

2nd International Conference on Communication, Computing & Security

(ICCCS-2012)

Procedia Technology Volume 6

**Rourkela, Odisha, India
6-8 October 2012**

Volume 1 of 2

**ISBN: 978-1-62748-522-7
ISSN: 2212-0173**

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2012) by Elsevier B.V.
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact Elsevier B.V.
at the address below.

Elsevier B.V.
Radarweg 29
Amsterdam 1043 NX
The Netherlands

Phone: +31 20 485 3911
Fax: +31 20 485 2457

<http://www.elsevierpublishingsolutions.com/contact.asp>

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

VOLUME 1

A Segment based Technique for Detecting Exudate from Retinal Fundus Image.....	1
<i>Atul Kumar, Abhishek Kumar Gaur, Manish Srivastava</i>	
A New Soft-Thresholding Image Denoising Method	10
<i>Mantosh Biswas, Hari Om</i>	
WiMAX-UMTS Converging Architecture with IMS Signalling Analysis to Achieve QoS.....	16
<i>G. Vijayalakshmy, G. Sivaradje</i>	
A Resilient Authentication and Trojan Detection Technique for Hard IP	24
<i>Debasri Saha</i>	
A Particle Swarm Optimization based Approach for Power System Transient Stability Enhancement with TCSC	31
<i>S. K. Rautray, S. Choudhury, S. Mishra, P. K. Rout</i>	
Semiautomatic Method for Segmenting Pedicles in Vertebral Radiographs	39
<i>Sampath Kumar, K. Prabhakar Nayak, K. S. Hareesh</i>	
Towards Improving Self-adaptive Differential Evolution for Numerical Optimization: A Progress Note.....	49
<i>Indrajit Saha, Ujjwal Maulik, Dariusz Plewczynski</i>	
An Optimal Novel Byzantine Agreement Protocol (ONBAP) for Heterogeneous Distributed Database Processing Systems.....	57
<i>Dharavath Ramesh, Chiranjeev Kumar</i>	
Application of Fuzzy Clustering on Software Quality using Max-min Method.....	67
<i>Jaya Pal, Vandana Bhattacherjee</i>	
Modified Gate Diffusion Input Technique: A New Technique for Enhancing Performance in Full Adder Circuits	74
<i>R. Uma, P. Dhavachelvan</i>	
Q-Learning Approach for Minutiae Extraction from Fingerprint Image.....	82
<i>Sandeep Tiwari, Neha Sharma</i>	
Analysis of Reconfigurable Multipliers for Integer and Galois Field Multiplication based on High Speed Adders.....	90
<i>Divya Madhuri, Kedhareswarao, Ramesh Kumar, Madhavi Latha</i>	
FPGA based Real Time Human Hand Gesture Recognition System	98
<i>Amit Gupta, Vijay Kumar Sehrawat, Mamta Khosla</i>	
A New and Efficient Method for Removal of High Density Salt and Pepper Noise Through Cascade Decision based Filtering Algorithm	108
<i>Ashutosh Pattnaik, Sharad Agarwal, Subhasis Chand</i>	
Improvisation of the Document Summarization by Combining the IR Techniques with “Code-Quantity Memory and Attention” Linguistic Principles	118
<i>Pranitha Reddy, R. C. Balabantary</i>	
The Lion’s Algorithm: A New Nature-Inspired Search Algorithm	126
<i>B. R. Rajakumar</i>	
Test Case Design Using Slicing of UML Interaction Diagram	136
<i>Ranjita Kumari Swain, Vikas Panthi, Prafulla Kumar Behera</i>	
A Novel Approach for Web Service Run Time Exception Handling.....	145
<i>M. Thirumaran, P. Dhavachelvan, R. Shammugapriya, Kiran Kumar Reddy</i>	
Assessment of Software Quality: Choquet Integral Approach	153
<i>Vatesh Pasrija, Sanjay Kumar, Praveen Ranjan Srivastava</i>	
Evaluation of Change Factors for Web Service Change Management	163
<i>M. Thirumaran, P. Dhavachelvan, D. Aishwarya, Kiran Kumar Reddy</i>	
Plant Identification based on Fractal Refinement Technique (FRT)	171
<i>Antony Jobin, Madhu S. Nair, Rao Tatavarti</i>	
Reduced Feature Based Efficient Cancer Classification Using Single Layer Neural Network	180
<i>Rosalin Mahapatra, Babita Majhi, Minakhi Rout</i>	
A Dynamic Fault Tolerant Threshold based Replication Mechanism in Distributed Environment	188
<i>Manu Vardhan, Akhil Goel, Abhinav Verma, Dharmender Singh Kushwaha</i>	
A Genetic Algorithm based Approach for Topological Optimization of Interconnection Networks	196
<i>P. K. Tripathy, R. K. Dash, C. R. Tripathy</i>	
Multiobjective Optimization for Biomedical Named Entity Recognition and Classification	206
<i>Asif Ekbal, Sriparna Saha, Utpal Kumar Sikdar</i>	
A Framework for Outlier Detection in Evolving Data Streams by Weighting Attributes in Clustering	214
<i>Yogita, Durga Toshniwal</i>	
Entropy based Log Chromaticity Projection for Real-time Stereo Matching.....	223
<i>U. Raghavendra, Makkithaya Krishnamoorthy, A. K. Karunakar</i>	
An Evolutionary Algorithm for Multi-criteria Resource Constrained Project Scheduling Problem based On PSO.....	231
<i>Tuli Bakshi, Bijan Sarkar, Subir K. Sanyal</i>	
Outlier Identification using Symmetric Neighborhoods	239
<i>Prasanta Gogoi, B. Borah, D. K. Bhattacharyya, J. K. Kalita</i>	
Edge Strength Extraction using Orthogonal Vectors for Shot Boundary Detection	247
<i>G. G. Lakshmi Priya, S. Dominic</i>	

Application of Multi-Objective Teaching Learning based Optimization Algorithm to Optimal Power Flow Problem.....	255
<i>M. R. Nayak, C. K. Nayak, P. K. Rout</i>	
Effect of Harmony Search Parameters' Variation in Clustering.....	265
<i>Vijay Kumar, Jitender Kumar Chhabra, Dinesh Kumar</i>	
Joint Robust and Reversible Watermarking for Medical Images	275
<i>Hirak Kumar Maity, Santi Prasad Maity</i>	
Dynamic Particle Swarm Optimization to Solve Multi-objective Optimization Problem	283
<i>Hemlata S. Urade, Rahila Patel</i>	
Outlier Detection in Microarray Data Using Hybrid Evolutionary Algorithm	291
<i>A Chandra Sekhara Rao, Dvln Somayajulu, Haider Banka, Rohit Chaturvedi</i>	
Design and Development of an Ontology based Personal Web Search Engine.....	299
<i>T. Sakthi Priya, P. Revathy, T. Pradeesh, C. R. Rene Robin</i>	
Scalable Rough-fuzzy Weighted Leader based Non-parametric Methods for Large Data Sets.....	307
<i>Suresh Veluru, P. Viswanath, Bidyut Kr. Patra, V. Jayachandra Naidu</i>	
Binarization based Image Edge Detection using Bacterial Foraging Algorithm	315
<i>Om Prakash Verma, Rishabh Sharma, Deepak Kumar</i>	
Smart Applications of Context Services using Automatic Adaptive Module and Making users Profiles	324
<i>Neeraj Garg, J. S. Lather, S. K. Dhurandher</i>	
Face Recognition using Threshold Based DWT Feature Extraction and Selective Illumination Enhancement Technique	334
<i>V. Vidya, Nazia Farheen, K. Manikantan, S. Ramachandran</i>	
DWT based Feature Extraction using Edge Tracked Scale Normalization for Enhanced Face Recognition	344
<i>B. P. Rinky, Payal Mondal, K. Manikantan, S. Ramachandran</i>	
Evolution of Degree of Purity in Programming Languages	354
<i>M. Rajasekharababu, Anu Soosan Baby, Deepu Raveendran, Aswathi Joe</i>	
Mobility Aided Cooperative MIMO Transmission in Wireless Sensor Networks	362
<i>N. Medhi, N. Sarma</i>	
Architecture Design and FPGA Implementation of CORDIC Algorithm for Fingerprint Recognition Applications	371
<i>P. Revathi, M. V. Nageswara Rao, G. R. Locharla</i>	
A Novel Technique for Name Identification from Homeopathy Diagnosis Discussion Forum	379
<i>Mukta Majumder, Utsav Barman, Rahul Prasad, Kumar Saurabh, Sujan Kumar Saha</i>	
Analysis of Clustering Algorithms for MR Image Segmentation using IQI	387
<i>S. Patel, K. S. Patnaik</i>	
Speech Coding Based on Orthogonal and Biorthogonal Wavelet.....	397
<i>Shijo M. Joseph, P. Babu Anto</i>	
Automatic System for Classification of Erythrocytes Infected with Malaria and Identification of Parasite's Life Stage	405
<i>S. S. Savarkare, S. P. Narote</i>	
Gravitational Search Algorithm for Optimal Economic Dispatch	411
<i>R. K. Swain, N. C. Sahu, P. K. Hota</i>	
Effectiveness of Software Metrics for Object-oriented System	420
<i>Yeresime Suresh, Jayadeep Pati, Santanu Ku Rath</i>	
Improvement of Initial Cluster Center of C-means using Teaching Learning based Optimization.....	428
<i>Anima Naik, Suresh Chandra Satapathy, K. Parvathi</i>	
Heuristic Frequent Term-Based Clustering of News Headlines	436
<i>Nibir Nayan Bora, Bhabani Shankar Prasad Mishra, Satchidananda Dehuri</i>	
Efficiently Mining of Effective Web Traversal Patterns with Average Utility.....	444
<i>M. Thilagu, R. Nadarajan</i>	
A Novel Spatial Fuzzy Clustering using Delaunay Triangulation for Large Scale GIS Data (NSFCDT).....	452
<i>Parthajit Roy, J. K. Mandal</i>	
Hierarchy Classification for Data Warehouse: A Survey	460
<i>Kanika Talwar, Anjana Gosain</i>	
Using the Triangle Inequality to Accelerate Density based Outlier Detection Method.....	469
<i>Bidyut Kr. Patra</i>	
DWT Feature Extraction Based Face Recognition using Intensity Mapped Unsharp Masking and Laplacian of Gaussian Filtering with Scalar Multiplier	475
<i>Gautham Sitaram Yaji, Sankhadeep Sarkar, K. Manikantan, S. Ramachandran</i>	
A Prototype-Based Modified DBSCAN for Gene Clustering	485
<i>Damodar Reddy Edla, Prasanta K. Jana</i>	
Inverted File Compression using EGC and FEGC.....	493
<i>S. Domnic, V. Glory</i>	
Genetic Algorithm Driven ANN Model for Runoff Estimation	501
<i>Nina R. Dhamge, S. L. Atmapoojya, Mahendra S. Kadu</i>	
Image Retrieval from WWW using Attributes in HTML TAGs	509
<i>P. Shanmuga Vadivel, P. Sumathy, A. Vadivel</i>	

VOLUME 2

Formulating Particle Swarm Optimization based Generalized Kernel Function for Kernel-Linear Discriminant Analysis.....	517
<i>E. S. Gopi, P. Palanisamy</i>	
Block Encoding of Color Histogram for Content based Image Retrieval Applications.....	526
<i>S. G. Shaila, A. Vadivel</i>	
Designing Trust Propagation Algorithms based on Simple Multiplicative Strategy for Social Networks.....	534
<i>Partha Sarathi Chakraborty, Sunil Karform</i>	
Incremental Indexing for High-Dimensional Data using Tree Structure	540
<i>R Vishnu Priya, A. Vadivel</i>	
A Survey on Monochrome Image Segmentation Methods.....	548
<i>M. Srivedi, C. Mala</i>	
TRANS Outperforms MTF for Two Special Types of Request Sequence Without Locality of Reference	556
<i>Rakesh Mohanty, Sangita Patel, Shiba Prasad Dash, Burle Sharma</i>	
Visible Spectrum, Bi-Modal Ocular Biometrics.....	564
<i>Sriram Pavan Tankasala, Plamen Doynov, Reza Derakhshani</i>	
Speckle Noise Reduction using Local Binary Pattern	574
<i>Ajay K. Mandava, Emma E. Regentova</i>	
A Transliteration of CRF based Manipuri POS Tagging	582
<i>Kishorjit Nongmeikapam, Sivaji Bandyopadhyay</i>	
Design Pattern for Dynamic Reconfiguration of Component-based Autonomic Computing Systems using RMI	590
<i>Vishnuvardhan Mannava, T. Ramesh</i>	
Pruning Strategies to Refine Resource List for NN Queries in Location based Services.....	598
<i>A. Saravanan, S. R. Balasundaram</i>	
Learnable Focused Meta Crawling Through Web.....	606
<i>Mukesh Kumar, Renu Vig</i>	
Feature Extraction using Normalized Difference Vegetation Index (NDVI): A Case Study of Jabalpur City	612
<i>A. K. Bhandari, A. Kumar, G. K. Singh</i>	
Feature Binding Technique for Integration of Biological Databases with Optimized Search and Retrieve.....	622
<i>A Chandra Sekhara Rao, Dvln Somayajulu, Haider Banka, Sawraj Roy</i>	
Network Status Aware Routing in 3D-CGIN	630
<i>Meenal A. Borkar, Nitin</i>	
An Efficient and Tolerant Model for Real-time Transaction Management in a Cellular Environment with Random Multiple Handoffs and Frequent Short Disconnections.....	640
<i>Abhishek Kayal, Hemanta Kumar Pati</i>	
Design of Trapezoidal Monopole Antenna with Truncated Ground Plane for 2.5 GHz Band.....	650
<i>Jolly Rajendran, Rakesh Peter, K. P. Soman</i>	
Negative Correlation Aided Network Module Extraction	658
<i>Hasin Afzal Ahmed, Priyakshi Mahanta, Dhruba Kumar Bhattacharyya</i>	
Soft Output Decoding Algorithm for Turbo Codes Implementation in Mobile Wi-Max Environment.....	666
<i>Jagdish D. Kene, Kishor D. Kulat</i>	
Energy Efficient Target Tracking Mechanism using Rotational Camera Sensor in WMSN	674
<i>Debashis De, Madhuparna Das Gupta, Aditi Sen</i>	
A Novel High Speed Two Stage Detector for Spectrum Sensing.....	682
<i>S. Geethu, G. Lakshmi Narayanan</i>	
An Analytical Model for Adaptive Multi-Guard Channel Scheme for Multi-Class Traffic in Cellular Networks with Reduced Handoff Drop Probabilities	690
<i>Suresh Reddy Somagari, Hemanta Kumar Pati</i>	
Fault Tolerant Decentralized Scheduling Algorithm for P2P Grid	698
<i>Piyush Chauhan, Nitin</i>	
Joint Precoding and Decoding in MU-MIMO Downlink Systems with Perfect Channel State Information (CSI)	708
<i>M. Raja, P. Muthuchidambaranathan</i>	
Formal Verification of IEEE 802.11w Authentication Protocol	716
<i>V. Valli Kumari, K. V. Krishnam Raju</i>	
Optimized Hybrid Optical Communication System for First Mile and Last Mile Problem Solution of Today's Optical Network.....	723
<i>Bijayananda Patnaik, P. K. Sahu</i>	
Energy Efficient Routing in Wireless Sensor Network	731
<i>Subhajit Das, Subhabrata Barman, Jayashri Deb Sinha</i>	
Predictive Queue-based Technique for Network Latency Optimization in Established TCP/IP Gigabit Ethernet Stations.....	739
<i>Moses Ekpenyong, Chimaeme Igbokwe</i>	
A New UWB Tri-Band Antenna for Cognitive Radio	747
<i>S. Siva Sundara Pandian, C. D. Suriyakala</i>	
An Approach to Manage Mobility of Sensor Nodes in Sensor-Grid Infrastructure	754
<i>Suman Sankar Bhunia, Soumen Kumar Das, Sarbani Roy, Nandini Mukherjee</i>	
Mathematical Modeling, Equivalent Circuit Analysis and Genetic Algorithm Optimization of an N-sided Regular Polygon Split Ring Resonator (NRPSSR)	763
<i>Sumanta Bose, M. Ramaraj, S. Raghavan, Swadhyaya Kumar</i>	

Energy Efficient Load-Balanced Clustering Algorithm for Wireless Sensor Networks	771
<i>Pratyay Kuila, Prasanta K. Jana</i>	
An Ultra-wideband Printed Monopole Antenna with Dual Band-Notched Characteristics Using DGS and SRR.....	778
<i>M. M. Sharma, Ashok Kumar, Sanjeev Yadav, Y. Ranga</i>	
Dual Mode VLSI Architecture for Spread Spectrum Image Watermarking using Binary Watermark	784
<i>Sudip Ghosh, Somsubhra Talapatra, Jayasree Sharma, Navonil Chatterjee, Hafizur Rahaman, Santi P. Maity</i>	
Optimum Design of Exponentially Varying Helical Antenna with Non Uniform Pitch Profile	792
<i>K. Jimisha, Santhosh Kumar</i>	
Optimal Design of Zig-Zag Antenna Using Nonlinear Segment Length and Pitch Angle	799
<i>V. Anjitha, Santhosh Kumar</i>	
Performance Evaluation of Synchronous Energy Efficient MAC Protocols for Wireless Sensor Networks.....	806
<i>Alak Roy, Nityananda Sarma</i>	
Analytical Crosstalk Modelling of On-Chip RLC Global Interconnects with Skin Effect for Ramp Input.....	814
<i>V. Maheshwari, Suvra Mukherjee, R. Kar, D. Mandal, A. K. Bhattacharjee</i>	
An Improved DSDV Routing Protocol for Wireless Ad Hoc Networks.....	822
<i>Gulfishan Firdose Ahmed, Raju Barskar, Nepal Barskar</i>	
Crosstalk Aware Bandwidth Modelling for VLSI RC Global Interconnects using 2-π Model	832
<i>V. Maheshwari, A. Bansal, S. K. Chhotray, R. Kar, D. Mandal, A. K. Bhattacharjee</i>	
Simulation and Performance Analysis of Various IEEE 802.11 Backoff Algorithms	840
<i>B. Nithya, C. Mala, Vijay Kumar</i>	
Thinned Concentric Circular Antenna Array Synthesis using Particle Swarm Optimization	848
<i>D. Mandal, H. Kumar, S. P. Ghoshal, R. Kar</i>	
Non-uniform Concentric Circular Antenna Array Design using IPSO Technique for Side Lobe Reduction.....	856
<i>Durbadal Mandal, Md. Asif Iqbal Ansari, Rajib Kar, S. P. Ghoshal</i>	
Robust Distributed Learning in Wireless Sensor Network using Efficient Step Size.....	864
<i>T. Panigrahi, G. Panda</i>	
Inter Cipher Block Diffusion: A Novel Transformation for Proposed Parallel AES	872
<i>Shashank Srivastava, Avinash Kumar Singh, G. C. Nandi</i>	
A New Authentication Protocol for Multi-tag RFID Applicable to Passive Tag.....	880
<i>Subhashis Dhal, Indranil Sengupta</i>	
A Coalitional Game Theoretic Mechanism for Privacy Preserving Publishing Based on k-Anonymity	889
<i>Srinivasa L. Chakravarthy, V. Valli Kumari, Ch. Sarojini</i>	
Non Blind Digital Watermarking Technique Using DWT and Cross Chaos	897
<i>Chittaranjan Pradhan, Shibani Rath, Ajay Kumar Bisoi</i>	
Integrating Signature Apriori based Network Intrusion Detection System (NIDS) in Cloud Computing	905
<i>Chirag N. Modi, Dhiren R. Patel, Avi Patel, Mutukrishnan Rajarajan</i>	
A Novel Multi-Classifier Layered Approach to Improve Minority Attack Detection in IDS.....	913
<i>Neelam Sharma, Saurabh Mukherjee</i>	
Secure Data Aggregation in Vehicular-Adhoc Networks: A Survey	922
<i>Sagarika Mohanty, Debasish Jena</i>	
On-line Electronic Payment System Using Signcryption	930
<i>Arpita Mazumdar, Debasis Giri</i>	
Face Recognition using Geometric Measurements, Directional Edges and Directional Multiresolution Information	939
<i>Vikas Maheshkar, Suneeta Agarwal, Vinay Kr. Srivastava, Sushila Maheshkar</i>	
CellTCS:A Secure Threshold Cryptography Scheme based on Non-linear Hybrid Cellular Automata	947
<i>Jyoti Jakhar, Pami Dey, M. Dutta, D. K. Bhattacharyya</i>	
Design of RSA-CA Based E-Health System for Supporting HIPAA Privacy-Security Regulations.....	954
<i>Sangram Ray, G. P. Biswas</i>	
Privacy Preservation for Global Cyclic Associations in Distributed Databases.....	962
<i>Nirali Nanavati, Devesh Jinwala</i>	
Duplication with Trapdoor Sensitive Attribute Values: A New Approach for Privacy Preserving Data Publishing.....	970
<i>B. R. Purushothama, B. B. Amberker</i>	
Security Frameworks for Wireless Sensor Networks-Review.....	978
<i>Gaurav Sharma, Suman Bala, Anil K. Verma</i>	
Relational Database Watermarking for Ownership Protection.....	988
<i>Udai Pratap Rao, Dhiren R. Patel, Punitkumar M. Vikani</i>	
Hybrid Approach for Detection of Anomaly Network Traffic using Data Mining Techniques	996
<i>Basant Agarwal, Namita Mittal</i>	
A Real-time Model for Multiple Human Face Tracking from Low-resolution Surveillance Videos.....	1004
<i>Rajib Sarkar, Sambit Bakshi, Pankaj K. Sa</i>	
A Behaviour based Framework for Worm Detection	1011
<i>Tonmoy Saikia, Ferdous A. Barbhuiya, Sukumar Nandi</i>	
Towards Optimized Placement of Cameras for Gait Pattern Recognition.....	1019
<i>Rahul Raman, Pankaj K. Sa, Sambit Bakshi, Bansidhar Majhi</i>	

Author Index