Image.....1922**
Rafat Jamal Tazim, Md. Messal Monem Miah, Sanzida Sayedul Surma and Mohammad Tariqul Islam (Bangladesh University of Engineering and Technology, Bangladesh); Celia Shahnaz and Shaikh Anowarul Fattah (BUET, Bangladesh)
- 1570469091 Development of a System to Profile Foot Temperatures of the Plantar and the Periphery.....1927**
Nipun D Perera, Chamara Madarasingha, Asanka Rathnayaka, Herath Savindu and Anjula C De Silva (University of Moratuwa, Sri Lanka); Saroj Jayasinghe (Faculty of Medicine, University of Colombo, Sri Lanka)
- 1570469118 An Efficient Method to Determine the Size of Bladder Using Electrical Impedance Tomography.....1932**
Anil Kumar Khambampati (Jeju National University, Korea); Sravan Kumar Konki (Jeju National University, Korea); You Jung Han (Jeju National University, Korea); Sunam Kumar Sharma and Kyung Youn Kim (Jeju National University, Korea)

Renewable Energy & Solar Plants

Session Time: 13:15 - 14:45

<WED-ARA-II> (8F)

Session Chair: Dong-Myung Lee (Hongik University, Korea)

- 1570461493 Examination of Compact and Online Diagnosis Method Based on Temporal Fluctuation of String Currents of Photovoltaic Solar Plant.....1936**
Ryo Torihara and Shohei Kita (University of Miyazaki, Japan); Osamu Takenouchi (Civil Aviation College, Japan); Tetsuya Sakoda and Hayashi Noriyuki (University of Miyazaki, Japan)
- 1570461532 Long-Term Observation of Ambient Temperature Effects on the Performance of A 60 kW CIGS Solar Power System Installed in Miyazaki.....1941**
Kyaw Myo Win, Ryo Torihara, Shohei Kita, Tetsuya Sakoda, Yasuyuki Ota, Kensuke Nishioka and Hayashi Noriyuki (University of Miyazaki, Japan)
- 1570466825 Short Term Wind Speed Forecasting: A Machine Learning Based Predictive Analytics.....1947**
Annael Domingo and Nathaniel Libatique (Ateneo de Manila University, Philippines); Gregory Tangonan (Ateneo Innovation Center, Philippines); Mary Lai Salvaña (King Abdullah University of Science and Technology, Saudi Arabia); Felan Carlo Garcia (Ateneo de Manila University, Philippines)
- 1570468681 Differential Power Processing for Submodule Solar Photovoltaic Systems.....1953**
Renz Martin David and Lew Andrew R Tria (University of the Philippines Diliman, Philippines)
- 1570461477 Determination of Hosting Capacity of Solar and Wind Distributed Generation (DG) Using Stochastic Approach.....1959**
Rodolfo Aguirre, Jr., Carl Peter Christian Caampued and Rei-Ann Dayapera (University of the Philippines Los Baños, Philippines)
- 1570467075 Feeder Wise Net Metering Service Planning Using Load Power Demand Profile and Raw Customer Billing Data.....1965**
Tehrina Ismail (University of Engineering and Technology, Pakistan); Syed Abbas and Muhammad Ismail (National University of Computer and Emerging Sciences, Pakistan); Syed Ahmed Raza Naqvi (University of Western Ontario, Canada)

Biomedical Engineering IV

Session Time: 15:00 - 17:00

<WED-RA2-III> (2F)

Session Chair: Seokhyun Yoon (Dankook University, Korea)

- 1570460702 Grid Topology Neuron Clustering for Time Domain Electrocardiogram Waveform Evaluation of Race Driving Maneuvers.....1970**
Jong-Rul Park and Jae-Chern Yoo (Sungkyunkwan University, Korea)
- 1570461656 Design and Analysis of Modified Leaky Integrate and Fire Model.....1975**
Abhilash Mishra and Santosh Kumar Majhi (Veer Surendra Sai University of Technology, India)
- 1570462342 Analysis of Instantaneous Energy Symmetry Index in Asymmetrical Gait.....1981**
Yi Ting Yap and Darwin Gouwanda (Monash University Sunway Campus, Malaysia); Alpha Agape (Monash University, Malaysia); Yu Zheng Chong (Universiti Tunku Abdul Rahman, Malaysia)
- 1570466596 Linking Bayesian Network and Intensive Care Units Data: A Glycemic Control Study.....1987**
Asma Abu-Samah (Universiti Tenaga Nasional (UNITEN) Malaysia, Malaysia); Normy Abdul Razak (Universiti Tenaga Nasional, Malaysia); Fatanah Mohamad Suhaimi (Universiti Sains Malaysia, Malaysia); Ummu Kulthum Jamaludin (Universiti Malaysia Pahang, Malaysia); J. Geoffrey Chase (University of Canterbury, New Zealand)
- 1570466721 Towards Asynchronous Motor Imagery-Based Brain-Computer Interfaces: a Joint Training Scheme Using Deep Learning.....1993**
Theerawit Wilaiprasitporn, Patcharin Cheng, Phairot Autthasan, Boriwat Pijarana and Ekapol Chuangsuwanich (Vidyasirimedhi Institute of Science and Technology (VISTEC), Thailand)
- 1570466924 An Automatic and Portable Phototherapy Garment (APPG) with Integrated Non-Invasive Bilirubin Detector.....1998**
Mitra Mohd Addi and Nuraini Shahrani (Universiti Teknologi Malaysia, Malaysia)
- 1570466930 Accelerating Drug Discovery Using Convolution Neural Network Based Active Learning.....2004**
Pengfei Liu (the Chinese University of Hong Kong, Hong Kong)
- 1570469156 Single Channel ECG for Obstructive Sleep Apnea Severity Detection Using a Deep Learning Approach.....2010**
Theerawit Wilaiprasitporn and Nannapas Banluesombatkul (Vidyasirimedhi Institute of Science and Technology (VISTEC), Thailand); Thanawin Rakthanmanon (Kasetsart University, Bangkok, Thailand)

Image Analysis & Understanding III

Session Time: 15:00-17:00

<WED-RA3-III> (2F)

Session Chair: Ayyachamy Shenbagavalli (National Engineering College Kovilpatti, India)

- 1570468504 Analysis of Breast Thermograms in Lateral Views Using Texture Features.....2016**
Josephine Selle Jeyanathan (Department of Electronics & Communication Engineering Kalasalingam Academy of Research and Education Krishnankoil), Tamil Nadu, A Shenbagavalli (Department of Electronics & Communication Engineering National Engineering College, Kovilpatti), Tamil Nadu, B Venkatraman & Tamil Nadu, M Menaka (Quality Assurance Divison, Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, Inda)
- 1570452722 Object Detection Using Convolutional Neural Networks.....2022**
Reagan Galvez (De La Salle University & Bulacan State University, Philippines); Argel Bandala (De La Salle University, Philippines); Elmer P. Dadios (Philippines, Philippines); Ryan Rhay P. Vicerra and Jose Martin Z Maningo (De La Salle University, Philippines)



- 1570461505 Two-Step Vehicle Classification System for Traffic Monitoring in the Philippines.....2027**
Rodrigo Celso, Il, Zachary Ting and Dale Joshua Del Carmen (University of the Philippines Diliman, Philippines); Rhandley Cajote (University of the Philippines Electrical and Electronics Engineering Institute, Philippines)
- 1570461616 A Study of Feature Extraction and Classifier Methods for Tropical Wood Recognition System.....2033**
Rubiyah Yusof (Universiti Teknologi Malaysia (UTM), Malaysia); Azlin Ahmad (Universiti Teknologi MARA, Malaysia); Uswah Khairuddin, Nenny Ruthfalydia Rosli, Nik Mohamad Aizuddin Nik Azmi and Hafizza Abdul Ghapar (Universiti Teknologi Malaysia, Malaysia); Anis salwa Mohd khairuddin (University of Malaya & Kuala Lumpur, Malaysia)
- 1570466780 Color Space Analysis Using KNN for Lettuce Crop Stages Identification in Smart Farm Setup.....2039**
Pocholo James Loresco (De La Salle University, Manila & Far Eastern University Institute of Technology, Philippines); Ira C. Valenzuela (Technological University of the Philippines, Philippines); Elmer P. Dadios (Philippines, Philippines)
- 1570466854 Emotion Recognition via Facial Expression: Utilization of Numerous Feature Descriptors in Different Machine Learning Algorithms.....2044**
John Chris Kwong, Felan Carlo Garcia, Patricia Angela Abu and Rosula Reyes, S. J. (Ateneo de Manila University, Philippines)
- 1570467024 A Robust System for Visual Pattern Recognition in Engineering Drawing Documents.....2049**
Avinash Patel, Bhagesh Seraogi, Supriya Das, Purnendu Banerjee, Himadri Majumder, Srinivas Mukkamala and Rahul Roy (ARC Document Solution Pvt Ltd, India); B B Chaudhuri (Indian Statistical Institute, India)
- 1570468769 Decision Level Fusion Based Approach for Indian Languages Identification Using Deep Neural Network.....2055**
Kanika Gupta (IIIT Hyderabad, India)

Wireless IoT

Session Time: 15:00 - 17:00 <WED-RA4-III> (2F)

Session Chair: Roy Francis Naveax (De La Salle University, Philippines)

- 1570469285 Improving WiFi Indoor Localization Through a Peer-to-Peer Architecture.....2059**
Leiko Ravelo and Joseph Daniel Dantes (University of the Philippines Diliman, Philippines); Nestor Michael C. Tiglao (University of the Philippines, Philippines); Armando Celso (University of the Philippines Diliman, Philippines); Wilbert Jethro Limjoco (University of the Philippines, Diliman, Philippines)
- 1570440466 Wirelessly Control for RGB Lamp End-device: Design and Implementation.....2065**
Trio Adiono, Maulana Yusuf Fathany, Syifaul Fuada and Sinantya Feranti Anindya (Institut Teknologi Bandung, Indonesia); Irfan Purwanda (Pusat Mikroelektronika Institut Teknologi Bandung, Indonesia)
- 1570461467 Study of Design Method for Tangible User Interface in IoT Paradigm.....2070**
Zihong Yuan and Wee Siong Ng (Institute for Infocomm Research, Singapore); Shen Tat Goh (Institute for infocomm research, Singapore); Yimin Zhou (Centre for Liveable Cities, Singapore)
- 1570465871 Precompliance Test Setup for Pyroelectric Sensor Devices in IoT Applications.....2074**
Denise Lee (Singapore University of Technology and Design & Excelitas Technologies, Singapore); Mei Yu Soh (Singapore University of Technology and Design & GlobalFoundries Singapore, Singapore); T Hui Teo and Kiat Seng Yeo (Singapore University of Technology and Design, Singapore)



- 1570466866 Assisting Vulnerability Detection by Prioritizing Crashes with Incremental Learning.....2079**
Li Zhang and Vrizlynn L. L. Thing (Institute for Infocomm Research, Singapore)
- 1570468230 Community Detection and Mining Using Complex Networks Tools in Social Internet of Things.....2085**
Farhan Amin, Awais Ahmad and Gyu Sang Choi (Yeungnam University, Korea)
- 1570467081 Self-Adaptive Framework with Game Theoretic Decision Making for Internet of Things.....2091**
Euijong Lee, Young-Gab Kim and Young-Duk Seo (Sejong University, Korea); Doo-Kwon Baik (Korea University, Korea)
- 1570468866 Herbal Medicine Information System Using Push and Pull Technology in Mobile Application.....2097**
Mary Jane Samonte, Marianne Therese Cadiz, Berline Mae Mabanag and Genesis Esguerra (Mapua University, Philippines)

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Session Chair: Akira Yamawaki (Kyushu Institute of Technology, Japan)		
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	<i>Yi Guo, Heming Sun and Shinji Kimura (Waseda University, Japan)</i>	
1570435926	A New Open Loop Linearization Technique for Power Amplifier Circuit in MMIC for 5G Wireless Backhaul Application.....2115	
	<i>Manas Kumar Hati (Galgotias University, Greater Noida, UP, India); Tarun K. Bhattacharyya (IIT Kharagpur, India)</i>	
1570469084	A 0.5V Low-Power All-Digital Phase-Locked Loop in 65Nm CMOS Process for Wireless Sensing Applications.....2121	
	<i>Fredrick Angelo Galapon, Mark Allen D Agaton and Arcel Leynes (University of the Philippines Diliman, Philippines); Lemuel Noveno (University of the Philippines - Diliman, Philippines); Anastacia B Alvarez (University of the Philippines Diliman, Philippines); Chris Vincent Densing (University of the Philippines Electrical and Electronics Engineering Institute, Philippines); John Richard Hizon (University of the Philippines Diliman, Philippines); Marc Rosales (University of the Philippines, Philippines); Maria Theresa de Leon (University of the Philippines Diliman, Philippines); Rico Jossel M Maestro (University of the Philippines, Philippines)</i>	
1570461419	Describing Methods for High-level Synthesis of Histogram Generation and Their Evaluation.....2126	
	<i>Moena Yamasaki and Akira Yamawaki (Kyushu Institute of Technology, Japan)</i>	
1570463662	An Evaluation of Burst Transfer Inferred by a High-level Synthesis Tool.....2130	
	<i>Yuki Yamagata and Akira Yamawaki (Kyushu Institute of Technology, Japan)</i>	
1570466709	A Low-Voltage Charge Pump with High Pumping Efficiency.....2134	
	<i>Taegun Yim (Yonsei University, Korea); Seungjin Lee and Choongkeun Lee (University of Yonsei, Korea); Hongil Yoon (Yonsei University, Korea)</i>	



- 1570468747 A New Charge Pump Switch Parallel to Series Connection.....2139**
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Session Chair: Wenyu Chen (Institute for Infocomm Research, Singapore)

- 1570467143 Structuring Elements in the Watershed Algorithm for the Segmentation of Mammography Images.....2143**
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- 1570468401 Unsupervised Eye Blink Artifact Identification in Electroencephalogram.....2147**
Ashvaany Egambaram and Nasreen Badruddin (Universiti Teknologi PETRONAS, Malaysia); Vijanth Sagayan Asirvadam (Universiti Teknologi Petronas, Malaysia); E Fauvet and Christophe Stolz (Universite de Bourgogne, France); Tahamina Begum (Universiti Sains Malaysia, Malaysia)
- 1570477972 Parallel Large-Scale Image Processing for Orthrectification.....2152**
ChangJin Im and Chang-Seong Jeong (Korea University, Korea); Jae-Heon Jeong (Korea Aerospace Research Institute(KARI), Korea)
- 1570461751 Joint Texture and Geometry Analysis for Robotic Adaptive Visual Inspection.....2157**
Wenyu Chen, Wei Xiong, Jierong Cheng, Ying Gu and Yusha Li (Institute for Infocomm Research, Singapore)
- 1570467000 Classification of Heterogeneous Scenes in POLSAR Image Based on Statistical Analysis.....2163**
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- 1570467524 Sobriety Testing Based on Thermal Infrared Images Using Convolutional Neural Networks.....2169**
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Session Chair: Yoshikazu Fukuyama (Meiji University, Japan)

- 1570440117 Biometric Based Consistent Key Generation for IMS.....2174**
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- 1570466407 Reactive Hybrid Particle Swarm Optimization Based Job-shop Scheduling Problems Considering Energy Management.....2180**
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- 1570466977 Investigation of a Joint Splitting Criteria for Decision Tree Classifier Use of Information Gain and Gini Index.....2186**
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- 1570467410 Similarity Search Techniques in Exploratory Search: A Review.....2192**
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- 1570459561 Building a Filipino Colloquialism Translator Using Sequence-to-Sequence Model.....2198**
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- 1570460954 Mining Educational Data to Predict Academic Dropouts: a Case Study in Blended Learning Course.....2204**
Otgontsetseg Sukhbaatar, Kohichi Ogata and Tsuyoshi Usagawa (Kumamoto University, Japan)
- 1570461670 Analysis of Bipartite Network for New Product Recommendation.....2208**
Subhasis Mallick (B. P. Poddar Institute of Management and Technology, India); Dipankar Majumdar (RCC Institute of Information Technology, India); Ananya Kanjilal (BPPIMT Kolkata, India); Swapan Bhattacharya (Jadavpur University, Kolkata, India)
- 1570466455 Weighted Single-Pass Fuzzy c-Means Algorithm Based on Density Peaks.....2213**
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- 1570459652 E-Government Portal for Optimizing Services to Laguneño: An Analysis.....2217**
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- 1570460554 Real-Time Audio Transmission Using Visible Light Communication.....2222**
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- 1570460901 Design and Implementation of a Human Tracking CCTV System Using IP-Cameras.....2226**
Roy Francis Navea (De La Salle University, Philippines)
- 1570461461 Traffic Prediction for Efficient Elevator Dispatching.....2231**
Jinghong Zheng and Thomas Chee Tat Ho (Institute for Infocomm Research, Singapore); HuaiBing Yuan (Joylive Co., Ltd., P.R. China)
- 1570463704 A Study on Writer Verification Based on Finger-Writing of a Simple Symbol on a Tablet.....2236**
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- 1570469148 Fieldtrip Ni Juan: An Augmented Reality Mobile Application for the Tourist Spots in the Philippines for Travel Hub PH.....2241**
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- 1570456294 Mathematical and Physical Model of the Generation and the Transmission of Single Photon and Its Quantum State Representations.....2246**
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Computer Systems II

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Session Chair: Muhammad Afzal (Sejong University, Korea)

- 1570466144 Adaptive Balance of Quality-resources of Neural Networks with Principle Component Analysis.....2251**
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- 1570467473 Redesign of Clinical Decision Systems to Support Precision Medicine.....2257**
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- 1570468298 Some Torus-embedded Graphs with Regular Structure Have the Minimum Diameter and the Minimum Average Shortest Path Length.....2262**
Noriyuki Fujimoto and Hiroyuki Kobayashi (Osaka Prefecture University, Japan)
- 1570468319 Automated Consistency Checking of UML/MARTE Based Software Systems.....2268**
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- 1570468513 Analysis of Linux Kernel Packet Processing on Manycore Systems.....2274**
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- 1570468576 Neural Network Reliability Enhancement Approach Using Dropout Underutilization in GPU.....2279**
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- 1570469155 Automated Neural Network Accelerator Generation Framework for Multiple Neural Network Applications.....2285**
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Modeling & Analysis of Electrical Systems II

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Session Chair: Yutian Liu (Shandong University, P.R. China)

- 1570460187 Power System Network Equivalents: Key Issues and Challenges.....2289**
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- 1570461596 Mobile Phone Charging via Utilization of Triboelectric Effect in Harnessing Electrical Energy from Disposed Human Hair.....2295**
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- 1570461885 Small Signal Stability of UHVDC Hierarchical Connection to AC Grid.....2300**
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- 1570466689 Deep Learning Based Feature Reduction for Power System Transient Stability Assessment.....2306**
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- 1570466778 A Revisit to Impulse Breakdown Voltage of Standard Air Gaps.....2311**
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- 1570468824 Transient Stability Enhancement Brought by Rotor Angle Droop Control When Tie-line Faults Happen.....2317**
Jiangnan Zhang (Electric Power Research Institute of Henan Electric Power Company, P.R. China); Qiang Wei (Henan Electric Power Research Institute, P.R. China); Weimin Guo (Rundian Energy Science and Technology Co., Ltd., P.R. China); YaoHua Tang (Henan Electric Power Research Institute, P.R. China); Xinghuang Wu (Fuzhou University, P.R. China)
- 1570452458 Error Procreation Algorithm Applied for Multilevel Inverters.....2322**
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Poster I (Monday 29 October)

Session Time: 13:30-15:00

<MON-LOB-II> (Lobby 2F)

Session Chair: Changhyun Kim (POSTECH, Korea)

- 1570466650 Constant Current Frequency Tracking in LCC Converters.....2328**
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- 1570467002 Development of Low Power Low Dropout Regulator with Temperature and Voltage Protection Schemes for Wireless Sensor Network Application.....2333**
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- 1570467007 Development of a Self-Correcting CMOS-Based Clock Generator for Wireless Sensor Network in 90nm Process Technology.....2338**
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- 1570467011 Development of Resolution Scalable Successive Approximation Register ADC in 90nm CMOS Process Technology for Wireless Sensor Network.....2344**
Jhohn Paulo de Chavez, Michaela Maala, Ellen Mhae Valencia, Adonis Santos, Francis Malabanan, Jay Nickson Tabing and Sherryl Gevaña (First Asia Institute of Technology and Humanities, Philippines)
- 1570467013 Design of an Advanced Microcontroller Bus Architecture for Wireless Sensor Network in 90nm Process Technology.....2350**
Dereil Arellano, Geraldine Malaguit, Michelle Sosing, Janus Giovanni Torres, Jay Nickson Tabing, Adonis Santos, Francis Malabanan and Sherryl Gevaña (First Asia Institute of Technology and Humanities, Philippines)
- 1570468129 A Dimmable Open-Loop Resonant LED Driver for a Horticulture Grow Light.....2355**
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- 1570468641 ISFET Bridge Type Readout Circuit with Programmable Voltage and Current.....2360**
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- 1570468748 Development of Low Power Full-Custom 1 Kb 8T Synchronous SRAM for Wireless Sensor Network in 90nm CMOS Process Technology.....2364**
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- 1570459928 BIFF: A Blockchain-based IoT Forensics Framework with Identity Privacy.....2370**
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- 1570466676 A Novel Fault-Tolerant Routing Technique for Mesh-of-Tree Based Network-on-Chip Design.....2376**
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- 1570466694 Fault-Tolerant Network-on-Chip Design for Mesh-of-Tree Topology Using Particle Swarm Optimization.....2382**
P Veda Bhanu (Birla Institute of Technology and Science- Pilani, Hyderabad Campus, India); Pranav Kulkarni (Birla Institute of Technology and Science- Pilani, Hyderabad Campus, India); Sarthak Jain (Birla Institute of Technology and Science- Pilani, Hyderabad Campus, India); Soumya J (BITS Pilani, Hyderabad Campus & BITS Pilani, Hyderabad Campus, India); Linga Reddy Cenkeramaddi (University of Agder, Norway); Henning Idsøe (Norway & University of Agder, Norway)
- 1570461311 Four Scene Transition of Scenario Robot by Some Triggers.....2388**
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- 1570466962 Gyroscopic Stabilizer for 3D Mapping Device on Unmanned Ground Vehicle.....2393**
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- 1570442590 Power Model of Rain Gauge Sensor Node with Solar Panel Power Source.....2397**
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- 1570447649 Bayesian Wingbeat Frequency Classification and Monitoring of Flying Insects Using Wireless Sensor Networks.....2401**
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- 1570460593 Effective Algorithm for Benign Brain Tumor Detection Using Fractional Calculus.....2406**
Saroj Chandra (Indian Institute Of Information Technology Design and Manufacturing Jabalpur, India); Manish Bajpai (IIITDM Jabalpur, India)
- 1570467021 Inference Analysis of Dry Rubber Content Inductive Properties in Discriminating of White Root Disease.....2412**
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- 1570466624 Analysis on the Limitation of Number of Channels in WDM System Based on Photonic Microring Resonator.....2416**
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- 1570466621 Design, Simulation, and Analysis of a Digital Electro-optic SR NOR Latch.....2420**
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Poster II (Tuesday 30 October)

Session Time: 13:15-14:45

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Session Chair: Cheon Won Choi (Dankook University, Korea)

- 1570461630 Developing Social Information Platform for Cool Japan in Asian Countries.....2424**
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- 1570461146 Assessment of Malaysian ICU Staff Perceptions Towards STAR Glycaemic Control Protocol.....2429**
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- 1570467028 ANN and SVM Classifiers in Identifying Autism Spectrum Disorder Gait Based on Three-Dimensional Ground Reaction Forces.....2434**
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- 1570461446 Crowdsourcing Transportation Information Services Through Named Data Networking.....2439**
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