

2019 4th International Conference and Workshops on Recent Advances and Innovations in Engineering (ICRAIE 2019)

**Kedah, Malaysia
28 – 29 November 2019**



**IEEE Catalog Number: CFP1937W-POD
ISBN: 978-1-7281-2611-1**

**Copyright © 2019 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:	CFP1937W-POD
ISBN (Print-On-Demand):	978-1-7281-2611-1
ISBN (Online):	978-1-7281-2610-4

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

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Content

S. No.	Particulars	Page No.
1.	Messages & Keynote Details	
2.	Conference Committees	
3.	Animesh Deval , Rohit Kumar, Rahul Vyas “ A Recommendation of Right Product to Right Customer, Next Best Offer: A Comparative Study ”	1
4.	See Yuen Chark , Jian Jing Saw, “ Internet Of Things (IoT) Based Smart Wall Outlet ”	6
5.	Mohammed Hajjaj , Mitsunori Miki, Kitsunori Shimohara, “ Reducing the Energy by Utilizing Distributed Luminance for the Occupancy Spaces at the Office ”	11
6.	Anita Garhwal , Mohd. Riduan Ahmad, Badrul Hisham Ahmad, Sanyog Rawat, Pushepndra Singh, Kanad Ray, Anirban Bandyopadhyaya, “ Dual Band Flower Shaped Fractal Patch Antenna for Remote Health Monitoring ”	17
7.	Nor Laily Hashim , Yasir Salman Dawood, “ Review on Test Case Generation Methods using UML Statechart ”	21
8.	Jamal Salem Amro, Rohaida Romli, “ Investigation on the Learning Programming Techniques via Mobile Learning Application ”	26
9.	Siti Azreena Mubin , Matthew Wee Ann Poh, “ A Review on Gamification Design Framework: How They Incorporated for Autism Children ”	33
10.	Suman Sukhavasi, Thinagaran Perumal , Norwati Mustapha, Razali Yaakob, “ Device Verification and Compatibility for Heterogeneous Semantic IoT Systems ”	37
11.	Fredrik Schalling , Sebastian Ljungberg, Naveen Mohan, “ Benchmarking LiDAR Sensors for Development and Evaluation of Automotive Perception ”	40
12.	Yi Yun Lau, Muhammad Nasiruddin Mahyuddin , Bakhtiar Affendi Rosdi, Noor Hafizi Hanafi, “ Autonomous Test System for CAN-based Automotive Instrument Cluster ”	46
13.	Yong Jonathan Chung Ee , Shariff Ghanem Nawazdeen, Norsaremah Bt Salleh, Siow Chee Loon, “ Risk Assessment of Building Fire Evacuation with Stochastic Obstructed Emergency Exit ”	53
14.	Ramashini Murugaiya, Pg Emeroylariffion Abas, Ulmar Grafe, Liyanage C De Silva, “ Bird Sounds Classification using Linear Discriminant Analysis ”	58
15.	Zhong Ying Thean , Vooi Voon Yap, Peh Chiong The, “ Container-based MQTT broker cluster for edge computing ”	64
16.	Muhamad Najib Zamri , Mohd Shahrizal Sunar, “ Research on Atmospheric Clouds: A Review of Cloud Animation Methods in Computer Graphics ”	70
17.	Syahida Hassan , Azizah Ahmad, Alawiyah Abd Wahab, Rahayu Ahmad, Juliana Wahid, “ Simplicity is The Golden Rule: Lesson Learned from The Development of Smart Mobile Apps for Rural Community ”	76
18.	Nur Nabilah Binti Abd Rahman , Noor Syuhada Elyza Ghazali, Abdullah Sharaf, Rania Al-Ashwal, “ Critical Path Analysis For Myocardial Infarction Patient ”	81
19.	Yuliarman Saragih , Gilang Ramadhany Hakim, Agatha Elisabet, “ Monitoring Design of Methods and Contents Methods in Semi Real Water Tandon by Using of Arduino – based on Internet of Things ”	87
20.	Laurent Nana (Prof) , François Monin, Sophie Gire, “ Proof of Properties of A Syntax Analyzer Of Robotic Mission Plans ”	91
21.	Ahmed A. Hussain , Nizar Tayem, Abdel-Hamid Soliman, “ Matrix Decomposition Methods for Efficient Hardware Implementation of DOA Estimation Algorithms: A Performance Comparison ”	97
22.	You-Chun Huang , Chin-Sien Moo, Wan-Jung Chen, Shih-An Yin, “ An LED Driver Circuit with Partial Power Regulation for Photovoltaic Warning-Light ”	104
23.	Ramesh Chand Meena , Meenakshi Nawal and Mahesh Bundele, “ Appraisal of Source IP Validation Techniques in SDN ”	109
24.	Boezura Borhanuddin , Norziana Jamil, Ooi Thomas Wei Min, Mohd Zafri Baharuddin, Chen Soong Der, Tan Kelvin Sim Zhenm, “ Small-Scale Deep Network for DCT-Based Images Classification ”	114

25.	Venkata Raghunadh Machavaram, Bheema Rao Nistala, "A High Performance Miniaturized onchip 25 GHz Narrow Bandpass Filter for 5G Radio Access Applications"	120
26.	Medikonda Asha Kiran , Syam Kumar Pasupuleti, R Eswari, "A Lightweight Two-factor Mutual Authentication Scheme for Cloud-based IoT"	125
27.	Nahla Mohammed Elzein , Mazlina Abdul MajidMohammed Fakherldin, Ibrahim Abaker, "ANN-based Performance Analysis on Human Activity Recognition"	131
28.	Sridhar K V , Prof. Kishore Kumar T, "Performance Evaluation Of CS Based Speech Enhancement Using Fixed And Sparse Dictionaries"	137
29.	Nur Darina Ahmad , Nik Muhamad Syazwan Nek Omar, Siti Solehah Md Ramli, Nurul Huda Ishak, Mohd Taufiq Ishak, Norlina Md Zain, "A Study on Varies Temperature and Varies Gap Distance on Mixed Vegetable Oil as an Transformer Oil"	144
30.	Siti Solehah Md Ramli, Mohd Khairul Anwar Md Khairudin, Nur Darina Ahmad, Nurul Huda Ishak, Nur Fadhilah Jamaludin, Nur Atharah Kamarzaman, Mohamad Kamarol Mohd Jamil, "An Effect on Form Particle Contamination in Biodegradable Transformer Oil"	148
31.	Sagar Shankarrao , Dr Minh Nyuen, Prof Wei Qi Yan, Shazebo Kazi, "Human Tumor Detection Using Active Contours and Region Growing Segmentation"	153
32.	Suhanah Rosnan, Nurazzah Abd Rahman, Shahirah Mohamed Hatim , Zahirah Hamid Gul, "Performance Evaluation Of Inverted Files B-Tree And B+ Tree Indexing Algorithm On Malay Text"	158
33.	Saravana Selvan , Umayal, "A Novel Dual Electrode and Gate Extended Doping-less TunnelFET for RF Energy Harvesting"	164
34.	Nur Hana Samsudin , Lukman Nurhaqim Rahim, "Rapid Heteronym Disambiguation for Text-to Speech System"	170
35.	Indu Chhipa, Devendra Somwanshi, "Fuzzy Logic Controller to control internal climate of a greenhouse"	176
36.	Khairul Adilah Ahmad , Mahmod Othman, Sharifah Lailee Syed Abdullah, Noor Rasidah Ali, Siti Rafidah Muhamat Dawam, "Mango Shape Maturity Classification Using Image Processing"	181
37.	Jamaluddin Jasmis, Mohd Nor Hajar Hasrol Jono, Azlan Abdul Aziz, Rosdiana Abd Razak, Shamsul Jamel Elias and Shaifizat Mansor, "An Evolutionary Tool For Requirements and Design Crosscutting Concerns"	186
38.	Afida Ahmad , Ong Weng Eng, Ab Razak Mansor, "Preserving the Positivity of Curves and Surfaces using Radial Basis Function"	191
39.	Aznor Hanah , M R A Rejab, Rohani Farook, M Fairuz M Fadzil, Shamsul Jamel Elias and Zulkifli Husin, "IoT Room Control And Monitoring System Using Raspberry Pi"	197
40.	Maxim Mozgovoy, "Multiplatform Automated Software Testing: Personal Experience of a Maintainer"	201
41.	Quinny Ben Hassan, Azlan Abdul Aziz, Jamaluddin Jasmis Jasmis, Zainal Fikri Zamzuri, Syamsul Ariffin Yahya, Mohd Nor Hajar Hasrol Jono, Shamsul Jamel Elias, Siti Nurbaya Ismail, "Evaluation of e-Content for Adult Learners in a Distance Education Program: A Case Study"	205
42.	Taniza Tajuddin , Azizah Abdul Manaf, Nor Fatimah Awang, Siti Rafidah Muhamat Dawam, Noor Rasidah Ali, Rafidah Amat, "Crime Suspect Profiling (CSP) for Forensic Investigation on Smartphone"	211