

2018 5th International Conference on Signal Processing and Integrated Networks (SPIN 2018)

**Noida, Delhi-NCR, India
22-23 February 2018**

Pages 1-456



**IEEE Catalog Number: CFP18SPJ-POD
ISBN: 978-1-5386-3046-4**

**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:	CFP18SPJ-POD
ISBN (Print-On-Demand):	978-1-5386-3046-4
ISBN (Online):	978-1-5386-3045-7

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

1.	Secure Data Aggregation with Mean Field Extensive Game Theoretic Framework Khyati Chopra, Ranjan Bose, Anupam Joshi	1
2.	An Energy aware Routing Mechanism in WSNs using PSO and GSO Algorithm Asha G R, Gowrishankar	7
3.	Analysis of fractional order low pass Elliptic filters Ashu Soni, Maneesha Gupta	13
4.	Significance of non-local means estimation in DWT based ECG signal denoising Pratik Singh, Gayadhar Pradhan	18
5.	Dual Stage Classification of Hand Gestures using Surface Electromyogram Karush Suri, Rinki Gupta	23
6.	Fuzzy Modeling between Cerebral Blood Flow and Physiological Parameters of the Human Brain Kavita Goyal, Moin Uddin, Vikas Jindal	28
7.	Effect of Transducer Positioning in Active Noise Control Sajil C. K., Biji C. L., Achuthsankar S. Nair	33
8.	Dual-Band Low Profile Notched Printed UWB Monopole Antenna with Enhanced Bandwidth Sachin Kumar, Sandeep Kumar Palaniswamy, Shobhit Saxena, Rahul Tiwari, Shalini Sah	39
9.	Relative Measures to Characterize EEG Signals for Early Detection of Alzheimer Aarti Sharma, J. K. Rai, R. P. Tewari	43
10.	Dynamic Threshold based Cooperative Spectrum Sensing using Coalitional Game for CRNs Sanjib K. Deka, Prakash Chauhan, Nityananda Sarma	49
11.	Mammogram Classification in Transform Domain Neha Samant, Poonam Sonar	56
12.	Differential Transmission over Strong fading Dual-Hop FSO links with Misalignment Deepti Aggarwal, Ankur Bansal, Ashwni Kumar	63
13.	A Design for Two-Dimensional Non-Causal Deslauriers-Dubuc Discrete Wavelet Transformation for Real-Time Video Processing on FPGA Mohammed Shameem Hussain, Thi Phuong Loan Hoang, Christian Langen	69

14.	A Variable Length Genetic Algorithm approach to Optimize Data Collection using Mobile Sink in Wireless Sensor Networks Raj Anwit, Prasanta K. Jana	73
15.	Transfer Learning for Object Detection using State of the Art Deep Neural Networks J. Talukdar, S. Gupta, P. S. Rajpura, R. S. Hegde	78
16.	Design of an Efficient RF Energy Harvesting System at 900 MHz Tapashi Thakuria, Hidam Kumarjit Singh, Tulshi Bezboruah	84
17.	Robust Digital Image Watermarking Scheme Based on RDWT-DCT-SVD Priyank Khare, Vinay Kumar Srivastava	88
18.	A Two-element Wideband MIMO Antenna For X-Band, Ku-Band, K-band Applications Nirdosh, Ashna Kakkar, Shalini Sah	94
19.	A Novel Approach for Gesture Spotting in an Assamese Gesture-Based Character Recognition System using a Unique Geometrical Feature Set Ananya Choudhary, Kandarpa Kumar Sharma	98
20.	Deep Neural Networks as Feature Extractors for Classification of Vehicles in Aerial Imagery Vysakh S Mohan, Sowmya V, K. P. Soman	105
21.	Performance Analysis of IRNSS-GPS Hybrid Operation: Study in Indian Metropolis Environment Atanu Santra, Somnath Mahato, Sukabya Dan, Pratibha Verma, P. Banerjee, Anindya Bose	111
22.	AN ADAPTIVE 2D-OS-CFAR THRESHODING IN CLUTTER ENVIROMENTS: TEST WITH REAL DATA Vu Viet Tien, Tran Vu Hop, Luu Hoai Nam, Nguyen Van Loi, Tran Thi Thanh	116
23.	An Effective Algorithm for Hemorrhages Detection in Retinal Images Nita Nimbarte, Milind Mushrif	120
24.	CPW-Fed UWB Flexible Antenna for GSM/WLAN/X-Band Applications Saurabh Kumar, Taimoor Khan	126
25.	Cognitive decision engine design for CR based IoTs using Diffrential Evolution and Bat Algorithm Avneet Kaur, Ashmeet Kaur, Surbhi Sharma	130
26.	Analysis of Correlation Based Coarse Timing estimation of OFDM system Soumitra Bhowmick, Kasturi Vasudevan	136
27.	Performance Improvement for Devanagari Script Input Based P300 Speller Ghanshyam B. Kshirsagar, Narendra D. Londhe	142
28.	Energy Efficient Communication Protocol at Network Layer for Internet of Things	148

Pinky Bai, Krishna Kumar, Sushil Kumar

29.	Comparison of feature extraction techniques to recognize traffic rule violations using low processing embedded system Manishkumar Purohit, Arvind R. Yadav	154
30.	Testing the conformity of GPS and IRNSS in terms of ionospheric delay and position errors T. Biswas, P. Banerjee, A. Paul	159
31.	Automatic Indexing of Lecture Videos using Syntactic Similarity Measures Shubhangi Jaiswal, Manoj Misra	164
32.	A Framework for Codon Based Analysis to detect abnormalities responsible for Esophagus Cancer using Soft Computing Tool Hemashree Bordoloi, Daisy Roy, S. R. Nirmala	170
33.	Comparing CNN and RNN for Prediction of Judgement in Video Interview Based on Facial Gestures Nishank Singhal, Neetika Singhal, Srishti	175
34.	GWO/PID Approach for Optimal Control of DC Motor Alisha Ahmed, Rajeev Gupta, Girish Parmar	181
35.	Detection of pulmonary vessels in 3D lung CT using improved Graph Cut Anita Khanna, Narendra D. Londhe, S. Gupta	187
36.	Artificial Noise Aided Secrecy Enhancement in Amplify-and-Forward Relay Networks Shemi P. M., Jibukumar M. G., Ali M. A.	192
37.	Improved Block-based Technique using SURF and FAST Keypoints Matching for Copy-Move Attack Detection Badal Soni, Pradip K. Das, Dalton Meitei Thounaojam	197
38.	A Novel Method for Direction and Deformation Independent Iris Localization Jaya Gautam, Abhimanyu Bhateja	203
39.	Power Management and Control of HEV using Model Predictive Control Pinaki Chakraborty, Bedatri Moulik	209
40.	Data Augmentation on Synthetic Images for Transfer Learning using Deep CNNs Jonti Talukdar, Ayon Biswas, Sanchit Gupta	215
41.	Error Rate Performance of SC-FDMA with Channel Dependent Subcarrier Scheduling Vinay Kumar Trivedi, Madhusudan Kumar Sinha, Preetam Kumar	220
42.	Access Point Planning for Disaster Scenario Using Dragonfly Algorithm Sanjoy Debnath, Anand Jee, Srimanta Baishya, Wasim Arif, Partha Pratim Saikia, Shoaib Naafi	226

43.	A Wideband U-Slotted 1×2 Array Antenna For Energy Harvesting Ashna Kakkar, Nirdosh, Rakshita Singh, Malay Ranjan Tripathy	232
44.	Cryptanalysis of an Image Encryption Scheme using Reverse 2-dimensional Chaotic Map and Dependent Diffusion Kirtee Panwar, Ravindra Kumar Purwar, Anchal Jain	236
45.	M Shaped Ultra Wide Band Monopole Antenna for TVWS CPE Arun Kumar Singh, Malay Ranjan Tripathy	240
46.	Genetic Algorithm based Approach to Determine Optimal Collection Points for Big Data Gathering in Distributed Sensor Networks Alekha Kumar Mishra, Suma Shree Thota, Simrat Bains, Meenakshi Das, Shruti Singhai, Siddhant Choudhary, Asis Kumar Tripathy	244
47.	Automatic Key Frame Extraction From Videos For Efficient Mouse Pain Scoring Marcin Kopaczka, Lisa Ernst, Jakob Heckelmann, Christoph Schorn, René Tolba, Dorit Merhof	248
48.	Capturing Temporal Aspects for ASR Design using Time Shifted Examples-TDNN Combination Mridusmita Sharma, Kandarpa Kumar Sarma	253
49.	Adaptive Volterra Modeling For Nonlinear Systems Based on LMS Variants Sachin N. Kapgate, Saurav Gupta, Ajit Kumar Sahoo	258
50.	Hybrid RBFN Based Encrypted SSH Traffic Classification Ayush Pradhan, Sidharth Behera, Ratnakar Dash	264
51.	Deep Neural Network Architecture for Anomaly based Intrusion Detection System Sidharth Behera, Ayush Pradhan, Ratnakar Dash	270
52.	New Frequency Dependent Negative Conductance Simulator employing VDTAs and Grounded Capacitances Pranjal Gupta, Mayank Srivastava	275
53.	Web-based Innovators Marketplace on Data Jackets as Communication Support System Daiji Iwasa, Teruaki Hayashi, Yukio Ohsawa	280
54.	Joint Source Channel Coding with Bandwidth Compression Surajit Deka, Kandarpa Kumar Sarma	286
55.	Pedestrian Detection from Low Resolution Public Cameras in the Wild Martin Rajnoha, Lukas Povoda, Jan Masek, Radim Burget, Malay Kishore Dutta	291
56.	A Novel HEED Protocol for Wireless Sensor Networks Rahul Priyadarshi, Lucky Singh, Randheer, Anurag Singh	296
57.	A Design and Analysis of Low Voltage FB-VDIBA and Biquad Filter Application Shweta Kumari, Maneesha Gupta	301

58.	A NOVEL WAVELET PACKET BASED DIRECTION OF ARRIVAL ESTIMATION FOR SPECTRUM SENSING IN COGNITIVE RADIO NETWORKS Vandana Bhardwaj, Tanya Goel, Garima Mahendru	307
59.	Compact circular monopole antenna with band notch characteristics for UWB applications Ushaben Keshwla, Sanyog Rawat, Kanad Ray, Nivedita Nair, Shweta Yadav	312
60.	Development of a Novel Approach to Enhance the performance of real time intelligent Telemetry based Irrigation System Manju Kaushik, Rajeev Ratan	316
61.	Automatic System for Diseased Artery Transverse Section Detection Jan Masek, Martin Rajnoha, Radim Burget, Malay Kishore Dutta	322
62.	Complex Image Segmentation using K-means Clustering aided Neuro-Computing Manami Barthakur, Kandarpa Kumar Sarma	327
63.	C ³ T : Cloud based Cyclic Cryptographic Technique and it's comparative analysis with classical cipher techniques Shubham Gupta, Rahul Johari, Prachi Garg, Kalpana Gupta	332
64.	SEEN: Stable Energy Efficient Network for Wireless Sensor Network Rahul Priyadarshi, Lucky Singh, Anurag Singh, Ankush Thakur	338
65.	IRS: Incentive Based Routing Strategy for Socially Aware Delay Tolerant Networks Amit Kumar Singh, Rajendra Pamula	343
66.	Tunable Q - wavelet transform based features for automated screening of knee-joint vibroarthrographic signals Jayrajsinh Zala, Manish Sharma, Raghavendra Bhalerao	348
67.	Parameter Estimation of Low Pass Filter Using Stochastic Modelling Rahul Bansal, Sudipta Majumdar	353
68.	Diabetic Retinopathy Detection by Extracting Area and Number of Microaneurysm from Colour Fundus Image Shailesh Kumar, Basant Kumar	359
69.	New Feature Extraction from Electroglottographic Signals Applied to Automatic Detection of Laryngeal Pathologies Jesús B. Alonso-Hernández, María L. Barragán-Pulido, José P. González-Torres, Carlos M. Travieso-Gonzalez, Miguel A. Ferrer-Ballester, José De León Y De Juan, Malay Kishore Dutta, Garima Vyas	365
70.	Nonlinear characterization of ECG signals for automatic arrhythmia detection Jesús B. Alonso-Hernández, María L. Barragán-Pulido, Carlos M Travieso-Gonzalez, Miguel A. Ferrer-Ballester, Raquel Plata-Pérez, Malay Kishore Dutta, Anushikha Singh	372
71.	Hardware implementation of microlens array calibration for light field video processing	380

Sven-Hendrik Voss, Erwin Prizkau, Marc Geh

72.	Analysis of Link Maintenance Probability for Cognitive Radio Ad Hoc Networks Anand Jee, Shanidul Hoque, Banani Talukdar, Wasim Arif	385
73.	Effect of Different Atmospheric Conditions on the Performance of the FSO System at 1550nm Ravneet Bajwa, Pankaj Verma	390
74.	Enhanced Epidemic Routing Protocol in Delay Tolerant Networks Prachi Garg, Hemang Kumar, Rahul Johari, Prabhanshu Gupta, Riya Bhatia	396
75.	Generalised Fractional-Order Oscillators using OTA Amiyajeet Pradhan, R. K. Sharma	402
76.	Utilising Genetic Algorithm and Driving Point Impedance Data to Synthesize High Frequency Circuit Model of Power Transformer Winding Smitkumar Patel, Avinash Derwal, Sachin Doshi, Shah Krupa Rajendra	407
77.	An Efficient Watermarking for Protecting Signature Biometric Template Jyotika Chopra, Amod Kumar, Ashwani Kumar, Anupma Marwaha	413
78.	Speech De-Noising Using Wavelet Based Methods with Focus on Classification of Speech into Voiced, Unvoiced and Silence Regions Anamika Baishya, Priyatam Kumar	419
79.	A Novel Machine Learning Approach to Detect Phishing Websites Ishant Tyagi, Jatin Shad, Shubham Sharma, Siddharth Gaur, Gagandeep Kaur	425
80.	Detection of Power Transformer Winding Faults using Orthogonal Wavelet Filter Bank Shah Krupa Rajendra, Malvi Shrimali, Sachin Doshi, Manish Sharma	431
81.	Enhanced AES Architecture using Extended Set ALU at 28nm FPGA Nidhi Gaur, Anu Mehra, Pradeep Kumar	437
82.	Analysis and Design of Residue Number System Based Building Blocks Shamim Akhter, Gaurav Raturi, Shaheen Khan	44
83.	Beamforming and Combining in Multi-User Large MIMO Systems Arti M.K.	446
84.	Error probability analysis of FSO Communication System using Differential Chaos Shift Keying Ghanishtha Narang, Mona Aggarwal, Hemani Kaushal, Swaran Ahuja	452
85.	Efficient 16 nm SRAM Design for FPGA's Abdul Manan	457
86.	Multi-layered Cloud and Fog based Secure Integrated Transmission and Storage Framework for IoT based Applications B. B. Gupta, Megha Quamara	462

87.	Automatic Clustering simultaneous Feature Subset Selection using Differential Evolution V. Sesha Srinivas, A. Srikrishna, B. Eswara Reddy	468
88.	A Body Wearable Antenna Based on Jeans Substrate with Wide-Band Response Chandrajeet Kumar Nanda, Suparna Ballav, Ayan Chatterjee, Susanta Kumar Parui	474
89.	rFilter: A Scalable and Space-efficient Membership Filter Ripon Patgiri, Samir Kumar Borgohain, Arup Bhattacharjee	478
90.	Image Super-Resolution Using DWT Based Learning with Zooming Approach Meera D. Doshi, Prakash P. Gajjar, Ashish M. Kothari	486
91.	Dimensionality Reduction of Hyperspectral Images for Classification using Randomized Independent Component Analysis Chippy Jayaprakash, Bharath Bhushan Damodaran, Sowmya V, K. P. Soman	492
92.	Effect of Different Optimization Methods in Determining the Clusterheads in Wireless Sensor Network Chiranjib Patra, Samir Biswas, Sourish Mullick	497
93.	Facial Expression Recognition with LDPP & LTP using Deep Belief Network Vasudha, Deepti Kakkar	503
94.	Analysis For Self-taught and Transfer Learning Based Approaches For Emotion Recognition Piyush Bhandari, Rakesh Kumar Bijarniya, Subhamoy Chatterjee, Maheshkumar Kolekar	509
95.	Robust Image Watermarking Technique Using Contourlet Transform and Optimized Edge Detection Algorithm Rajat Sharma, Nishtha Aggarwal, Kritika Khanwalkar, Manasvee Singh, Dharmendra Kumar	513
96.	Double Threshold-Based Energy Detection Spectrum Sensing Scheme by Considering the Sensing History in Confusion Region Smriti, Chhagan Charan	518
97.	Gain Improvement of Circular Patch Antenna with Frequency Selective Surface Praful Ranjan, Anoop Kumar Sagar	522
98.	Analyzing Skin Pigment Discoloration on Cheeks by Using Image Processing Md. Asaduzzaman Rasel, S. M. Rukunuddin Osmani, Shahed Al Hasan, Md. Hasan, Shahanaz Akther	527
99.	A comprehensive study on channel modeling of broadband communication over low voltage power line Mukesh Kumar Varma, Zainul Abidin Jaffery, Ibraheem	532
100.	Ensemble of Hybrid CNN-ELM Model for Image Classification Suresh Prasad Kannoja, Gaurav Jaiswal	538
101.	The k - μ /Inverse Gamma Shadowed Distribution with Arbitrary Fading	542

Parameters

Shilpi Gadi, Anurag Singh Baghel, S. Pratap Singh

102.	Human Fall Detection using Depth Videos Priyanka S. Sase, Smriti H. Bhandari	546
103.	Hemorrhage segmentation by fuzzy c-mean with Modified Level Set on CT imaging Pankaj Singh, Vandana Khanna, Meenu Kamal	550
104.	Blind audio watermarking using adaptive quantization and Lifting wavelet transform Abhishek Kumar Gupta, Archit Agarwal, Akhilesh Singh, Divay Vimal, Dharmendra Kumar	556
105.	Classification and Detection of Epilepsy using Reduced Set of Extracted Features Hemant Choubey, Alpana Pandey	560
106.	Enhancing ADOV routing protocol for Vehicular Ad Hoc Networks Ayushi Pandey, Vikas Deep, Purushottam Sharma	565
107.	DMTL filter in Ku-band with improved slope of attenuation after cut-off Rohit Kumar, Updesh Sharma, Priyanka Jain	569
108.	Facial Expression Recognition Using Gabor-Mean- DWT Feature Extraction Technique Govardhan Mattela, Sandeep K. Gupta	575
109.	A Proposed Elevation Angle Model for Small Cell Environments Qi Hong, Haonan Hu, Hao Li, Hui Zheng, Baoling Zhang, Jie Zhang	581
110.	Sign Language Gesture Recognition using Zernike Moments and DTW Samridhi Mathur, Poonam Sharma	586
111.	Modern Controller Techniques of Improve Stability of AC Microgrid Bhuvnesh Rathor, Mahendra Bhadu, S. K. Bishnoi	592
112.	Semantic Background Estimation in Video Sequences Andreas Savakis, Aadeesh Milind Shringarpure	597
113.	A Technique to Analyze Cyclomatic Complexity and Risk in a Wireless Sensor Network Sunil Kumar, C. Rama Krishna, A. K. Solanki	602
114.	Analysis of Different Converters for Reduced Total Harmonic Distortion and Improved Power Factor Piyush Sharma, Dheeraj K. Dhaked, Sachin Saini, Love K. Tripathi, Ashish Shrivastva	608
115.	Design of Cosine Modulated Non-uniform filter bank using Particle Swarm Optimization Aman Kumar, Ramesh Kumar Sunkaria, Lakhan Dev Sharma	614
116.	Medical Image Fusion based on Frei-Chen Masks in NSST Domain	619

117.	Assessing the Scar Images to Check Medical Treatment Effectiveness Prateechi Singh, Vikas Saxena	624
118.	Design of 64 QAM Transceiver Model and its Performance Analysis for FSO Communication Saurabh Sarkar, Vijay Janyani, Ghanshyam Singh, Tawfik Ismail, Hossam A. Selmy	630
119.	Fuzzy Estimation of Changes in Intracranial Pressure under hydrocephalus condition of Brain Kavita Goyal, Moin Uddin	635
120.	Integral Sliding Mode Control for Position Control of Robotic Manipulator Sudhir Nadda, A. Swarup	639
121.	Optimal PI-PD and I-PD Controller Design Using Cuckoo Search Algorithm Madhurima Peram, Sandhyarani Mishra, Madhuri Vemulapaty, Bharat Verma, Prabin K. Padhy	643
122.	Operational Floating Current Conveyor based Digitally Controlled Hearing Aid Deva Nand, Neeta Pandey, Rajeshwari Pandey, Sunchit Jindal	647
123.	Precision Capacitance Multiplier with Low Power and High Multiplication Factor Shashwat Singh, Jatin Pandey, Neeta Pandey, Rajeshwari Pandey	652
124.	Complete Charge Recovery Diode Free Adiabatic Logic Sagar Jain, Neeta Pandey, Kirti Gupta	656
125.	Tunable Q-Factor Wavelet Transform for Classifying Mechanical Deformations in Power Transformer Sachin Doshi, Malvi Shrimali, Shah Krupa Rajendra, Manish Sharma	661
126.	Deep Convolution Neural Network Based Speech Recognition for Chhattisgarhi Narendra D. Londhe, Ghanahshyam B. Kshirsagar, Hitesh Tekchandani	667
127.	High Q Half turn Split Inductor for RF Applications B. Murali, N. Bheema Rao	672
128.	Separation of PCG signal from Mixture of Speech and PCG Signals with Genetic Algorithm-Based Filter Banks Jang Bahadur Singh, Parveen Kumar Lehana	676
129.	CSI Knowledge Effect on Secrecy of Threshold-Based Underlay Cognitive Decode-and-Forward Relaying Khyati Chopra, Ranjan Bose, Anupam Joshi	681
130.	Handwritten Bengali Numeral Recognition using HOG Based Feature Extraction Algorithm Amitava Choudhary, Hukam Singh Rana, Tanmay Bhowmik	687
131.	A Stockwell Transform Based Approach for Detection of Transmission Line Faults in the Presence of Thyristor Controlled Reactor	691

132.	Performance Evaluation of SPR biosensor using Metamaterial over Conventional SPR and Graphene based SPR biosensor Sarika Pal, Narendra Pal, Y. K. Prajapati, J. P. Saini	696
133.	A Reduced KELM model using DBSCAN Clustering algorithm for centroid selection Sukirty Jain, Sanyam Shukla	702
134.	Centroid Selection in Kernel Extreme Learning Machine using K-means Mona Singhal, Sanyam Shukla	708
135.	Tumor Segmentation and Gradation for MR Brain Images Tanvi Gupta, Pranay Manocha, Tapan K. Gandhi, R. K. Gupta, B. K. Panigrahi	712
136.	Analysis of Heuristic based Feature Reduction method in Intrusion Detection System. Swapnil Umbarkar, Sanyam Shukla	717
137.	Cooperative Routing Mechanisms in the 5G Ultra Dense Network Debashis Dev Misra, Kandarpa Kumar Sarma	721
138.	Facial Expression Recognition using Bandlet Transform and Centre Symmetric – Local Binary Pattern Gaurav V. Deshmukh, Smriti H. Bhandari	726
139.	An Efficient Character Segmentation Approach for Handwritten Hindi Text Deepika Gupta, Soumen Bag	730
140.	Automated Polyp Classification of Gastroenteric Lesion in Colonoscopy Videos Mohinee Vispute, Smirti H. Bhandari	735
141.	Performance Evaluation of RPL under Mobility for VANETs Rangaballav Pradhan, Souvik Rakshit, Tanmay De	739
142.	Multiband Slotted Microstrip Patch Antenna for TD-LTE, ITU and X-band Applications Ajay Dadhich, J. K. Deegwal, M. M. Sharma	745
143.	A Novice Encryption Technique using Substitution Clock and Time in It (SCT) Kshitij Kala, Akhilesh Dwivedi, Janmejy Pant, Senam Pandey, Vertika Kandpal, R. P. Pant	749
144.	New Electronically Tunable Floating FDNR Configuration employing Grounded Capacitances Mayank Srivastava, Pranjal Gupta, Dinesh Prasad, Ajay Roy, Manish Kumar Verma	754
145.	Design of Optimized PID Type Fuzzy Logic Controller for Higher Order System Roshan Bharti, Rishika Trivedi, Prabin K. Padhy	760
146.	Facility Energy Management based on adaptive thermal comfort protocols: A case-study	765

Spoorthy Paresh, Naveen Thokala, M. Girish Chandra

- | | | |
|------|--|-----|
| 147. | A Generalized Grounded Impedance Simulator/Grounded Impedance Scaling Circuit with Electronic Tuning
Pranjal Gupta, Mayank Srivastava, Dinesh Prasad, Ajay Roy, Manish Kumar Verma | 771 |
| 148. | Arithmetic Logic Unit Using Diode Free Adiabatic Logic and Selection Unit for Adiabatic Logic Family
Vasudev Grover, Vishwas Gosain, Neeta Pandey, Kirti Gupta | 777 |
| 149. | Exploring Dynamic Factor Graphs for Forecasting Building Electrical Load
Aakanksha Bapna, Naveen Thokala, M. Girish Chandra | 782 |
| 150. | 3D Smith-Chart Applications for Passive Negative Resistance in RF and Microwave Circuits
Sachin K. Yadav, Urvashi Singh, Mohammad Hashmi | 788 |
| 151. | PID controller design with Hyperbolic Tangent weighted error function using GA
Bharat Verma, Prabin Kumar Padhy | 792 |
| 152. | Quadrature Modulation Using Radio Frequency Wave Correlation In Multiport Network
Chetan Pathak, Karun Rawat | 796 |
| 153. | Indian Art form Recognition using Convolutional Neural Networks.
Sonu Kumar, Arjun Tyagi, Tarpit Sahu, Pushkar Shukla, Ankush Mittal | 800 |
| 154. | Accounting For Order-Frame Length Tradeoff of Savitzky-Golay Smoothing Filters
Tanu, Deepti Kakkar | 805 |
| 155. | Content Capture and Noise Cancellation Aided Mood Recognition using Assamese Speech
Rajiv Barman, Mridusmita Sharma, Kandarpa Kumar Sarma, Parismita Sarma | 811 |
| 156. | Optimized Time Synchronization Algorithm Inspired By Nature
Nishtha Joshi, Nagma Arora, Divya Upadhyay, Ashwani Kumar Dubey | 816 |
| 157. | Differenced Prosody Features from Normal and Stressed Regions for Emotion Recognition
Vishnu Vidyadhara Raju V, Krishna Gurugubelli, KNRK Raju Alluri, Anil Kumar Vuppala | 821 |
| 158. | Significance of Accuracy in Vowel Region Detection for Robust Language Identification
Ramakrishna Thirumuru, Ravikumar Vuddagiri, Krishna Gurugubelli, Anil Kumar Vuppala | 826 |
| 159. | Singing Voice Synthesis System for Carnatic Music
Ragesh Rajan M | 831 |
| 160. | Voltage regulation of DC-DC Boost converter using Modified IMC controller
Kelam Sudheer Kumar, Sudeep Sharma, Prabin K. Padhy | 836 |
| 161. | Dual-Material Ferroelectric Stacked Gate SiO ₂ /PZT SOI Tunnel FETs with | 842 |

Improved Performance: Design and Analysis

Sanjay Kumar, P. K. Singh, Sweta Chander, Ashvini Rahangade, K. Baral, Satyabrata Jit

162.	Wavelet based Noise Reduction Techniques for Real Time Speech Enhancement Bhat Raghavendra Ravi, Deepu S. P., Ramesh Kini M., Sumam David S.	846
163.	Frequency band implementation of non-integer order functions Nitisha Shrivastava, Pragya Varshney	852
164.	A Semi-automated Fuzzy Multi-criteria Decision Support System for Radiological Diagnosis of Lung Cancer Indra Neil Choudhury, Aishwaryaprajna, Arundhuti Ghosh, Saunak Chatterjee, Atasi Sarkar, Souptik Basu, Jyotirmoy Chatterjee, Anup Sadhu, Tandra Sarkar, Subhankar Poddar, Atanu Sengupta, Abhijit Chatterjee, Debjani Chakraborty	858
165.	Design of 4.9 GHz Current starved VCO for PLL and CDR Neha Singhal, R. K. Sharma	864
166.	Design of Ultra Low Power, Temperature Independent Resistorless Bandgap Reference in 0.18 μm CMOS Monika Gupta, R. K. Sharma	868
167.	Detecting DDoS Attack using Software Defined Network (SDN) in Cloud Computing Environment Kriti Bhushan, B. B. Gupta	872
168.	Secure VOIP LTE network for secure transmission using PLRT (Packet Level Restraining Technique) under DDOS Attack Humma Shoket, Jagdeep Singh Aulakh	878
169.	Computer-Based Automatic Segmentation of Pap smear Cells for Cervical Cancer Detection Anupama Bhan, Divyam Sharma, Sourav Mishra	883
170.	Image Forensic using Block-based Copy-move Forgery Detection Badal Soni, Debalina Biswas	888
171.	An Efficient Approach for Handwritten Devanagari Character Recognition based on Artificial Neural Network Nikita Singh	894
172.	PLCC System Performance with Complex Channel-Gain and QPSK Signaling Kamal Agrawal, Ankur Bansal	898
173.	Correlation Based Evaluation for Search Tools Rajesh Kumar Gautam	903
174.	A High-Gain, Low-Power Latch Comparator Design for Oversampled ADCs Varun Mishra, Santosh Kumar Gupta, Yogesh Kumar Verma, Vishal Ramola, Abhishek Bora	908
175.	A Secure Lightweight Mutually Authenticated Radio Frequency Identification (RFID) Protocol	914

Varinder Kumar, Sujata Mohanty

176.	Metamaterial Inspired Dual Band Patch Antenna Array Chirag Arora, Shyam S. Pattnaik, R. N. Baral	919
177.	Enhancement of Underwater images using White Balancing and Rayleigh-Stretching Monika Mathur, Nidhi Goel	924
178.	CUDA based Fast Bilateral Filter for Medical Imaging Shraddha Oza, Kalyani R. Joshi	930
179.	Beam Shaping using Genetic Algorithm for Large Array Beamforming Devashish Arora, Meenakshi Rawat	936
180.	Design of Weighted Circular Array for 5G Applications with Fixed Beam Forming Satish Kumar, Snehal Raj, Prashasti Sharma, Abhinav Sharma, R. Gowri	940
181.	Design and Analysis of Diplexer using various types of Band Pass Filters Aditi Sharma, Shadab Mohd Siddiqui, R. Gowri, Abhinav Sharma	944
182.	Automated Detection of Retinal Detachment from Ocular Ultrasound using Image Thresholding Rajeev Gupta, Abhishek Singh, Pramod Kumar Singh, Ayushi Chandra, Basant Kumar	949