2017 International Conference on Computing, Communication and Automation (ICCCA 2017)

Greater Noida, India
5-6 May 2017

Pages 1-788

IEEE Catalog Number: CFP17IWY-POD
ISBN: 978-1-5090-6472-4

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: CFP17IWY-POD
ISBN (Print-On-Demand): 978-1-5090-6472-4
ISBN (Online): 978-1-5090-6471-7

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

Contents

Track–1

Web Intelligence & Semantics, & Data Mining

S.No	Paper ID	Title	Page No.
1	8	**A User-friendly College Recommending System using User-profiling and Matrix Factorization Technique** *Sheetal Girase, VarshaPowar, Debajyoti Mukhopadhyay*	1
2	15	**Improvement in BER Performance of BPSK System Using Diversity Techniques** *Govind Singh Jethi, Neha Belwal, Sandeep Sunori, Pradeep Juneja*	6
3	28	**Hybrid Influential Centrality Based Label Propagation Algorithm for Community Detection** *Seema Rani, Monica Mehrotra*	11
4	61	**Sentiment Analysis of the URI Terror Attack Using Twitter** *Pulkit Garg, Himanshu Garg, Virender Ranga*	17
5	69	**A Review: Crime Analysis Using Data Mining Techniques and Algorithms** *Chhaya Chauhan, Smriti Sehgal*	21
6	80	**Sentiment Analysis on Product Reviews** *Chhaya Chauhan, Smriti Sehgal*	26
7	140	**Unsupervised Learning Dimensionality Reduction Algorithm PCA for Face Recognition** *Vivek Kumar, Dr. Denis Kalitin, Prayag Tiwari*	32
8	143	**Comparative Study of Tools for Big Data Analytics: An Analytical Study** *Sanjib Kumar Sahu, M Mary Jacintha, Amit Prakash Singh*	37
9	144	**Pest Detection using Adaptive Thresholding** *Yogesh Kumar, Ashwani Kumar Dubey, Adityan Jothi*	42
10	192	**Cause Effect Testing of Flu in Medical Sciences** *Nishant Mathur, Dr. Reema Ajmera, Jitendra Singh Yadav*	47
11	196	**An Efficient Analysis of Crop Yield Prediction Using Hadoop Framework Based on Random Forest Approach** *Shriya Sahu, Meenu Chawla, Nilay Khare*	53
12	203	**Clustering Attribute Values in Transitional Data Streams** *Shankar B. Naik, Jyoti D. Pawar*	58
13	211	**Text Independent Gender Identification in Noisy Environmental Conditions** *Seema Khanum, Firos A*	63
14	230	**Classification of Locomotive Disorders Based on Stance Parameters** *Pulkit Arora, Archit Singla, Saruchi Aggarwal, Divija Rawat, Padmavati Khandnor Neelesh Kumar,Kashif I Sherwani*	67
15	232	**A Detailed Analysis of Data Consistency Concepts in Data Exchange Formats (JSON & XML)** *Gaurav Goyal, Karanjit Singh, Dr. K.R. Ramkumar*	72
16	239	**Role of Association Rules in Medical Examination Records of Gestational Diabetes Mellitus** *Dr. M. Thiyagarajan, Dr. Chaitanya Raveendra, Dr. Thulasi P. , S. Kavi Priya*	78
17	246	**Open Problems in Recommender Systems Diversity** *Akshi Kumar, Nitin Sodera*	82
18	253	**Investigation Into the Efficacy of Geospatial Big Data Visualization Tools** *Rabindra K. Barik, Rakesh K. Lenka, Syed Mohd Ali, Noopur Gupta, Ananya Satpathy, Ankit Raj*	88
19	262	**CBIR by Cascading Features & SVM** *Savita, Sandeep Jain, Prof. (Dr.) K.K. Paliwal*	93
20	277	**Understanding Dynamics of Trending Topics in Twitter** *Shahab Saquib, Rashid Ali*	98
21	290	**Wild Animal Detection using Discriminative Feature-oriented Dictionary Learning** *Pragya Gupta, Gyanendra K. Verma*	104
22	293	**Pedestrian Detection and Tracking Using Particle Filtering** *Prateek K. Gaddigoudar, Tushar R. Balihalli, Dr. Nalini C. Iyer*	110
23	303	**Modified Optimal Algorithm for Load Balancing in Cloud Computing** *Shruti Tripathi, Shriya Prajapati, Nazish Ali Ansari*	116
24	306	**ADANS: An Agriculture Domain Question Answering System using Ontologies** *Manmita Devi, Mohit Dua*	122
25	318	**An Unsupervised Content Based News Personalization using Geolocation Information** *Khumukcham Robindro, Kshetrimayum Nilakanta, Deepen Naorem, Ningthoujam Gourakishwar Singh*	128

26	327	**A Survey on Solving Cold Start Problem in Recommender Systems** *Jyotirmoy Gope, Sanjay Kumar Jain*	133
27	363	**Privacy Preserving Data Publishing and Data Anonymization Approaches: A Review** *Dr. Puneet Goswami, Suman Madan*	139
28	364	**Performance Enhancement of K-Means Clustering Algorithm for Gene Expression Data using entropy-based Centroid Selection** *Naveen Trivedi, Suvendu Kanungo*	143
29	372	**A Memetic Algorithm for the Cyclic Bandwidth Minimization Problem** *Dharna Satsangi, Kamal Srivastava, Gursaran*	
30	377	**Sentiment Analysis: Approaches and Open Issues** *Shahnawaz, Parmanand Astya*	154
31	379	**Applications of Big Data in Real World It's Not What You Know, It's What You do with what you Know** *Vidhi Khanduja, Abhishek Arora, Sameer Garg*	159
32	383	**A Novel Clustering Framework Using Farthest Neighbour Approach** *Aparna Shukla, Suvendu Kanungo*	164
33	386	**Student Academic Performance and Social Behavior Predictor using Data Mining Techniques** *Suhas S. Athani, Sharath A. Kodli, Mayur N. Banavasi, P. G. Sunitha Hiremath*	170
34	393	**Analysis and Detection of Fake Profile Over Social Network** *Dr Vijay Tiwari*	175
35	398	**Challenges to Find Association Rules Over Various Types of Data Items: A Survey** *P. Amaranatha Reddy, MHM Krishna Prasad*	180
36	410	**Top-K Dominating Queries on Incomplete Data with Priorities** *Jilu Sajeev, Nurjahan V.A.*	
37	428	**Humor Grounded Taxonomy of Music by Investigating Expressive Statistics using Audio Feature Extraction** *Nirbhay Kashyap, Tanupriya Choudhury, Inderpal Singh Mehta, Arjun Vaibhav Srivastava*	189
38	442	**Intelligent Data Analysis using SSN Ontology for Streaming Reasoning Capability** *Monika Rani, Ranjana Vyas, Sahil Chaudhary, Sandeep Sharma, Alok Baitiyal, Aaditya Tomar, O. P. Vyas*	196
39	451	**Comparative Study of Rate of Convergence & Complex Dynamics of Trigonometric Functions Using Jungck Ishikawa Iteration Scheme** *Suman Pant, Dr. Yashwant S. Chauhan, Dr. Priti Dimri, Krishna Kumar Singh, Dr. J. N. Singh*	202
40	461	**Elitism Based Artificial Bee Colony Algorithm** *Ankita Rajawat, Nirmal Sharma, Harish Sharma*	210
41	463	**Disruption Operator-based Spider Monkey Optimization Algorithm** *Avinash Kaur, Harish Sharma, Nirmala Sharma*	216
42	478	**A Review of Devices Using Modern Dietary Assessment Methods for Reducing Obesity** *Vivian Brian Lobo, Shamsuddin S. Khan*	222
43	490	**Enhancing K means by Unsupervised Learning using PSO Algorithm** *Aishwarya Gupta, Vishwajeet Pattanaik, Mayank Singh*	228
44	508	**Reference based Inter Chromosomal Similarity based DNA Sequence Compression Algorithm** *Kakoli Banerjee, Dr. R. A. Prasad*	234
45	512	**Design of Financial Inclusion System for Rural India** *Dr. Sanmeet Kaur, Niharika Girnar*	239
46	526	**Sign Language Recognition for Hearing Impaired People based on Hands Symbols Classification** *Naresh Kumar*	244
47	545	**A Comparative Analysis of Frequent Pattern Mining Algorithms Used for Streaming Data** *Shalini, Sanjay Kumar Jain*	250
48	546	**Lossless Data Compression Techniques and their Performance** *Komal Sharma, Kunal Gupta*	256
49	556	**Advances in Multi Modal Biometric Systems: A Brief Review** *Keshav Gupta*	262
50	560	**Security Framework using Hadoop for Big Data** *Prashant Johri, Sanjoy Das, Arun Kumar, Sanchita Arora*	268
51	592	**A Comparative Study of Community Detection Algorithms using Graphs and R** *Neha Garg, Dr. Rinkle Rani*	273
52	630	**Risk for Big Data in the Cloud** *Nayan Chitransh, Chitvan Mehrotra, Dr. Ajay Shanker Singh*	279
53	631	**Performance Analysis of Window Functions for Exon Prediction in DNA Sequences** *Sanyogita Sharma, Kanika sandal, Pardeep Garg, Sunil Datt Sharma*	283
54	632	**Development of a Portable Telemedicine Tool for Remote Diagnosis of Telemedicine Application** *Uzzal Kumar Prodhan, Mohammad Zahidur Rahman, Israt Jahan, Ahsin Abid, Mohtasim Bellah*	287

55	642	**SHA-3 & Locking Protocol for Distributed Database Systems** *Prerna Gupta, Dr. B.K. Verma*	293
56	662	**Effect of Resistive Feedback on Performance Parameters of Common Source LNA** *Vikram Singh, Sandeep K. Arya, Manoj Kumar*	298
57	670	**Enhanced Fundus Images by Using Hybrid Neighbourhood Estimator before Filling with ACO** *Rajesh Kochher, Prabhjot Kaur*	304
58	677	**Bigdata Analysis and Comparison of Bigdata Analytic Approches** *Shweta Malhotra, M.N Doja, Bashir Alam, Mansaf Alam*	309
59	679	**Expert Finding in Twitter Using Semantic Relatedness with Wikipedia** *Shilpa Sudhakaran, Maria Kurian*	
60	695	**Learning the student's sufferings using Social Networks** *Meenakshi Upreti and Vishal Kumar*	319

Track 2

Evolutionary Computing

S. No.	Paper ID	Title	Page No.
61	14	**An approach to develop a hybrid algorithm based on Support Vector Machine and Naïve Bayes for anomaly detection** *Subarna Shakya and Sandeep Sigdel*	323
62	18	**Optimization of Information Retrieval Using Evolutionary Computation: A Survey** *Shadab Irfan and Subhajit Ghosh*	328
63	68	**Diagnosis of Diabetes Mellitus Using PCA and Genetically Optimized Neural Network** *Aakanksha Mahajan, Sushil Kumar and Rohit Bansal*	334
64	97	**A Framework for Assessing the Evolvability Characteristics along with Sub-characteristics in AOSQ Model Using Fuzzy Logic Tool** *Pankaj Kumar and S. K. Singh*	339
65	151	**An Ensemble Based NLP Feature Assessment in Binary Classification** *Saurabh Srivastava and Roshan Kumari*	345
66	199	**Literature Survey of statistical, deep and reinforcement learning in Natural Language Processing** Pranav Kaushik and Akanksha Rai Sharma	350
67	229	**Malware Detection Using GA optimized K-means and HMM** *Surjeet Singh and Anjly Chanana*	355
68	255	**EDGE DETECTION USING PARTICLE SWARM OPTIMIZATION TECHNIQUE** *Ruchika Chaudhary, Anuj Patel, Sanjeev Kumar Tomar and Dr. Sushil Kumar*	363
69	281	**Multiple Traveling Salesman Problem using novel Crossover and Group Theory** *Dharm Singh, Manoj Singh and Tarkeshwar Singh*	368
70	326	**Adaptive Genetic Programming Based Linkage Rule Miner For Entity Linking In Semantic Web** *Amit Singh and Aditi Sharan*	373
71	445	**BBO-DE: Hybrid Algorithm based on BBO and DE** *Abhishek Dixit, Sushil Kumar, Millie Pant and Rohit Bansal*	379
72	475	**Feature Selection with Intelligent Dynamic Swarm and Fuzzy Rough Set** *Tarun Maini, Abhishek Kumar, Rakesh Kumar Misra and Devender Singh*	384
73	510	**Machine Learning and Time Series: Real world applications** *Puneet Misra and Siddharth Chaurasia*	389
74	515	**An Algorithm for the better Assessment of Machine Translation** *Pooja Malik and Anurag Baghel*	395
75	620	**Application of Genetic Algorithm in Cryptanalysis of Mono-alphabetic Substitution Cipher** *Piyush Kumar Mudgal, Rajesh Sharma, Rajesh Purohit and Mahendra Kumar Jangir*	400
76	668	**Analyzing Titanic Disaster Using Machine Learning Algorithms** *Aakriti Singh, Shipra Saraswat, Ankita Singh and Neetu Faujdar*	406

Track 3

Ubiquitous Computing & Networking

S. No.	Paper ID	Title	Page No.
77	16	**An approach towards Backbone Network Congestion Minimization in Software Defined Network** *Subarna Shakya and Rajendra Paudyal*	412
78	19	**General Study on Intrusion Detection System and Survey of Agent Based Intrusion Detection System** *Aumreesh Saxena and Sitesh Sinha*	417
79	24	**An enhanced AES algorithm using cascading method with 400 bits key size used in enhancing the safety of the next generation Internet of Things(IoT)** *Ritambhara, Alka Gupta and Manjit Jaiswal*	422
80	25	**An Advanced AES Algorithm using Swap and 400 bit Data Block with flexible S-Box in Cloud Computing** Chinnakandukuri Paul Pramod and Manjit Jaiswal	428
81	44	**Power and capacity optimization for Wireless Sensor Network (WSN)** *Abinash Basnet, Subarna Shakya and Mandira Thapa*	434
82	51	**DTN Routing: Secure Message Transmission in Border Defence System** *Afreen Fatimah and Rahul Johari*	440
83	60	**Credit Card Fraud Detection Using Fuzzy ID3** *Sikdar Md Sultan Askari and Md Anwar Hussain*	446
84	96	**Design and testability aspects of Mobile Adhoc Networking waveform Physical Layer for Software Defined Radio** *Nitin Tandon, Bhupendra Suman, Nisha Agrawal and Vikas Bhatia*	453
85	125	**Multi-Party Privacy Conflict Detection and Resolution in Social Media** *Rajul Chhallani and Jyoti Rao*	458
86	141	**Time Scheduled Route Adjustment for Mobile sink in Grid-based Routing for Wireless Sensor Networks** *Suraj Sharma and Sabah Tazeen*	464
87	174	**Surveillance Drone for Disaster Management and Military Security** *Aakash Sehrawat, Tanupriya Choudhury and Gaurav Raj*	470
88	185	**Infrastructure based Routing Protocols in Vehicular Ad Hoc Network: A Review** *Ridhma Khokhar and Sudesh Rani*	476
89	213	**Selection of Optimal Credit Card Fraud Detection Models Using a Coefficient Sum Approach** *Suman Arora, Dharminder Kumar*	482
90	234	**To Enhance the Reliability and energy efficiency of WSN using new clustering Approach** *Vivek Kumar Singh, Rajesh Kumar, Subrata Sahana and Ashwini Kumar*	488
91	256	**A Way to Secure a QR Code: SQR** *Sudhir Goswami, Nishant Goel and Ajay Sharma*	494
92	270	**Combinatorial Group Based Approach for Key Pre-distribution Scheme in Wireless Sensor Network** *Monjul Saikia and Md Anwar Hussain*	
93	272	**Integrated Disaster Recovery Network using MANET-DTN with I-Spray and Wait Protocol** *Nidhi Ahlawat, Prashant Kumar, Naveen Chauhan and Narottam Chand*	
94	282	**DDoS attack isolation using Moving Target Defense** *Vaishali Kansal and Mayank Dave*	511
95	300	**A Comment on Efficient Certificateless Aggregate Signature Scheme** *Pankaj Kumar and Vishnu Sharma*	515
96	310	**Secure Message Broadcasting in VANET over Wormhole Attack by using Cryptographic Technique** *Shahjahan Ali, Parma Nand and Shailesh Tiwari*	520
97	313	**A Triple Bandstop Frequency Selective Surface For Escalation In The Security Of Wimax And WLAN Application** *Darakshanda Noor, Sanjeev Yadav, Sandeep Yadav, Shweta Garg and Monika Garg*	524
98	333	**Ant Colony Optimization Routing in Mobile AdHoc Networks - A Survey Paper** *Mohd.Sharique Khan and Dr.Vishnu Sharma*	529
99	339	**Towards Software-defined Vehicular Communication: Architecture and Use Cases** *Manisha Chahal and Sandeep Harit*	534
100	354	**Comparative Analysis of Various Feature Descriptors for Efficient ATM Surveillance Framework** *Monika Pandey, Vishal Sanserwal, Vikas Tripathi and Zhiqian Chen*	539
101	358	**SCLCT: Secured Cross Language Cipher Technique** *Sandeep Kumar, Rahul Johari, Laukendra Singh and Kalpana Gupta*	545
102	392	**Vertical Handoff in Heterogeneous Wireless Networks: A Tutorial** *Pramod Goyal, D.K. Lobiyal and C.P. Katti*	551
103	396	**Multi-stage Multi-secret Sharing Scheme for Hierarchical Access Structure** *Abdul Basit, N Chaitanya Kumar, V. Ch. Venkaiah, Salman Abdul Moiz, Appala Naidu Tentu and Wilson Naik*	557

104	417	**Recent Techniques Used for Preventing DOS Attacks in VANETs** *Kaushik Adhikary, Shashi Bhushan*	564
105	419	**A Bee Colony Inspired Clustering Protocol for Wireless Sensor Networks** *Zaheeruddin . and Aruna Pathak*	570
106	429	**Grid Based Forwarding and Routing Scheme for Extending Lifetime of Wireless Sensor Networks** *Awadhesh Kumar and Prof. Neeraj Tyagi*	576
107	440	**Broadcasting Methods in Mobile Ad-hoc Networks** *Akansha Vij and Vishnu Sharma*	582
108	446	**Impact of Imperfect Sensing on Performance of Adaptive Back-Off Algorithm for Contention Window of CSMA** *Surbhi Jain and Dr. Brahmjit Singh*	588
109	460	**Indirect Mutual Trust for third party proving Data stored in Distributed-Cloud Storage** *Mohd Saleem, Mohd Naqeeb, Abdul Quyoom and Mudasser Nazar*	592
110	480	**Energy Efficient Delay Tolerant Network Routing Protocols: A Comparative Study** *Savita*	596
111	486	**Energy Efficient Clustering Based Data Gathering Using Hybrid DB-EMGM In Distributed Sensor Networks** *Rajesh K Yadav and Joginder Singh*	601
112	489	**A Survey of Activity Recognition Process Using Inertial sensors and Smartphone Sensors** *Shweta Chaudhary and Padmavati Khandnor*	607
113	494	**A new security methodology for Internet of Things** *Surya Kant Josyula and Daya Gupta*	613
114	498	**Simulative Analysis of NRZ-OOK Point-to-Point Free Space Optical Link under Continental Fog in view of Retinal Safety** Prachi Arora and Nitin Garg	619
115	528	**Design and Implementation of EF-MAC Protocol to Optimize WSN Communication** *Sanjoy Das, Rishipal Singh and Rai Pal*	625
116	555	**A Relative Survey of Various LEACH Based Routing Protocols in Wireless Sensor Networks** *Sanjoy Das, Rishipal Singh and Rai Pal*	630
117	558	**Optimized utilization of disks in Storage Area Network by Storage Tiering** *Edwina Jacob and Shree Jaswal*	637
118	568	**Comparative Study of TCP Variants for Congestion Control in Wireless Network** *Pooja Chaudhary and Dr.Sachin Kumar*	641
119	580	**Advanced Encryption Standard (AES) Security Enhancement using Hybrid Approach** *Flevina D'Souza and Dakshata Panchal*	647
120	583	**Improved 2Tier Cooperative Caching Scheme for Internet based Vehicular adhoc networks** *Nisha Wadhawan and Dr. Meenu Dave*	653
121	601	**Node Deployment Strategies for a 2D Wireless Sensor Network** *Anvesha Katti and D.K. Lobiyal*	658
122	611	**An optimized routing algorithm for BAN by considering Hop-count, residual energy and link quality for route discovery** *Rani Kumari and Parma Nand*	664
123	633	**Trust-based Fault Tolerance in Mobile Ad-hoc Networks using Adaptive Monitoring** *Madhavi Saxena and Inderjeet Kaur*	669
124	639	**Key Community Analysis In Scientific Collaboration Network** *Annu Kumari, Shailendra Narayan Singh, Anand Bihari and Sudhakar Tripathi*	675
125	653	**Optimizing Energy Consumption with Global Load Balance in Mobile Ad Hoc Networks Using NSGA-II and Random Waypoint Mobility** *Sushil Kumar, Arvind Kumar and Omprakash Kaiwartya*	681
126	657	**Comparative Study of AODV and DSR Routing Protocols in Wireless Sensor Network Using NS-2 Simulator** *Vikash Kumar Kashyap, Gaurav Pandey and Parma Nand Astya*	687
127	669	**Towards Location Error Resilient Geographic Routing for VANETs** *Reena Kasana, Sushil Kumar and Omprakash Kaiwartya*	691
128	671	**Performance Enhancement of Hybrid Geographical Routing under Influence of IEEE 802.11g MANET** *Rajesh Kochher and Harsimran Singh*	
129	681	**Energy Efficient Routing Protocol for Linear Wireless Sensor Network** *Abhijeet Das and Abhishek Swaroop*	703
130	682	**Optimizing QoS parameters using Computational Intelligence in MANETS** *Saurabh Sharma and Dr Rashi Agarwal*	708
131	692	**Design of IPSec Virtual Private Network For Remote Access** *Dnyanesh Deshmukh and Brijesh Iyer*	716

Track 4

Distributed Computing & Cloud Computing

S.No	Paper ID	Title	Page No.
132	12	**BSS: Blockchain Security over Software Defined Network** *Sadhu Ram Basnet, Subarna Shakya*	720
133	21	**Comparative Analysis of Backpropagation Algorithm Variants for Network Intrusion Detection** *Nabin Neupane, Subarna Shakya*	726
134	162	**Load Balancing Algorithm using JIQ Methodology for Virtual Machines** *Mehak Choudhary, Dimple Chandra, Dr. Deepti Gupta*	730
135	169	**A Roadmap of Parallel Sorting Algorithms using GPU Computing** *Neetu Faujdar, Shipra Saraswat*	736
136	173	**Distributed High Performance Computing using JAVA** *Subarna Shakya, Ram Sharan Chaulagain, Santosh Pandey, Prakash Gyawaliz*	742
137	205	**Cluster-Based Rendezvous Routing Protocol for Wireless Sensor Network** *Rakesh Kumar Lenka, Amiya Rath, Arushi Aggarwal, Suraj Sharma*	748
138	245	**Design of Dynamic Metric to Measure the Component-Based Software** *Parveen Kumar, Pradeep Tomar*	753
139	268	**Various Security Threats and Their Solutions in Cloud Computing** *Anil Barnwal, Satyakam Pugla, Rajesh Jangade*	758
140	340	**GPU Accelerated Foreground Segmentation using Code Book Model and Shadow Removal using CUDA** *Praveen Gudivaka, Nayaneesh Mishra, Anupam Agrawal*	765
141	342	**Security Techniques for Cloud Computing Environment** *Prachi Garg, Dr. Sandeep Goel, Dr. Avinash Sharma*	771
142	370	**Bacteria Foraging Based Task Scheduling Algorithm in Cloud Computing Environment** *Juhi Verma, Srichandan Sobhanayak, Suraj Sharma, Ashok Kumar Turuk, Bibhudatta Sahoo*	777
143	380	**Temporal Hierarchical Event Detection of Timestamped Data** *Bushra Siddique, Nadeem Akhtar*	783
144	415	**Data Security using Authenticated Encryption and Decryption Algorithm for Android Phones** *Abhishek Vichare, Tania Jose, Jagruti Tiwari, Uma Yadav*	789
145	477	**DEDUP: Deduplication System for Encrypted Data in Cloud** *Himshai Kamboj, Bharati Sinha*	795
146	492	**Agricultural Management using Cloud Computing in India** *Dinesh Kumar Baghel, Arun Singh, Pratyush Kumar Deka*	801
147	542	**A Review of Security Techniques for Mobile Agents** *Mandeep Kaur, Sharad Saxena*	807
148	553	**An APP Based on Static Analysis for Android Ransomware** *Meet Kanwal, Sanjeev Thakur*	813
149	613	**Deploying an OpenStack Cloud Computing Framework for University Campus** *P.Sai Sheela, Monika Choudhary*	819
150	650	**Real Time Database Management in Mobile Computing** *Shaifali Pandey, , Dr. Parmanand Astya*	825
151	659	**Integration of Network Intrusion Detection Systems and Honeypot Networksfor Cloud Security** *Varun Mahajan, Sateesh K Peddoju*	829
152	687	**Prediction Model for Suitability of Resource Deployment Using Complex Templates in Open Stack** *Shefali Jain, Sateesh K. Peddoju*	835
153	688	**A Workload-Aware VM Placement Algorithm for Performance Improvement and Energy Efficiency in OpenStack Cloud** *Ankita Rani, Sateesh K Peddoju*	841
154	689	**Container-based Microservice Architecture for Cloud Applications** *Vindeep Singh, Sateesh K Peddoju*	847
155	694	**Study on Secured Framework for Cloud Based Online Banking** *Satya Prakash Tripathi, Aditya Kumar, Rani Astya*	853
156	697	**Performance Analysis of Checkpoint Based Efficient Failure-Aware Scheduling Algorithm** *Manjeet Singh*	859

Track 5

Software Engineering & Information System

S.No	Paper ID	Title	Page No.
157	65	**SCRUM Model for Agile Methodology** *Apoorva Srivastava, Sukriti Bhardwaj, Shipra Saraswat*	864
158	89	**Estimating Actual Execution Time of Component-based Software: Considering Interaction-metric** *Umesh Kumar Tiwari, Santosh Kumar, Nikhil Kumar*	870
159	165	**Prophecy of Software Maintenance Effort with Univariate and Multivariate Approach By using Support Vector Machine Learning Techniquewith Radial Basis Kernel Function** *Dimple Chandra, Mehak Choudhary, Dr. Deepti Gupta*	876
160	184	**A Graph Theory Based Algorithm for the Computation of Cyclomatic Complexity of Software Requirements** *Chaudhary Wali Mohammad, Mohd. Shahid, Syed Zeeshan Husain*	881
161	304	**A Critical Review of Mutation Testing Technique and Hurdles** *Richa Saxena, Abhishek Singhal*	887
162	320	**Annotated Buzzwords and Key References for Software Testing in the Cloud** *Antonia Bertolino, Lata Nautiyal, Preeti*	893
163	395	**An Exploratory Study on Perception of Indian Crowd Towards Crowdsourcing Software Development** *Shruti Sharma, Nitasha Hasteer, Jean Paul Van-Belle*	901
164	402	**An Empirical Comparison of Models for Dropout Prophecy in MOOCs** *Nidhi Periwal, Dr. Keyur Rana*	906
165	436	**A Proposed Framework for Effective Software Team Performance: A Mapping Study between the Team Members' Personality and Team Climate** *Mohammad Shameem, Chiranjeev Kumar, Bibhas Chandra*	912
166	466	**166. Classification Model for Test Case Prioritization Techniques** *Sujata, G.N. Purohit*	919
167	509	**Ransomware: Let's Fight Back!** *Shreya Chadha, Utham Kumar*	925
168	648	**Identification of Requirements of Software Reengineering for JAVA Projects** *Jaswinder Singh, Ashu Gupta, Jaiteg Singh*	931

Track 6

Intelligent System & Automation

S.No	Paper ID	Title	Page No.
169	9	**A Proposed Architecture for Automating Public Distribution System** *Chaitali Chandankhede, Debajyoti Mukhopadhyay*	935
170	35	**Touch-n-Play: An Intelligent Home Automation System** *Bababe B. Adam, Ashish Kumar Jha, Rajiv Kumar*	940
171	120	**Performance Analysis of LED Based Indoor VLC System under Receiver Mobility** *Ram Sharma, Charan Kumari, Mona Aggarwal, Swaran Ahuja*	945
172	129	**Source-to-Source Translation: Impact on the Performance of High Level Synthesis** *Meena Belwal, Sudarshan TSB*	951
173	183	**Design of an Accurate Pedestrian Detection System Using Modified HOG and LSVM** *Reema Kalshaonkar, Sonia Kuwelkar*	957
174	204	**Performance Evaluation of Maglev System with 1-DOF and 2-DOF Controllers** *Shradha Kishore, Dr. Vijaya Laxmi*	963
175	311	**Optimized Path Tracing Analysis and Application of Four-Bar Linkage and CT Guided Robotic Arm** *Gourishankar Mohapatro, Shah Shubham Kamlesh, Dr. Ruby Mishra*	967
176	426	**Performance Analysis of Hybrid & Non-Hybrid Approaches in Digital Image Analysis** *Mohammad Shahnawaz, Dr. Rakesh Kumar Dwivedi*	973
177	462	**Improved Load Frequency Response in Two Area Power System with Battery Energy Storage** *S Zahid Nabi Dar, Mairaj-ud-Din Mufti*	977
178	484	**Design Architecture and Comparison of Interactive Smart Button using HC-05 and ESP8266** *R.K Yadav, HimanshuVohra*	982

179	487	**Intelligent Neighbourhood Teaching Learning Based Optimization Algorithm** *Geetanjali Singh, Nirmala Sharma, Harish Sharma*	986
180	589	**Design of a Brain Computer Interface for Stress Removal Using Yoga a Smartphone Application** *Ankita Tiwari, Rajinder Tiwari*	992
181	685	**Home Automation and Intelligent Light Control System using Microcontroller** *Robin Goyal, Dr. LeenaArya*	997

Track 7

Multimedia Services & Technologies

S.No	Paper ID	Title	Page No.
182	5	**A Study on Face Recognition Techniques with Age and Gender Classification** *Sandeep Kumar, Sukhwinder Singh, Jagdish Kumar*	1001
183	39	**Possible Approaches to Arecanut Sorting / Grading using Computer Vision: A Brief Review** *Bharadwaj N.K., Dr. Dinesh R.*	1007
184	47	**3D Object Tracking Using Disparity Map** *Wasim Akram Khan, Dibakar Raj Pant, Bhisma Adhikari, Rasana Manandhar*	1015
185	66	**An Improved Method for Facial Expression Recognition using Hybrid Approach of CLBP and Gabor Filter** *Sakshi Sharma, Akhilesh Verma, Divya Tyagi*	1019
186	91	**Sparse Proximity Based Robust Fingerprint Recognition** *Kuldeep Singh, Jitender Kumar, Kuldeep Singh, G A Chullai*	1025
187	100	**Hamming Filter Design for ECG Signal Detection and Processing Using Co-Simulation** *Sushant Shama, Ashish Kumar, Yogendera Kumar*	1029
188	101	**Polygonal Region of Interest Based Compression of DICOM Images** *Amit Kumar Shakya, Ayushman Ramola, Deepak Chander Pandey*	1035
189	152	**Identifying Concavity Laws of Attractiveness Character for Composite Regions Application through Geo-tagged Media Check-ins** *Anant Jain, Shailendra Narayan Singh*	1041
190	179	**Iris Detection and Recognition Using 2 Fold Technique** *Dinesh Kumar Vishwakarma, Divyansh Jain, Shantanu Rajora*	1046
191	209	**Evaluation of Fusion at different levels for Face Recognition** *Prachi Punyani, Ashwani Kumar*	1052
192	216	**Modified Quaternion Encryption for DICOM Image** *Gurjinder Singh, Ramesh Kumar Sunkaria, Ajay Gupta*	1056
193	236	**Accident and Road Quality Assessment using Android Google Maps API** *Prakhar Bhatt, Saransh Gupta, Prateek Singh, Preeti Dhiman*	1061
194	241	**Blind Image Steganalysis using Neural Networks and Wrapper Feature Selection** *Rita Chhikara, Meena Kumari*	1065
195	263	**Feature Selection Approach of Hyperspectral Image using GSA-FODPSO-SVM** *Purnima Gaba, , Surjeet Singh, Prof. (Dr.) K.K. Paliwal*	1070
196	280	**Finding the Optimal Threshold values for Edge Detection of Digital Images & Comparing among Bacterial Foraging Algorithm, Canny and Sobel Edge Detector** *Kushagra Goel, Monica Sehrawat, Amit Agarwal*	1076
197	284	**A Video Database for Intelligent Video Authentication** *Jaspreet Kaur, Prof. (Dr.) Saurabh Upadhyay, Prof. (Dr.) Avinash Sharma*	1081
198	285	**A Short Survey on Bloom Filter and Its Variants** *Divya Gupta, Shalini Batra*	1086
199	288	**Study of Various Data Compression Techniques Used in Lossless Compression of ECG Signals** *Raghuvendra Pratap Tripathi, G. R. Mishra*	1093
200	301	**Secure Fingerprint Fuzzy Vault Including Novel Chaff Point Generation Method** *Nancy Singla, Manvjeet Kaur, Sanjeev Sofat*	1098
201	321	**A Comparative Study on Face Spoofing Attacks** *Sandeep Kumar, Sukhwinder Singh, Jagdish Kumar*	1104
202	322	**Fractional Order Chaotic Systems: A Survey** *Sangeeta Gupta, Smriti Srivastava, Pragya Varshney*	1109
203	329	**Study of Single Image Fog Removal Techniques in Low Visibility Foggy Images** *Neha, Rajesh Kumar Aggarwal*	1114

204	338	**Enhancement of Ultrasound Images using Modified Anisotropic Diffusion Model in Non-Subsampled Shearlet Domain** *Anterpreet Kaur Bedi, Ramesh Kumar Sunkaria, Deepti Mittal*	1119
205	345	**A Hybrid Approach for Image Retrieval Using Visual Descriptors** *Ruchi Jayaswal, Jaimala Jha*	1125
206	350	**Fuzzy Vault Template Protection for Multimodal Biometric System** *Manvjeet Kaur, Sanjeev Sofat*	1131
207	367	**An Enhanced CBIR using HSV Quantization,Discrete Wavelet Transform and Edge Histogram Descriptor** *Mohd. Aquib Ansari, Manish Dixit*	1136
208	381	**Image Denoising Using Shift-Invariant Techniques for Camera Images** *Shikha Roy, Sugandha Agarwal, Anil Kumar*	1142
209	389	**Ensemble Classifiers in Remote Sensing: A Review** *Rashmi Saini, S.K.Ghosh*	1148
210	391	**Diabetic Retinopathy Screening Using Retinal Blood Vessel and Lesions Segmentation A Comparative Study** *Megha Divakar, Paresh Chandra Sau, Atul Bansal*	1153
211	416	**Threshold Modeling for Cellular Logic Array Processing based Edge Detection Algorithm** *Surender Singh, , Ajay Prasad, Kingshuk Srivastava, Suman Bhattacharya*	1158
212	438	**Overview of High Efficiency Video Encoder and Comparative Analysis of H.265 & H.264/AVC Video Encoders** *Imran Ullah Khan, Nupur Mittal, Ch. Mohd. Farhan, S. Hasan Saeed*	
213	459	**A Review and Proposal of an Innovative Approach for Medical Image Segmentation** *S. Vijayalakshmi, Savita Dahiya*	1167
214	473	**Vehicle Detection using Acoustic Signatures** *M Uttarakumari, Anirudh S. Koushik, Anirudh S. Raghavendra, Akshay R. Adiga, Harshita P*	1173
215	505	**Sparse Representation and Homomorphic Filter for Capsule Endoscopy Image Enhancement** *Rampal Bhadu, Rahul Sharma, Surender Kumar Soni, Nithin Varma*	1178
216	506	**Identification of Diabetic Retinopathy in Eye Images Using Transfer Learning** *Sarfaraz Masood, Tarun Luthra, Himanshu Sundriyal, Mumtaz Ahmed*	1183
217	522	**Image Encryption Algorithm Using Chaotic Sequences and Flipping** *Priyanka Takkar, Ashish Girdhar, V.P. Singh*	1188
218	535	**A Survey on Key Frame Extraction Methods of A MPEG Video** *Shivangi Pandey, Prashant Dwivedy, Sunil Meena, Anjali Potnis*	1192
219	564	**Classification of EEG Signals Using Empirical Mode Decomposition and Lifting Wavelet Transforms** *Jatin Sokhal, Bindu Garg, Shubham Aggarwal, Rachna Jain*	1197
220	587	**Recent Advancements in Facial Expression Recognition Systems: A Survey** *Uzair Asad, Nirbhay Kashyap, Shailendra Narayan Singh*	1203
221	594	**Review on Finger Vein Feature Extraction Methods** *Rahul Dev, Ruqaiya Khanam*	1209
222	605	**Data Compression Algorithm for Computer Vision Applications: A Survey** *Kajol Rana, Sanjeev Thakur*	1214
223	607	**An Efficient Fuzzy and Morphology Based Approach to Metal Artifact Reduction from Dental CBCT Image** *Anita Thakur, Vishu Pargain , Pratul Singh, Shekhar Raj Chauhan, P K Khare, Prashant Mor*	1220
224	634	**Building Blocks for Visual Analytics** *Chitvan Mehrotra, Nayan Chitransh, Dr. Ajay Shanker Singh*	1224
225	654	**Scope and Challenges of Visual Analytics: A Survey** *Chitvan Mehrotra, Nayan Chitransh, Dr. Ajayshanker Singh*	1229
226	661	**A Medical Image Identification System Based on Mixture Models** *T.V. Madhusudhana Rao, Y. Srinivas*	1235
227	667	**GeoDigViz: A Spatio-temporal Model for Massive Analysis of Shapefiles** *Abdul Jhummarwala, Sumit Prajapati, Dr. M.B. Potdar*	1240

Track 8

Green Computing & Internet of Things

S.No	Paper ID	Title	Page No.
228	49	**Smart Threat Alert System using IoT** *Dr. Bhawna Suri, Shweta Taneja, Nitesh Sahni, Ankit Varshney, Akshat Sharma, Rishabh Vidhani*	1246
229	70	**A Combination of Internet of Things (IoT) and Graph Database for Future Battlefield Systems** *Gaurav Tripathi, Bhawna Sharma, Sonali Rajvanshi*	1252

230	75	**An IIoT Quality Global Enterprise Inventory Management Model for Automation and Demand ForecastingBased on Cloud** *Athul Jayaram*	1258
231	102	**Green Cloud Computing: A Review on Efficiency of Data Centers and Virtualization of Servers** *Fatima Shakeel, Seema Sharma*	1264
232	110	**Internet of Things and Social Networks: A Survey** *Vishu Tyagi, Ashwini Kumar*	1268
233	134	**Fit-Wit: Design and Development of Wearable Healthcare Device based on Intel Curie Platform** *Nisha Sharma, Zeenat Shareef, Dr. S.R.N. Reddy*	1271
234	178	**Securing the Internet of Things: A Proposed Framework** *Komal Jaswal, Tanupriya Choudhury, Roshan Lal Chhokar, Sooraj Randhir Singh*	1277
235	207	**The Framework of Internet of Things Services** *Dr. M. Thiyagarajan, Dr. Chaitanya Raveendra*	1282
236	249	**Energy Usage Profiling for Green Computing** *Janet Light*	1287
237	296	**Efficient Distribution of Virtual Machines using Honey Bee Windowing in Cloud Computing** *Firos A, Seema Khanum*	1292
238	479	**Contiki-based Mitigation of UDP Flooding Attacks in the Internet of Things** *Manisha Malik, Kamaldeep, Dr. Maitreyee Dutta*	1296
239	495	**Physical Remote Agent with Integrated Data Acquisition Elements (PRIDE) -an IOT Based Secluded Machine Interaction** *Suman Deb, Saikat Paul, Shreyasi Das, SaptarshiSaha, Chiranjit Das, Priyanko Das*	1301
240	496	**All You Want To Know About Internet of Things (IoT)** *Priya Matta, Bhaskar Pant, Minit Arora*	1306
241	518	**Predictive Analytics on IOT** *Tushar Taneja, Aman Jatain, Dr. Shalini Bhaskar Bajaj*	1312
242	530	**A Framework for Health-care Applications using Internet of Things** *Priti Alok Mishra, Bidisha Roy*	1318
243	563	**IoT Based Smart Health Care System using CNT Electrodes (for Continuous ECG Monitoring)** *Malti Bansal, Bani Gandhi*	1324
244	615	**IoT Based Low-Cost Distant Patient ECG Monitoring System** *Parmveer Singh, Ashish Jasuja*	1330
245	616	**Health Monitoring Based on IoT using RASPBERRY PI** *Amandeep Kaur, Ashish Jasuja*	1335
246	624	**Air Quality Monitoring System Based on IoT using Raspberry Pi** *Somansh Kumar, Ashish Jasuja*	1341
247	690	**Health Monitoring and Tracking System For Soldiers Using Internet of Things(IoT)** *Niket Patil, Brijesh Iyer*	1347
248	691	**Research Directions in the Internet of Every Things(IoET)** *Prachi Deshpande, Brijesh Iyer*	1353
249	693	**An Internet of Things based Prototype for Smart Appliance Control** *Aniruddha Sinha, Shubham Sharma, M. R. Mahboob*	1358

Track 9

Hardware Design and Communication

S.No	Paper ID	Title	Page No.
250	10	**A Framework of a Hybrid Wave Communication Channel for Transmitting Voice Over Light-Fidelity (VoLF)** *Debajyoti Mukhopadhyay, Rutwick Bhawsar, Varad Deshpande, Vikrant Deshpande, Pooja Banthia*	1364
251	23	**Different Sources of Energy Harvesting: A Survey** *Sushant Sharma, Varij Panwar, S.C Yadav, Sachin, Lokesh*	1370
252	55	**A New16-bit ALU using Variable Stage Adder and PTL mux** *Aradhana Uniyal, Vandana Niranjan*	1374
253	58	**Fuzzy Tuned PID Controller for Power System Stability** Zubair Iqbal, Shoeb Hussain, Mohammad Abid Bazaz	1379
254	62	**Multifunction Reversbile Logic Gate: Logic Synthesis and Design Implementation in QCA** *Bisma Bilal, Suhaib Ahmed, Vipan Kakkar*	1385

255	64	**Performance Analysis of Data Reusing Least Mean Square Algorithm for Smart Antenna System** Anamika Rathore, Debendra Kumar Panda	1391
256	85	**Predictive Controlled SMES for Frequency Control of Hybrid Wind-Diesel Standalone System** *Mairaj-ud-Din Mufti, Mubashar Yaqoob Zargar, Shameem Ahmed Lone*	1395
257	88	**Outage Analysis of AF Relayed Hybrid VLC-RF Communication System for E-Health Applications** *Anshul Vats, Mona Aggarwal IEEE Member, Swaran Ahuja*	1401
258	98	**Effect of Ultra Battery on Load Frequency Response of Two Area Power System** *S. Zahid Nabi Dar, Mairaj-ud-Din Mufti*	1406
259	99	**Model Predictive Control oftwo Area Power System with Super Conducting Magnetic Energy Storage System** *S Zahid Nabi Dar, Mairaj-ud-Din Mufti*	1412
260	105	**Model Order Reduction in Power Electronics: Issues and Perspectives** *Shahkar Ahmad Nahvi, Mohammad Abid Bazaz, Hadhiq Khan*	1417
261	106	**Active Inductor Linearization using Transistor Level Techniques** *Akanksha Singh, Vandana Niranjan*	1422
262	109	**Analysis of Swastika Slot Patch on A Tilted Square Metasurface** *Saroop Singh, Chahat Jain*	1428
263	118	**Analysis of Square Slotted Fractal Antenna on A Square Slotted Metasurface** *Avinashi Chhabra, Chahat Jain, Saroop Singh*	1432
264	146	**Convolution based Efficient Architecture for 1-D DWT** *Mamatha I, Shikha Tripathi, Sudarshan TSB*	1436
265	168	**TCAD Simulations of Double Gate Junctionless Tunnel Field Effect Transistor with Spacer** *Sapna Singh, Sudakar Singh Chauhan*	1441
266	171	**Steep Subthreshold Swing Analysis of Dual Metal Drain Dopingless Double Gate Tunnel FETs based on Ge-Source with High-k for Low Power Applications** *Neeraj Sharma, Sudakar Singh Chauhan*	1445
267	172	**Enhancing Analog Performance and Suppression of Subthreshold Swing using Hetero-junctionless Double Gate Tunnel FETs** *Neha Sharma, Sudakar Singh Chauhan*	1449
268	186	**Analysis of Various Parameters of Double Gate Junctionless MOSFET using Ge-source with High-k Spacer** *Neelam Kumari, Shweta Meena*	1453
269	190	**Effect of Different Dielectric Materials on Enzyme Field Effect Transistor** *Purnima Kumari Sharma, Hiranya Ranjan Thakur, Jiten Chandra Dutta*	1457
270	191	**Reduced Order Modeling of Electrical Circuits: Simulation and Hardware Validation** *Puneet Panchal, Yogesh V. Hote, Sahaj Saxena, Chitra Krishnamurthi*	1461
271	197	**Local Training in Speaker Verification for PLDA** *Hunny Pahuja, Priya Ranjan, Amit Ujlayan*	1466
272	208	**Power Efficient Voltage Controlled Oscillator Design in 180nm CMOS Technology** *Prachi Gupta, Manoj Kumar*	1470
273	210	**Design of Low Power and Area Efficient Half Adder using Pass Transistor and Comparison of Various Performance Parameters** *Prashant Kumar, Navaneet Singh Bhandari, Lokesh Bhargav, Rashmi Rathi, S C Yadav*	1477
274	212	**Demonstration of Double Electrode Vertical-sliding Triboelectric Generator** *Parul Chaudhary, Puneet Azad*	1483
275	214	**Prevention of Illegal Distribution Line Tappings** *Sheikh Suhail Mohammad, Peerzada Aamir Javaid, Auqib Ahmed Dar, Priya Ranjan*	1488
276	220	**Design and Implementation of Robust Low Cost and Low Power Prototype for Generic Counting System** *Deepshikha Yadav, Puneet Azad*	1493
277	222	**Triboelectric Nanogenerator based on Vertical Contact Separation Mode for Energy Harvesting** *Khushboo, Puneet Azad*	1499
278	237	**Islanding Detection Technique for a Distributed Generation with Perfectly Matched Load Condition** *Ruchika, Pankaj Gupta, D. K. Jain, R. S. Bhatia*	1503
279	251	**Performance Analysis of Organic Photovoltaics by Optimization of Active Layer and Electrode: Materialistic Approach** *Pranjali Nautiyal, Poornima Mittal*	1507
280	265	**Fuzzy Logic based Battery Storage System for a Standalone Wind Energy Conversion System** *Priyanka Nagwanshi, Mubashar Yaqoob Zargar, Mairaj-ud-Din-Mufti*	1512
281	291	**A Novel Polarization Independent TripleBandStop Frequency Selective Surface for the Mobile and Wireless Communication** *Monika Garg, Rekha Chahar, Sanjeev Yadav, Shweta Garg, Darakshanda Noor*	1518
282	292	**A Novel Reflective Frequency Selective Surface for Triple Frequency Applications** *Shweta Garg, Sanjeev Yadav, Kiran Aseri, Monika Garg, Darakshanda Noor*	1522

283	336	**MIG and COG Reversible Logic Gate Based QSD Addition / Subtraction** *Simranjeet Singh Sudan, Manish Singhal*	1526
284	344	**A Hexagonal Broadband Compact Microstrip Monopole Antenna for C Band, X Band and Ku Band Applications** *Shailendra Kumar Dhakad, Tapesh Bhandari*	1532
285	375	**Review on Reversible Logic Circuits and its Application** *Ruqaiya Khanam, Abdul Rahman, Pushpam*	1537
286	378	**Analytical Study of High Performance Flip-flop Circuits Based on Performance Measurements** *Neha Raghav, Malti Bansal*	1543
287	435	**Memristor based XNOR for high speed area efficient 1-bit Full Adder** *Anuradha Singh*	1549
288	456	**NanocavityCoupled Waveguide Photonic Crystal Biosensor for Detection of Different Blood Components** *Shivani Ameta, Arvind Sharma, Pawan Kumar Inaniya*	1554
289	524	**Contact Resistance in Organic Transistors: Extraction Using Variable Length Method** *Shruti Nautiyal, Poornima Mittal*	1558
290	550	**A Compact Meandered Line Micro strip Antenna and Observe Effect of Inverted U Shape in Ground Plane for Triple Band** *Brajlata Chauhan, Sandip Vijay, S C Gupta*	1563
291	599	**Design and Performance Analysis of 20nm 5-fin SOI FinFET for Different Channel Materials** *Gurpurneet Kaur, Sandeep Singh Gill, Munish Rattan*	1569
292	603	**Time-Domain Analysis of Monocycle Pulse Propagation for 5G UWB Communications** *Bajrang Bansal, Sanjay Soni, Nitin Jain*	1573
293	655	**Hardware Implementation of Carrier Rotation Strategy for Cascaded H-bridge Multilevel Inverters** *Jagilinki Venkata Rao, Aeidapu Mahesh*	1578