2017 IEEE 2nd International Conference on Automatic Control and Intelligent Systems (I2CACIS 2017)

Kota Kinabalu, Malaysia
21 October 2017

IEEE Catalog Number: CFP17H61-POD
ISBN: 978-1-5386-0847-0

Copyright © 2017 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number: CFP17H61-POD
ISBN (Print-On-Demand): 978-1-5386-0847-0
ISBN (Online): 978-1-5386-0846-3

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

Table of Contents

	Page
Organizing Committee	iii
Technical Reviewers	iv
Table of Contents	v
Paper Title & Authors	
Hybrid Fast Distributed Maximum Power Point Tracking Technique in Rapid Mismatching Condition Muhammad Iqbal Mohd Zakki, Mohd Najib Mohd Hussain and Mohammad Nawawi Seroji	1
Pre-School Selection System Using Analytic Hierarchy Process (AHP): Implementation and Usability Study Abd. Rasid Mamat, Nurul Hanis Abd. Rasid, Fadhilah Ahmad, Norkhairani Abd Rawi, Mohamad Afendee Mohamed, Wan Suryani Wan Awang and Fatimah Ghazali	7
Identification of Impulse Responses of Multi-Input Systems Ai Hui Tan and Yin Hoe Ng	13
Prediction-Based Autoscaling for Container-Based PaaS System Bin Xie, Guanyi Sun and Guo Ma	19
Modeling and Comparative Study of PID Ziegler Nichols (ZN) and Cohen–Coon (CC) tuning method for Multi-Tube Aluminum Sulphate Water Filter (MTAS) Ahmad Aftas Azman, Mohd Hezri Fazalul Rahiman, Nurul Nadia Mohammad, Mohd Hezri Marzaki, Mohd Nasir Taib and Mohd Fozi Ali	25
Strength Characteristic of Polyurethane with Variation of Polyol to Isocyanate Mix Ratio : A Numerical Analysis Norbaya Sidek, Ilyani Akmar Abu Bakar, Ahmad Aftas Azman, Abdul Samad Abdul Rahman and Wizario Anak Austin	31
Blood Pressure Measurements using Non-contact Video Imaging Techniques Wei Leong Khong, Nittala Surya Venkata Kameswara Rao, Muralindran Mariappan	35
Finger Tracking for Piano Playing through Contactless Sensor System: Signal Processing and Data Training using Artificial Neural Network Choo Chee Wee and Muralindran Mariappan	41
Path Planning of Indoor Mobile Robot using Harmonic Potentials via Half-Sweep Modified SOR Method Sumiati Suparmin and Azali Saudi	46
Multimode Resonator Microstrip Bandpass Filters M. K. Haldar, A. Farzamnia and Hieng Tiong Su	52
An Optimal Adaptive Model-Free Control with a Kalman-filter-based Observer for a Generic Nonlinear MIMO System Ali Safaei and Muhammad Nasiruddin Mahyuddin	56

Optimization of Traffic Network Signal Timing using Decentralized Genetic Algorithm 62
Min Keng Tan, Helen Sin Ee Chuo, Renee Ka Yin Chin, Kiam Beng Yeo and Kenneth Tze Kin Teo

A Stochastic Traffic Cellular Automata with Controlled Randomness 68
Lorita Angeline, Mei Yeen Choong, Bih Lii Chua, Renee Ka Yin Chin and Kenneth Tze Kin Teo

Modeling of Vehicle Trajectory Clustering based on LCSS for Traffic Pattern Extraction 74
Mei Yeen Choong, Lorita Angeline, Renee Ka Yin Chin, Kiam Beng Yeo and Kenneth Tze Kin Teo

A Genetic Algorithm for Management of Coding Resources in VANET 80
Chun Hoe Lee, Kit Guan Lim, Min Keng Tan, Renee Ka Yin Chin and Kenneth Tze Kin Teo

SUMO Enhancement for Vehicular Ad Hoc Network (VANET) Simulation 86
Kit Guan Lim, Chun Hoe Lee, Renee Ka Yin Chin, Kiam Beng Yeo and Kenneth Tze Kin Teo

Evolvable Traffic Signal Control for Intersection Congestion Alleviation with Enhanced Particle Swarm Optimisation 92
Helen Sin Ee Chuo, Min Keng Tan, Alex Chee Hoe Chong, Renee Ka Yin Chin and Kenneth Tze Kin Teo

An Intelligent Approach for Nonlinear System Identification of a Li-ion Battery 98
Mohammad (Behdad) Jamshidi, Morteza Jamshidi and Safdar Rostami

Intelligent Sign Language Recognition Using Enhanced Fourier Descriptor: A Case of Hausa Sign Language 104
S. T. Hassan, J. A. Abolarinwa, C. O. Alenoghena, S. A Bala, M. David and Ali Farzaminia

Experimental Design for Backlash Detection in a Two-mass Rotational System 110
A'zraa Afhzan Ab Rahim, Christian Matthews and Noor Ezan Abdullah

A Dynamic Artificial Neural Network Approach to Estimate Thermal Behaviors of Li-ion Batteries 116
Mohammad (Behdad) Jamshidi and Safdar Rostami

Improvement for Power Quality by using Dynamic Voltage Restorer in Electrical Distribution 122
Amir Hameed Abed, Javad Rahebi and Ali Farzamnia

Reduce Power Losses and Improve Voltage Level by Using Distributed Generation in Radial Distributed Grid 128
Husham Sajir, Javad Rahebi, Amir Abed and Ali Farzamnia

Neural Network for the Detection of Misplaced and Missing Regions in Images 134
Jin Siang Tan and Rosmiwati Mohd-Mokhtar

Economic Dispatch Optimization for Thermal Power Plants in Iraq 140
Mohammed Al-jumaili, Javad Rahebi, Ayhan Akbas and Ali Farzamnia

Protection of Sensitive Loads from Voltages Fluctuations in Iraqi Grids By DVR 144
Amir Hameed Abed, Javad Rahebi, Husham Sajir and Ali Farzamnia

Interactive Procedural Generation for Items in Role-Playing Game 150
Ng Wai Foong, Chin Kim On, Rayner Alfred, Jason Teo and Ag Asri Ag Ibrahim

Improved-TOPSIS based Handover Scheme for Telemedicine Service Using Heterogeneous Wireless Networks 155
Hoe Tung Yew, C. S. Kheau, R. K. Y. Chin, Ali Chekima and Muhammad Haikal Satria

Investigation on the Relationship between Cholesterol and Blood Glucose Levels using Decision Tree Method in Healthy Subjects 161
Qurratu ‘Aini Aishah Ahmad Fazil and Ummu Kulthum Jamaludin

Understanding Convolutional Neural Networks Using A Minimal Model for Handwritten Digit Recognition 167
Matthew Y.W. Teow

An Analysis of PSO Inertia Weight Effect on Swarm Robot Source Searching Efficiency 173
M. H. A. Majid and A M. R. Arshad

Detection of Markers Using Deep Learning for Docking of Autonomous Underwater Vehicle 179
M. F. Yahya and M. R. Arshad

Wall-press Type Pipe Inspection Robot 185
Muhammad Azri Abdul Wahed and Mohd Rizal Arshad

Robust Optimal Depth Control of Hovering Autonomous Underwater Vehicle 191
Yoong Siang Song and Mohd Rizal Arshad

A Review on Methods and Classifiers in Lip Reading 196
Leticia Ria Aran, Farrah Wong and Lim Pei Yi

Integrated OBD-II and Mobile Application for Electric Vehicle (EV) Monitoring System 202
Kavian Khorsravinia, Mohd Khair Hassan, Ribhan Zafira Abdul Rahman, Syed Abdul Rahman Al-Haddad

A Study on Sabah Grid System Stability 207
Myjessie Songkin, N. N. Barsoum, Farrah Wong and P. Y. Lim

Preliminary Study of Kirlian Image in Digital Electrophotonic Imaging and its Applications 213
Janifal Alipal, Razak Mohd Ali Lee and Ali Farzamnia

Author’s Index 218