

2019 International Conference on Computing, Electronics & Communications Engineering (iCCECE 2019)

**London, United Kingdom
22 – 23 August 2019**



**IEEE Catalog Number: CFP19P74-POD
ISBN: 978-1-7281-2139-0**

**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:	CFP19P74-POD
ISBN (Print-On-Demand):	978-1-7281-2139-0
ISBN (Online):	978-1-7281-2138-3

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

CURRAN ASSOCIATES INC.
proceedings
.com

Table of Contents (ToC)

Preface

Mahdi H. Miraz, Peter S. Excell, Andrew Ware, Safeeullah Soomro and Maaruf Ali

Technical Co-sponsors

Knowledge Partners

Track: Electronics, Circuits and Systems

An Improved FVF Lowpass Filter with 0.02 fJ-FoM	1-4
Surachoke Thanapitak and Chutham Sawigun	
FPGA-based Task Scheduler for Mixed-Criticality Real-Time Systems	5-10
Lukáš Kohútka and Viera Stopjaková	
Leakage Immune Modified Cross Coupled Inverter Based MI-12T SRAM in Sub-Threshold Regime	11-15
Priya Gupta, Pawan Sharma and Srinjoy Mitra	
Design and Implementation Smart Transformer based on IoT	16-21
Walid K A Hasan, Abobaker Alraddad, Abdulfatah Ashour, Yachao Ran, Mohamed A Alkelsh and Reyadh A M Ajele	
Remote Arduino programming with Blockly web interface	22-25
Maroš Pataky and Peter Fecil'ak	

Track: Energy and Power Systems

Canadian Energy System Management under Climate Change Conditions	26-31
Gordon Huang, Lirong Liu, Xiaoyue Zhang, Jinbo Zhang, Yupeng Fu, Bin Luo, Mengna Li and Xiaogui Zheng	
Prediction of Machine Learning Base for Efficient Use of Energy Infrastructure in Smart City	32-35
Guwon Yoon, Sanguk Park, Sangmin Park, Tacklim Lee, Seunghwan Kim, Hyeonwoo Jang, Sanghyeon Lee and Sehyun Park	
Energy Harvesting using Piezoelectric Element for Human Daily Life	36-39
JaeYong Lee, Myeong-in Choi, Keonhee Cho, Sanghoon Lee, Lee Won Park, Seung Min Kim, Hangbae Chang and Sehyun Park	

Track: Control Systems

The voltage offset in the noised signal frequency estimation for a Renewable Energy System using Generalized Maximum Sidelobe Decay windows	40-44
Józef Borkowski and Dariusz Kania	
Optimization of Second Order Non-linear System using Fuzzy Logic Controller	45-50
Gurulingappa M. Patil, Abhinav Saxena and Aishwarya G. Patil	
Transient Performance Enhancement of Tank Circuited 3-Pole PV Based DC Microgrid with Limit-Based P & O MPPT Algorithm	51-55
Babatunde A. Giwa and Yehdego Habtay	

Track: Computing and IT

Gesture Recognition in Leap Motion Using LDA and SVM	56-61
Hussein Walugembe, Chris Phillips, Jesus Requena-Carrión and Tijana Timotijevic	
Reflex-Augmented Reinforcement Learning for Operating Strategies in Automotive Electrical Energy Management	62-67
Andreas Heimrath, Joachim Froeschl, Razieh Rezaei, Martin Lamprecht and Uwe Baumgarten	
Data-Driven Models for Sewer Blockage Prediction	68-72
Mohammed Hassouna, Marta Reis, Mohamed Al Fairuz and Ali Tarhini	
Comparative Study of Ranking Algorithms	73-77
Sandeep Suri, Arushi Gupta and Kapil Sharma	
Kernel Sharing in the Channel Dimension to Improve Parameters Efficiency	78-82
Guoqing Li, Meng Zhang, Bin Duan, Qianru Zhang and Guodong Tong	
An Intelligent Inflammatory Skin Lesions Classification Scheme for Mobile Devices	83-88
Nazia Hameed, Antesar Shabut, Fozia Hameed, Silvia Cirestea and Alamgir Hossain	
Credibility of Alert Messages for Computer Virus Infection	89-93
Kana Shimbo, Shun-Ichi Kurino and Noriaki Yoshikai	
Authentication by Graphical Passwords Method 'Hope'	94-99
Nikita Zujevs	
Failure Mode & Effect Analysis for Improving Data Veracity and Validity	100-105
Ana Elsa Hinojosa Herrera, Chris Walshaw, Chris Bailey and Chunyan Yin	
Predicting the Standard and Deviant Patterns In EEG Signals Based On Deep Learning Model	106-111
Mhd Saeed Sharif, Ali H. Al-Bayatti and Ahmed S. Alfakeeh	
E-Government in Developed and Developing Countries: A Systematic Literature Review	112-117
Bismal Majeed, Hamza Ahmed Khan Niazi and Nosheen Sabahat	
A Deep Learning Based Suggested Model to Detect Necrotising Enterocolitis in Abdominal Radiography Images	118-123
Jacqueline van Druten, Mhd Saeed Sharif, Sherwin S Chan, Clara Chong and Hassan Abdalla	
Fast and accurate iris segmentation methods using LoG filters	124-129
Raja Manzar Abbas, Tariq M. Khan, Mohammad A.U. Khan and Hilal Ahmed Khan	
Smart Holistic Model for Children and Youth with Special Educational Needs and Disabilities	130-135
Rasha Hafidh, Mhd Saeed Sharif and Muna Alsallal	
Predicting Hourly Particulate Matter (PM_{2.5}) Concentrations Using Meteorological Data	136-140
Sarah A. AlDaweesh	
Automating the Assessment of Network Security in Higher Education	141-146
Neville Palmer	

Track: Pervasive Computing and Internet of Things

Context-Aware Driver Distraction Severity Classification using LSTM Network	147-152
Adebamigbe Fasanmade, Suleiman Aliyu, Ying He, Ali H. Al-Bayatti, Mhd Saeed Sharif and Ahmed S. Alfakeeh	

LabVIEW-FPGA based implementation of an Authenticated Encryption core	153-157
Muzaffar Rao, Edin Omerdic, Admir Kaknjo, Daniel Toal and Thomas Newe	
Review and Open issues of Cryptographic Algorithms in Cyber Security	158-162
Safeeullah Soomro, Mohammad Riyaz Belgaum, Zainab Alansari and Ruchin Jain	
IoT Based Home Automation System Using ThingSpeak	163-168
Adeem Akhtar, Taha Ahmad, Nosheen Sabahat and Sidra Minhas	
A new Database for Underwater Sound Recognition using a Nonlinear Support Vector Machine	169-172
Mohsen Sadeghi, Hossein Gholamalinejad and Maaruf Ali	
A Novel Surgery Navigation System Combined with Augmented Reality based on Image Target Positioning System	173-176
Shin-Yan Chiou, Hao-Li Liu, Chia-Wei Lee, Meng-Yuan Lee, Ching-Yao Tsai, Chi-Lun Fu, Pin-Yuan Chen and Kuo-Chen Wei	
Intelligent Transaction Techniques for Blockchain Platforms	177-182
Anwar Alruwaili and Dov Kruger	
Three-way Security Framework for Cloud based IoT Network	183-186
Nida Zeeshan, Martin Reed and Zeeshan Siddiqui	

Track: Economics and Business Engineering

Conceptualization of a measurement method proposal for the assessment of IT security in the status quo of micro-enterprises	187-192
Michael Heidenreich	
Predictive Process Monitoring using a Markov Model Technique	193-196
Naveed Khan, Sally McClean, Zulfiqar Ali, Aftab Ali, Darryl Charles, Paul Taylor and Detlef Nauck	
Analysis of Users' Behaviour and Adoption Trends of Social Media Payment Platforms	197-202
Mahdi H. Miraz and Marie Haikel-Elsabeh	
Proposed Customer's Sensitive Information Privacy Model for Financial Institution	203-207
Sundresan Perumal, Raamesh Aramugam, Ganthan Narayana Samy, Karthiggaibalan Krishnasamy and Bharanidharan Shanmugam	

Track: Communications Engineering and Vehicular Technology

Vehicular Volunteer Computing (VVC): A Novel Paradigm for The Volunteering of Vehicular Resources; Opportunities and Challenges	208-213
Wiseborn Manfe Danquah and D. Turgay Altılar	
Reducing Transient Disturbances within Automotive Power Systems through Adapting of Input Circuits	214-218
Martin Baumann, Christoph Weissinger and Hans-Georg Herzog	
Learning-Driven Wireless Communications, towards 6G	219-224
Md Jalil Piran and Doug Young Suh	
Channel Assignment and Power Control for D2D-Enabled Cellular Networks	225-228
Idayat O. Sanusi, Karim M. Nasr and Klaus Moessner	
Lightweight PUF-based Continuous Authentication Protocol	229-234
Konstantinos Goutsos and Alex Bystrov	

Numerical Discrimination of the Generalisation Model from Learnt Weights in Neural Networks	235-240
Richard N M Rudd-Orthner and Lyudmila Mihaylova	
LMS for Truncate CSI Feedback in Massive MIMO	241-246
Ali Almohammed and Mohamed Deriche	
Cost-effective Network Planning for Rural Communities	247-252
Nazrul Islam and Chris Phillips	
Detailed Analysis of IRIS Recognition Performance	253-258
Oktay Koç, Loredana Tosku, Julian Hoxha, Ali Osman Topal, Maaruf Ali and Arban Uka	