

2017 IEEE 7th International Advanced Computing Conference (IACC 2017)

**Hyderabad, India
5 – 7 January 2017**



**IEEE Catalog Number: CFP1739F-POD
ISBN: 978-1-5090-1561-0**

**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:	CFP1739F-POD
ISBN (Print-On-Demand):	978-1-5090-1561-0
ISBN (Online):	978-1-5090-1560-3
ISSN:	2164-8263

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

2017 IEEE 7th International Advance Computing Conference

IACC 2017

Table of Contents

Preface from Chief Editor Dr. Y. Padma Sai	xvii
Message from Prof. A. Venugopal Reddy, Vice Chancellor.....	xix
Message from Dr. K.R. Murali Mohan, Head (Big Data Initiative), Department of Science and Technology, Govt. of India	xx
Message from Dr. Dukkipati Nageswara Rao, President, Vignana Jyothi.....	xxi
Message from Sri. Boppana Sarath Gopal, General Secretary, Vignana Jyothi	xxii
Message from Dr. Deepak Garg, Chair, IEEE Computer Society, India Council.....	xxiii
Message from Prof. Challa Dhanunjaya Naidu , Principal, VNRVJIET.....	xxiv
Message from Prof. Yarlagadda Padma Sai, Programme Chair, IACC 2017	xxv
Conference Organizers.....	xxvii
Technical Program Committee	xxx

Track 1: High Performance Computing

Artificial Intelligence to Impart Surveillance, Tracking, & Actuation on Suspicious Activities	1
<i>Surajit Bhattacharjee and G.C. Somashekhar</i>	
Dynamics of Ordinary and Recurrent Hopfield Networks: Novel Themes	6
<i>Siva Prasad Raju Bairaju, Rama Murthy Garimella, Ayush Jha, and Anil Rayala</i>	
Towards Achieving Efficient and Secure Way to Share the Data	11
<i>Naveen Ghorpade, P. Vijaykarthik, V. Dhananjaya, and R. Balasubramani</i>	
Parallelization in Predicting Species Distribution	15
<i>Cleber Silva F. da Luz, Liria M. Sato, André L. Acosta, Antonio M. Saraiva, and Edson T. Midorikawa</i>	

Cache Friendly Strategies to Optimize Matrix Multiplication	23
<i>M. Ananth, S. Vishwas, and M.R. Anala</i>	
An Efficient Approach to Detect Concept Drifts in Data Streams	28
<i>Aditee Jadhav and Leena Deshpande</i>	
Integration of Software Router with Wi-Fi for Enhanced Security	33
<i>S. Chaitra and Rinki Sharma</i>	
Optimization of Weather Radar Network Using PSO	37
<i>Uttam Kumar Roy and Subhas Acharya</i>	
Machine Learning Methods for Solving Complex Ranking and Sorting Issues in Human Resourcing	43
<i>Arun Kumar, Anurag Pandey, and Suman Kaushik</i>	
Big Data Security: Survey on Frameworks and Algorithms	48
<i>Sudipta Chandra, Soumya Ray, and R.T. Goswami</i>	
Unsupervised Learning Based Context-Aware Recommendation System	N/A
<i>Aditya Gupta and Kunal Gusain</i>	
BN-Based Approach for Predictive Admission Control of Cloud Services	59
<i>Abul Bashar</i>	
Plagiarism Detection Model Using Machine Learning in Hadoop Architecture	N/A
<i>Mary Carmel and Viji Gopal</i>	
Cost and Performance Analysis of Network Function Virtualization Based Cloud Systems	70
<i>M.D. Ananth and Rinki Sharma</i>	
Neural Network Approach for Reusable Component Handling	75
<i>N. Krishna Chythanya and Lakshmi Rajamani</i>	
Continuous Automatic Speech Recognition System Using MapReduce Framework	80
<i>M. Vikram, N. Sudhakar Reddy, and K. Madhavi</i>	
Support Vector Machine-Based Classification Scheme of Maize Crop	84
<i>Suhas S. Athani and Ch. Tejeshwar</i>	
Big Data Security in Healthcare: Survey on Frameworks and Algorithms	89
<i>Sudipta Chandra, Soumya Ray, and R.T. Goswami</i>	
Requirement Prioritization Using Adaptive Fuzzy Hierarchical Cumulative Voting	95
<i>Bhagyashri B. Jawale, Girish Kumar Patnaik, and Ashish T. Bhole</i>	
Existential Probability Weighting Strategy to Reduce Search Space & Time for Big Data Mining	103
<i>Mahesh A. Shinde and K.P. Adhiya</i>	
An Optimal Neural Network Classifier for Cervical Pap Smear Data	110
<i>K. Hemalatha and K. Usha Rani</i>	
Hadoop Approach to Cluster Based Cache Oblivious Peano Curves	115
<i>Gurpinder Kaur, Sachin Bagga, and Kulvinder Singh Mann</i>	
Framework for Predictive Analytics as a Service Using Ensemble Model	121
<i>S. Kishore Babu, S. Vasavi, and K. Nagarjuna</i>	

A Map-Reduce Framework for Finding Clusters of Colocation Patterns - A Summary of Results	129
<i>M. Sheshikala, D. Rajeswara Rao, and R. Vijaya Prakash</i>	
An Empirical Approach towards the Knowledge Extraction in a High-Dimensional Clinical Data Set	132
<i>Gihan P. Seneviratne and M.G.U. Nadeeshani</i>	
Big Data Privacy Using Fully Homomorphic Non-Deterministic Encryption	138
<i>Tejashree B. Patil, Girish Kumar Patnaik, and Ashish T. Bhole</i>	
A Multi-Objective Data Dissemination Protocol for Intelligent Transportation Systems	144
<i>Chinmoy Ghorai and Indrajit Banerjee</i>	
Fault-Tolerant Scheduling for Scientific Workflows in Cloud Environments	150
<i>K. Vinay and S.M. Dilip Kumar</i>	
Secure Complex Event Processing Framework	156
<i>Venkata Krishna Kota, Thirumal Kumar Kanakurthi, T. Velayutham, M. Akila, and Hemavathy M</i>	
Track 2: Advances in Communications and Networking	
Wireless Detection System for Health and Military Application	161
<i>Yallalinga, Nirmalkumar S. Benni, and Sunilkumar S. Manvi</i>	
Design and Analysis of Crescent Shape Textile Antenna for WLAN Applications	167
<i>Ramesh Manikonda, V. Rajyalakshmi, and P. Mallikharjuna Rao</i>	
Improvisation in BER and PAPR by Using Hybrid Reduction Techniques in MIMO-OFDM Employing Channel Estimation Techniques	170
<i>Ashna Kakkar, Sai Nitesh Garsha, Ojasvi Jain, and Kritika</i>	
A Low Cost Home Automation System Using Wi-Fi Based Wireless Sensor Network Incorporating Internet of Things (IoT)	174
<i>N. Vikram, K.S. Harish, M.S. Nihaal, Raksha Umesh, Aashik Shetty, and Ashok Kumar</i>	
Designing a New Link Quality Estimator for Sensor Nodes by Combining Available Estimators	179
<i>Moumita Deb, Subhobrata Roy, Bidushi Saha, Paromita Das, and Moumita Das</i>	
Wavelength Selection for Prediction of Polyphenol Content in Inward Tea Leaves Using NIR	184
<i>Ashmita De, Somdeb Chanda, Bipan Tudu, Rajib Bandyopadhyay, Ajanto Kumar Hazarika, Santanu Sabhapondit, B. D. Baruah, Pradip Tamuly, and Nabarun Bhattachryya</i>	
Tropospheric Scintillation of Ku and Ka-Band Satellite Signals in South Indian Region	188
<i>Prabhakar Rapaka and T.V. Ramana</i>	
Detection of Malicious Node in Wireless Sensor Network	193
<i>P. Padmaja and G.V. Marutheswar</i>	
Secure Energy Encryption for Wireless Power Transfer	199
<i>Emmanuel Ahene, Mark Ofori-Oduro, and Brighter Agyemang</i>	

Studying PPCA and Its Other Homologs in C7 Family towards the Binding with Deoxycholate Based on Unique Encoding of Amino Acids	205
<i>Prasanta Kumar Pramanik, Jayanta Kumar Das, and Pabitra Pal Choudhury</i>	
Non-Uniform Quantized Data Fusion Rule Alleviating Control Channel Overhead for Cooperative Spectrum Sensing in Cognitive Radio Networks	210
<i>Arpita Chakraborty, Jyoti Sekhar Banerjee, and Abir Chattopadhyay</i>	
Higher Order Statistics for Multispectral Satellite Data	216
<i>T. Venkata Krishnamoorthy and G. Uma Maheswara Reddy</i>	
Analysis of Hard-Decision and Soft-Data Fusion Schemes for Cooperative Spectrum Sensing in Rayleigh Fading Channel	220
<i>Srinivas Nallagonda, Y. Rakesh Kumar, and Pasham Shilpa</i>	
Impact of Malicious Node on Secure Incentive Based Advertisement Distribution (SIBAD) in VANET	226
<i>V Padmapriya, S. Smitha, D.N. Sujatha, and K.R. Venugopal</i>	
Reliability Evaluation of Mobile Ad Hoc Networks: With and without Interference	233
<i>Ch. Venkateswara Rao, N. Padmavathy, and Sanjay K. Chaturvedi</i>	
A Step towards Textual Instructions to Virtual Actions	239
<i>Himangshu Sarma, Robert Porzel, Rainer Malaka, and Arun Baran Samaddar</i>	
An Introspection on Effect of Framing and Bit-Error on Packet Delay	N/A
<i>Uttam Kumar Roy</i>	
Reliability Testing of Real Time Medium Voltage Drive Simulation by Benchmarking with Field Data	250
<i>J. Bapiraju, Ashish Lukka, B. Shanthibhushan, and S. Shriram</i>	
Severe Cause of Cloud Attenuation and Rain Attenuation on Space Communication Link at Millimetre Band and Differentiation between Rain Attenuation and Cloud Attenuation	255
<i>Kandala Kalyana Srinivas and Teppala Venkata Ramana</i>	
Ant Colony Approach for Lightweight Intrusion Detection in Wireless Sensor Networks Using Multi Agent Based System	N/A
<i>Gauri Kalnoor and Jayashree Agarkhed</i>	
Design and Implementation of High Performance MIL-STD-1553B Bus Controller	266
<i>K. Sushma, C.D. Naidu, Y. Padma Sai, and K. Sarath Chandra</i>	
Design and Implementation of Remote Terminal for MIL-STD-1553 B	270
<i>B. Sourav, C.D. Naidu, Y. Padma Sai, and P. Kishore</i>	
A Novel Method for Efficient Optimization of Energy for LTE with QoS Constraints	275
<i>Owk. Srinivasulu and P. Rajesh Kumar</i>	
Visualization of Exchanged Information with Dynamic Networks: A Case Study of Fire Emergency Search and Rescue Operation	281
<i>Vimala Nunavath and Andreas Prinz</i>	
Designing a Wireless Sensor Network for Precision Agriculture Using Zigbee	287
<i>G. Sahitya, N. Balaji, C.D Naidu, and S. Abinaya</i>	

An Improved Technique to Mitigate Interference between Adjacent Bands in Cognitive Radio System	292
<i>M. Srilatha, R. Hemalatha, and K.S. Ramesh</i>	
Challenge Evaluation Algorithm to Identify Malicious Node in MANET	297
<i>Sapna B. Kulkarni and B.N. Yuvaraju</i>	
Client Puzzle Approach for Securing Aggregated Data in Wireless Sensor Network	303
<i>Priyanka P. Mukartihal and Daneshwari I. Hatti</i>	
Randomized Grid-Based Approach for Complete Area Coverage in WSN	307
<i>Sasmita Dash, Biraja Prasad Nayak, Bhabani Shankar Prasad Mishra, and Amulya Ratna Swain</i>	
Energy Aware Multipath Routing Scheme for Wireless Sensor Networks	313
<i>Poornima M. Chanal, Mahabaleshwar S. Kakkasageri, Avani A. Shirbur, and Gururaj S. Kori</i>	
Knowledge Based Real Time Monitoring System for Aquaculture Using IoT	318
<i>K. Raghu Sita Rama Raju and G. Harish Kumar Varma</i>	
Optimized Performance Validation of Biosensors with High Fault Tolerance	322
<i>Subhas A. Meti and V.G. Sangam</i>	
Design of Multi-Carrier CDMA-MIMO System by Various Spreading Strategies	326
<i>P. Sreesudha and B.L. Malleswari</i>	
Smart Gas Level Monitoring, Booking & Gas Leakage Detector over IoT	330
<i>Kumar Keshamoni and Sabbani Hemanth</i>	
Chip-Based Key Distribution Technique for Security Enhancement in Hierarchical Wireless Sensors Networks	333
<i>Naveen Kumar K and Manisha J Nene</i>	
Lightweight Energy Proficient Anonymous Routing for Low-Power MANET	339
<i>A. Naveena and K. Rama Linga Reddy</i>	
Comparing and Analyzing Reactive Routing Protocols (AODV, DSR and TORA) in QoS of MANET	345
<i>Abdalftah Kaid Said Ali and U.V. Kulkarni</i>	
A New Method for Minimizing Unnecessary Handoff in 802.11	349
<i>Vaishali Chauhan, Naresh Pal, R. Vikram Raju, Sandeep Joshi, and Roheet Bhatnagar</i>	
An Intelligent Load Frequency Control for Two Area System	355
<i>T.V. Divya Jyothi, N. Lavanya, Ch. Bhavani Shankar, and T. Sudhakar</i>	
Performance Analysis of Power-Aware Node-Disjoint Multipath Source Routing in Mobile Ad Hoc Networks	361
<i>M. Bheemalingaiah, M.M. Naidu, D. Sreenivasa Rao, and P. Vishvapathi</i>	
Comparative Analysis of Approximate Point in Triangulation (APIT) and DV-HOP Algorithms for Solving Localization Problem in Wireless Sensor Networks	372
<i>Samuel Anthrayose and Ashish Payal</i>	

Design and Development of a Wireless Solar Power Monitor for Wireless Sensor Network Applications	N/A
<i>Remya Murugesh, Aravind Hanumanthaiah, Anand Ramachandran, Ullas Ramanadhan, and Nirmala Vasudevan</i>	
Intelligent Routing for Hybrid Communication in VANETs	385
<i>Mamata J. Sataraddi, Mahabaleshwar S. Kakkasageri, Gururaj S. Kori, and Rajeshwari V. Patil</i>	
Enhancing Identity Based Batch Verification Scheme for Security and Privacy in VANET	391
<i>Pratabidya Mahapatra and A. Naveena</i>	
Mamdani Fuzzy Inference Based Hierarchical Cost Effective Routing (MFIHR) in WSNs	397
<i>Arabinda Nanda and Amiya Kumar Rath</i>	
Comparative Analysis of Wireless Technology Options for Rural Connectivity	402
<i>Veluru Sai Anusha, G.K. Nithya, and Sethuraman N. Rao</i>	
Track 3: Circuits and Systems in Computing	
A Safe Driving Embedded System Integrated with Can Protocol	408
<i>S. Sheher Banu and Savita Sonoli</i>	
Analysis of Leakage in 32-Bit Adders in 45 nm Technology	412
<i>Md. Masood Ahmad, K. Manjunathachari, and K. Lalkishore</i>	
Model Based System for Software Change Analysis for Embedded Systems on Spacecraft	418
<i>A. Savitha, Rajiv. R. Chetwani, Y.R. Bhanumathy, and M. Ravindra</i>	
Automatic Generation of Traffic Signal Based on Traffic Volume	423
<i>T. Sridevi, Kuruva Harinath, and P. Swapna</i>	
Design of Power Management Unit Using Mixed Voltage Buffer	429
<i>V.V.B. Sravya and V. Priyanka Brahmaiah</i>	
Wide Band Patch Antenna Structures for Cognitive Radio Applications	434
<i>Manikya Krishna Chaitanya Durbhakula and Venkata Koteswara Rao Nalam</i>	
A Novel Low Power Dynamic Memory Architecture Using Single Supply 3T Gain Cell	440
<i>Malladhi Nagarjuna, Gadham Mamatha, and S. Rajendar</i>	
Enhancement of Dynamic Performance of Brush-Less DC Motor Drive	444
<i>S.S. Srinivas K. and P. Pavan Kumar</i>	
Development of System Level Computational Platform for IP-BTS Telecom Application	450
<i>M. Rajendra Prasad and D. Krishna Reddy</i>	
Text Mining Approach for Product Quality Enhancement: (Improving Product Quality through Machine Learning)	456
<i>Chandrasekhar Rangu, Shuvojit Chatterjee, and Srinivasa Rao Valluru</i>	
Inferential Sensing of Output Quality in Petroleum Refinery Using Principal Component Regression and Support Vector Regression	461
<i>Varun Jain, Perla Kishore, Rahul Anil Kumar, and Ajaya Kumar Pani</i>	

Design and Control of Grid Connected PV/Wind Hybrid System Using 3 Level VSC	466
<i>Divya Betha, Majji Satish, and Sarat Kumar Sahu</i>	
Performance Enhancement of Permanent Magnet Brushless DC Motor Using Multilevel Inverter	472
<i>Bonula Sowjanya Kalyani, Venu Madhav Mukkavilli, and Gopichand Naik</i>	
Design of Battery Energy Storage System (BESS) Support Dynamic Voltage Restorer (DVR) to Reduce the Rating of Voltage Source Converter (VSC) Applied to IEEE 11, 33 & 69 Bus Systems	477
<i>Chapa Udayakiran and Sk. Hussain Vali</i>	
Modeling and Analysis of Model Reference Adaptive Control by Using MIT and Modified MIT Rule for Speed Control of DC Motor	482
<i>M. Swathi and P. Ramesh</i>	
Low Power and High Speed Optimized 4-bit Array Multiplier Using MOD-GDI Technique	487
<i>Pinninti Kishore, P.V. Sridevi, and K. Babulu</i>	
Blind Adaptive Beamforming Simulation Using NCMA for Smart Antenna	492
<i>B.K. Imtiyaz Ahmed and Fathima Jabeen</i>	
Bistatic Radar Target Detection Based on GEO SAR via Fourth-Order Keystone Transform	N/A
<i>Fuxia Wu and Shunsheng Zhang</i>	
Novel Ultra Low Power Dual Edge Triggered Retention Flip-Flop for Transiently Powered Systems	500
<i>Madhav Dasari, R. Nikhil, and Ameet Chavan</i>	
Analytical Delay Modeling of On-Chip Hybrid RGLC Interconnect	505
<i>Bhattu Hari Prasad Naik, Md. Misbahuddin, and Chandra Sekhar Paidimarry</i>	
Transient Stability Analysis of a Combined Cycle Power Plant Using Etap Software	510
<i>D. Sreenivasulu Reddy and Ch. Siva Kumari</i>	
Development of Smart Insulin Device for Non Invasive Blood Glucose Level Monitoring	516
<i>P. Sampath Reddy and K. Jyostna</i>	
Stacked Keeper with Body Bias Approach to Reduce Leakage Power for 2-Byte CAM Using 180NM CMOS Technology	520
<i>K. Naresh, V. Madhavarao, M. Kavitha Sravanthi, and M. Rohith Anath Ratnam</i>	
Timing and Synchronization for Explicit FSM Based Traffic Light Controller	526
<i>K. Swetha Reddy and B.B. Shabarinath</i>	
Integrating the Reconfigurable Devices Using Slow-Changing Key Technique to Achieve High Performance	530
<i>A. Murali, K. Hari Kishore, C.P. Rama Krishna, S. Kumar, and A. Trinadha Rao</i>	
Effect of Catastrophic Faults in an Analog System	535
<i>Shailaja Mantha and M. Asha Rani</i>	
Design of a Parallel Adder Circuit for a Heavy Computing Environment and the Performance Analysis of Multiplication Algorithm	540
<i>Jayanta Kumar Das, Pabitra Pal Choudhury, and Sudhakar Sahoo</i>	

Implementation of Wireless Sensor Network for Real Time Overhead Tank Water Quality Monitoring	546
<i>Ch. Sowmya, C.D. Naidu, Rajendra Prasad Somineni, and D. Ramesh Reddy</i>	
FPGA Implementation of Memory Design and Testing	552
<i>K.L.V. Ramana Kumari, M. Asha Rani, and N. Balaji</i>	
Design of Low Power Multiplier using CNTFET	556
<i>Rajendra Prasad Somineni and Shaik Mohammed Jaweed</i>	
Development of Intelligent Powerd Wheelchair	560
<i>Rama Mohana Reddy Kallam and Harish Kumar Sharma</i>	

Track 4: Signal, Image, and Multimedia Processing

Vehicle Identification Based on the Model	566
<i>T. Sridevi, P. Swapna, and Kuruva Harinath</i>	
A Genetic-Fuzzy Approach for Automatic Text Categorization	572
<i>Pradnya Kumbhar, Manisha Mali, and Mohammad Atique</i>	
Genetic Algorithm Based Optimized Color Image Watermarking Technique Using SVD and DWT	579
<i>Jeebananda Panda, Akshay Uppal, Akhil S Nair, and Bhavesh Agrawal</i>	
Supervised Classification of Breast Cancer Malignancy Using Integrated Modified Marker Controlled Watershed Approach	584
<i>U. Rajyalakshmi, S. Koteswara Rao, and K. Satya Prasad</i>	
SSVEP Signal Detection for BCI Application	590
<i>P.M. Shyam Prasad, Radhika Swarnkar, K. Visnu Prasad, M. Radhakrishnan, Md. Farukh Hashmi, and A.G. Keskar</i>	
Morphological Pattern Spectrum Based Image Manipulation Detection	596
<i>Nayana Nayak, P. Nidhi Hegde, Anusha, Panchami Nayak, P.S. Venugopala, and Takeshi Kumaki</i>	
Optimization of Low Memory Killer by Recognizing User's App Usage Pattern	N/A
<i>Shubham Gupta and Periyasamy Paramasivam</i>	
Voice Control Module for Low Cost Local-Map Navigation Based Intelligent Wheelchair	609
<i>Sateesh Reddy Avutu, Dinesh Bhatia, and B. Venkateswara Reddy</i>	
The Fastest Possible Solution to the Weighted Water-Filling Problems	614
<i>Kalpana Naidu, Aytha Ramesh Kumar, and Vinjamoori Vikas</i>	
An Image Watermarking Scheme Using Threshold Based Secret Sharing	619
<i>S. Bhargavi Latha, D. Venkata Reddy, and A. Damodaram</i>	
A Feature Subset Based Decision Fusion Approach for Scene Classification Using Color, Spectral, and Texture Statistics	624
<i>Anish Chand Turlapaty, Hema Kumar Goru, and Balakrishna Gokaraju</i>	
DNA Based Disease Prediction Using Pathway Analysis	629
<i>Syeeda Farah, M.S. Sushma, T. Asha, B. Cauvery, and K.S. Shivanand</i>	

Implementation of Content Based Video Classification Using Hidden Markov Model	635
<i>Narra Dhana Lakshmi, Y. Madhavee Latha, A. Damodharam, and K. Lakshmi Prasanna</i>	
Saliency Based Assessment of Videos from Frame-Wise Quality Measures	639
<i>Bandi Roja and B. Sandhya</i>	
Extraction of 2.1D Sketch from Monocular Images Using DIRECT Optimization Algorithm	645
<i>Rashmi R. Deshpande and Mahabaleswara R. Bhatt</i>	
Aadhaar Based Biometric Attendance System Using Wireless Fingerprint Terminals	651
<i>Narra Dhanalakshmi, Saketi Goutham Kumar, and Y Padma Sai</i>	
Computational Size Measurement & Study of Nanoparticle Using Transmission Electron Microscopy Data by Image-Processing	656
<i>Oindri Ray, Bijit Bani, and Chandni Pani</i>	
Efficient Division in Carry Value Transformation (CVT) and Exclusive OR (XOR) Paradigm	659
<i>Jayanta Kumar Das and Pabitra Pal Choudhury</i>	
Analysis of Facial Expressiveness Captured in Reaction to Videos	664
<i>K.G. Srinivasa, Sriram Anupindi, R. Sharath, and S. Krishna Chaitanya</i>	
Music Genre Classification: A N-Gram Based Musicological Approach	671
<i>Eve Zheng, Melody Moh, and Teng-Sheng Moh</i>	
New Approach for Estimating Fractal Dimension of Both Gray and Color Images	678
<i>Abadhan Ranganath and Jibitesh Mishra</i>	
Video Skimming for Lecture Video Sequences Using Histogram Based Low Level Features	684
<i>Badri Narayan Subudhi, T. Veerakumar, Deepak Yadav, Amol P. Suryavanshi, and S.N. Disha</i>	
Adjacent Evaluation of Completed Local Ternary Count for Texture Classification	690
<i>Ch. Sudha Sree and M.V.P. Chandra Sekhara Rao</i>	
Watershed and Clustering Based Segmentation of Chromosome Images	697
<i>Ruchita Manohar and Jayanand Gawande</i>	
MR Image Classification Using Adaboost for Brain Tumor Type	701
<i>Astina Minz and Chandrakant Mahobiya</i>	
Edge Based Segmentation Approach to Extract Text from Scene Images	706
<i>T. Kumuda and L. Basavaraj</i>	
Automatic Variable Length Key Generation from Images and CRT	711
<i>Kalyanapu Srinivas and V. Janaki</i>	
Data Acquisition System of Electrooculogram	716
<i>V. Priyanka Brahmaiah, Y. Padma Sai, and M.N. Giri Prasad</i>	
Multi Instance Multi Label Classification of Restaurant Images	722
<i>Lakshya Kejriwal, Vaibhav Darbari, and Om Prakash Verma</i>	

A Novel Approach for Analysis of FTIR Membrane Spectroscopy	728
<i>Ravichand Kancharla, Shanthi Karpurapu, Vadeghar Ramesh Kumar, and Ginuga Prabhaker Reddy</i>	
Efficient Feature Set for Spam Email Filtering	732
<i>Reshma Varghese and K.A. Dhanya</i>	
OCR-Mirror Image Reflection Approach: Document Back Side Character Recognition by Using Neural Fuzzy Hybrid System	738
<i>Santosh Kumar Henge and B. Rama</i>	
Track 5: Advanced Algorithms	
Analysing Dataflow Multi-Threaded Applications at Runtime	744
<i>Somnath Mazumdar and Alberto Scionti</i>	
Solving System of Non-Linear Equations Using Modified Jaya Algorithm	N/A
<i>Prashant P. Bedekar and S.R. Bhide</i>	
Change Management Guidelines That Address Barriers to Technology Adoption in An Hei Context	754
<i>Richard Gareth Smuts, V.V. Madhavi Lalitha, and Habib Ullah Khan</i>	
Information Technology in the Maritime Industry Past, Present and Future: Focus on LNG Carriers	759
<i>Olugbenga A. Bankole, V.V. Madhavi Lalitha, Habib Ullah Khan, and Anjaneyulu Jinugu</i>	
A Heuristic-Based Resource Allocation Approach for Parallel Execution of Interacting Tasks	764
<i>Uddalok Sen, Madhulina Sarkar, and Nandini Mukherjee</i>	
Stack Solution for Finding Optimal One	772
<i>Pranav Kumar and G. Sahoo</i>	
Sentiment Analysis Using Random Forest Ensemble for Mobile Product Reviews in Kannada	777
<i>Yashaswini Hegde and S.K. Padma</i>	
Enhancing the Performance of Parallel N-Body Simulation	783
<i>Mayez A. Al-Mouhamed, Nazeeruddin Mohammad, and Majid A. Khan</i>	
Multiple Entities Search through Simon's Quantum Algorithm	789
<i>Shyam Sihare and V.V. Nath</i>	
Survey on Frequent Pattern Mining Algorithm for Kernel Trace	793
<i>Aniket Tate and Laxmi Bewoor</i>	
Generating Stopword List for Sanskrit Language	799
<i>Jaideepsinh K. Raulji and Jatinderkumar R. Saini</i>	
Topical and Trust Based Page Ranking Using Automatic Seed Selection	803
<i>L. Smitha and S. Sameen Fatima</i>	
Brain Tumor Detection and Segmentation Using Conditional Random Field	807
<i>C. Hemasundara Rao, P.V. Naganjaneyulu, and K. Satya Prasad</i>	

Intelligent Learning Environment Model for Education	811
<i>Tarun Dhar Diwan, Upasana Sinha, and Kamal K. Mehta</i>	
Wiener Model Based System Identification Based on CRPSO Algorithm	817
<i>P.S. Pal, R. Kar, D. Mandal, and S.P. Ghoshal</i>	
Ranking of FIXes for Choosing the Best Fix	822
<i>M. Chandra Mohan, T. Mamatha, and A. Balaram</i>	
Smart Organization	826
<i>Vivek Ghule and Sachin Sakhare</i>	
Optimization of Association Rule Mining Using Hybridized Artificial Bee Colony (ABC) with BAT Algorithm	831
<i>S. Neelima, N. Satyanarayana, and P. Krishna Murthy</i>	
Analysis of the Effect of Elite Count on the Behavior of Genetic Algorithms: A Perspective	835
<i>Apoorva Mishra and Anupam Shukla</i>	
Variance Based Moving K-Means Algorithm	841
<i>Vibin Vijay, V.P. Raghunath, Amarjot Singh, and S.N. Omkar</i>	
Prediction of Time Series Data Using GA-BPNN Based Hybrid ANN Model	848
<i>D.C. Aishwarya and C. Narendra Babu</i>	
Investigating Evolutionary Relationships between Species through the Light of Graph Theory Based on the Multiplet Structure of the Genetic Code	854
<i>Antara Sengupta, Jayanta Kumar Das, and Pabitra Pal Choudhury</i>	
N-Gram Approach for Gender Prediction	860
<i>T. Raghunadha Reddy, B. Vishnu Vardhan, and P. Vijayapal Reddy</i>	
Track 6: Databases and Data Management	
Implementation of K-Anonymity Using Android SDK	866
<i>M. Sheshikala, R. Vijaya Prakash, and D. Rajeswara Rao</i>	
Leaf Classification Using Completed Local Binary Pattern of Textures	870
<i>Anilkumar Muthevi and Ravi Babu Uppu</i>	
Facebook Based Choice Filtering	875
<i>Anusha Gupta, Himanshu Budania, Prachi Singh, and Pramod Kumar Singh</i>	
Exploring the Search Space Using Parallel Universe Alien GA for Multi-Objective Optimization	N/A
<i>Rupande Desai, Narendra Patel, and S.A. Puranik</i>	
Heterogeneous Face Identification by Fusion of Local Descriptors	886
<i>Kunwar Pankaj Siddharth and Dakshina Ranjan Kisku</i>	
Cost-Based Database Scaling	895
<i>V.S. Srujana Oruganti</i>	
To Handle Uncertain Data for Medical Diagnosis Purpose Using Neutrosophic Set	901
<i>Soumitra De and Jaydev Mishra</i>	

Enhancing Structure Learning of Markov Network Using Alternating Decision Trees	904
<i>Vishakha Gupta, Aditya Trivedi, and Wilfred Godfrey</i>	
Automated System for Brain Tumour Detection and Classification Using eXtreme Gradient Boosted Decision Trees	N/A
<i>Tushar Mudgal, Aditya Gupta, Siddhant Jain, and Kunal Gusai</i>	
Sentiment Analysis on Twitter Using Streaming API	915
<i>M. Trupthi, Suresh Pabboju, and G. Narasimha</i>	
Solving Enterprise Solution Complexity in SCM Domain through Business Process Agility	920
<i>Aarti M. Karande and D.R. Kalbande</i>	
A Reversible RIE Based Watermarking Scheme	925
<i>V. Muni Sekhar, Ch. Sravan Kumar, K.V.G. Rao, N. Sambasiva Rao, and M. Gopichand</i>	
Recommendation System in E-Commerce Websites: A Graph Based Approach	931
<i>Shakila Shaikh, Sheetal Rathi, and Prachi Janrao</i>	
End Users Can Mitigate Zero Day Attacks Faster	935
<i>Vivek Bardia and CRS Kumar</i>	
India - Retailing - Destination	939
<i>K. Vijaya Sekhar Reddy, B. Rajesh, and N. Venkat Rao</i>	
A Comparative Review of Data Warehousing ETL Tools with New Trends and Industry Insight	943
<i>Rajendrani Mukherjee and Pragma Kar</i>	
Author Index	949