

# **2018 Recent Advances on Engineering, Technology and Computational Sciences (RAETCS 2018)**

**Allahabad, India  
6 – 8 February 2018**



**IEEE Catalog Number: CFP18L33-POD  
ISBN: 978-1-5386-1687-1**

**Copyright © 2018 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:	CFP18L33-POD
ISBN (Print-On-Demand):	978-1-5386-1687-1
ISBN (Online):	978-1-5386-1686-4

**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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## TABLE OF CONTENTS

Paper ID.	Paper Title and Author(s) Name
RAETCS - 008	Shape-Area Model-based Key Management In Wireless Sensor Network...1 <i>Abhishek Srivastava, Sudhanshu Tripathi, Shweta Dwivedi and Prinu C. Philip</i>
RAETCS - 010	Daily Prediction of PM <sub>10</sub> using Radial Basis Function and Generalized Regression Neural Network...7 <i>Vibha Yadav and Satyendra Nath</i>
RAETCS - 019	Phishing Detection in Websites using Parse Tree Validation...12 <i>C Emilin Shyni, Anesh D Sundar and G. S. Edwin Ebby</i>
RAETCS - 023	A Wireless Sensor Node Based Efficient Parking Slot Availability Detection System for Smart Cities...16 <i>Venkanna U, Bhaumik Katiyar, Sanskar Sharma and Yamala Prashanth</i>
RAETCS - 027	Design and Performance Analysis of MZI based 2x2 Reversible XOR Logic Gate...22 <i>Kamal K. Upadhyay, Saumya Srivastava, Vanya Arun, N. K. Mishra and N. K. Shukla</i>
RAETCS - 032	A Novel Segmentation Technique for Urdu Type-Written Text...27 <i>Atif Mahmood and Ankita Srivastava</i>
RAETCS - 034	Maintenance of Medical Records Database and Simulation of Gene Therapy using Big Data concepts...32 <i>Saagar S., Naveen Nanda M., Nivedita Suresh Kumar Nair and Sruthi Kannan</i>
RAETCS - 037	Effectiveness of Processing Gain on Optical Interleave Division Multiple Access with Zero Dispersion Fiber using Tree Inter-leaver...37 <i>Ravi Prakash</i>
RAETCS - 039	Comparative Evaluation of Different Pulse Width Modulation Techniques on VSI Fed Three Phase Induction Motor...42 <i>Ipsita Mishra, Madhu Singh and Debanjan Roy</i>
RAETCS - 073	Gender Identification using Random Forest and SVM by Selecting Appropriate Set of Speech Frames in Real Environment...N/A <i>Arun Kumar Shukla and Suvendu Kanungo</i>
RAETCS - 074	Chaos Elimination in Fractional-Order Single-Machine-Infinite-Bus Power System Using State-Feedback Control...47 <i>Praveen Kumar Dewangan, Bimallesh Chandra Rout and Deepak Kumar Lal</i>
RAETCS - 078	Optimal Path in Mobile Ad-Hoc Networks with Differential Evolution...52 <i>Shashi Prabha and Raghav Yadav</i>
RAETCS - 083	A Review of Data Mining Methods in Bioinformatics...57 <i>Audu Musa Mabu, Rajesh Prasad, Raghav Yadav and Suleiman S Jauro</i>
RAETCS - 084	Design of Robust Feedback Controller for a UPS System in Industrial Application...63 <i>Venkatesh Naik, Satish Kumar Gudey and Arjuna Rao Anuku</i>
RAETCS - 087	Aperture Coupled Patch Antenna for Dual Band Operation 4.5/5.5 GHz...69 <i>R. K. Bajpai, Rajeev Paulus, Ashish Singh and Mohammad Aneesh</i>
RAETCS - 091	Design of an Advanced Five-level Inverter for A Photovoltaic System...73 <i>Raseswari Pradhan and Patriot Sher Das</i>
RAETCS - 096	E2E QoS Support Aided ITPC WiFi Network for Baghdad City: Performance Analysis...79 <i>Haider Mohammed Turki AL-HILFI, Ammar Ali Sahrab and Ion Marghescu</i>
RAETCS - 097	Design and Analysis of Wireless Networks Based on ITPC for Performance Improvement...85 <i>Haider Mohammed Turki AL-HILFI, Ammar Ali Sahrab and Ion Marghescu</i>
RAETCS - 100	Security Aspect in Instant Mobile Messaging Applications...91 <i>Puneet kumar Aggarwal, P. S. Grover and Laxmi Ahuja</i>
RAETCS - 107	High-Performance High Speed IGBT Based Induction Motor Driven by Cycloinverter-Fed with Slit Rotor...96 <i>Anchal Yadav, Pratibha Tiwari and Sarika Kalra</i>
RAETCS - 111	MEMS based Flow Cytometer with Instrumentation System for Detection of Micro Particles for Health Care Applications...102 <i>Mahesh Kumar and Debanjan Das</i>

Paper ID.	Paper Title and Author(s) Name
RAETCS - 113	Similarity Detection in Biological Sequences using Parameterized Matching and Q-gram...107 <i>Rama Singh, Deepak Rai, Rajesh Prasad and Rajevev Singh</i>
RAETCS - 119	Analysis of Half Circular F Slot Multiband Microstrip Antenna with Defected Ground Structure...113 <i>Mukesh Kumar, Rohini Saxena, J. A. Ansari, Ajay Singh, M. G. Siddiqui, A. K. Saroj and G. P. Singh</i>
RAETCS - 121	Design and Analysis of E-Slot Microstrip Antenna...118 <i>Navendu Nitin, Neelesh Agrawal, Mohd Gulman Siddiqui and Jamshed A. Ansari</i>
RAETCS - 130	Parameter Estimation of a Permanent Magnet Synchronous Motor using Whale Optimization Algorithm...123 <i>Abhishek Srivastava, Dushmanta Kumar Das, Ankur Rai and Rakshit Raj</i>
RAETCS - 131	Load Frequency Control of Multi Area Interconnected Microgrid Power System using Grasshopper Optimization Algorithm Optimized Fuzzy PID Controller...129 <i>Deepak Kumar Lal, Ajit Kumar Barisal and M. Tripathy</i>
RAETCS - 132	Design and Analysis of MEMS Varactor...135 <i>Kamal Prakash Pandey, Naveen Mishra and Rakesh Kumar Singh</i>
RAETCS - 133	Small Signal Stability Enhancement of Power System with GA Optimized PD Type PSS and AVR Control...141 <i>Bidyadhar Rout, B. B. Pati and Ashribad Pattnaik</i>
RAETCS - 139	An Automatic Segmentation Algorithm of Boundary Layers from B-Mode Ultrasound Images...147 <i>Amit Kumar and Pratibha</i>
RAETCS - 146	Design of Frequency Reconfigurable Annular Microstrip Patch Antenna using Pin Diode...153 <i>Ekta Singh Chauhan, Sarita Khandka and Anil Kumar</i>
RAETCS - 156	Design of Isosceles-Shaped Fractal Antenna for Ku and K-Band Applications...157 <i>Mohd Gulman Siddiqui, Abhishek Saroj, Devesh, Neelesh Agrawal and J. A. Ansari</i>
RAETCS - 164	Interoperability Framework for Wireless Standards-Performance Analysis...162 <i>Muthanna Jaafar Abbas</i>
RAETCS - 167	A Slot Loaded Circular Disk Antenna for Wideband Operation...167 <i>Saiyed Salim Sayeed, Gulman Siddiqui, Mukesh Kumar, Neelesh, J.A. Ansari and Abhishek Saroj</i>
RAETCS - 169	Optimized Entropy Based Algorithm for Aircraft Scheduling Problem...172 <i>Ayman Almabruk Mahmud and W. Jeberson</i>
RAETCS - 178	Dynamic Modelling and Control of PMSG Based Stand-Alone Wind Energy System...178 <i>Shruti Sahu, Gayadhar Panda and Satya Prakash Yadav</i>