

# **2014 International Conference on Optimization, Reliability, and Information Technology**

**(ICROIT 2014)**

**Faridabad, NCR, India  
6-8 February 2014**



**IEEE Catalog Number: CFP1488W-POD  
ISBN: 978-1-4799-2997-9**

**2014 International Conference on Reliability Optimization and Information Technology  
(ICROIT) 6-8 February 2014**

## Table of Contents

<b>Section I: Reliability and Optimization</b>				
<b>S. No</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>	<b>Page No.</b>
1	209	Fuzzy Based Transformer Failure Analysis under Uncertainty	M L Kansal, Sanchit Saran	1
2	170	Reliability Testing of Methodology Developed for Acquisition of Acoustic Patterns for Liquids	Shweta Singh, Dipali Bansal	6
3	108	A Review on Scheduling Tasks for Real Time Online Services and Maximizing System's Total Accrued Profit	Monika Mahajan, Rakesh Rajani	13
4	12	Reliability Modeling of a Complex Repairable System	P. S. Rajpal	17
5	65	Cost Effective, Reliable and Accurate Maintenance Model for SHP Plants Using RCM	Ravi Kumar, S. K. Singal	21
6	66	Modeling and Optimization of Integrated Renewable Energy System for a Rural Site	Mohit Bansal, D. K. Khatod, R. P. Saini	25
7	176	Availability Optimization of Refining System of Sugar Industry by Markov Process and Genetic Algorithm	S. P. Sharma, Yashi Vishwakarma	29
8	40	Reusability in AOSD - The Aptness, Assessment and Analysis	Ritika Chaudhary, Ram Chatterjee	34
9	223	Effective Test Strategy Model for Ensuring FTR of Hot-Fix	Anil Agarwal, N K Garg	40
10	224	Quality Assurance for Product Development Using Agile	Anil Agarwal, N K Garg, Avirag Jain	44
11	186	Importance Measures for Reverse Osmosis Plant	G. L. Pahuja, J. K Quamara, Ankita Nanda	48
12	200	Wisdom Application in Swarm: A WisSwarm Approach	V K Panchal, Utkarshani Jaimini	53
13	82	Cost and Effort Estimation in Agile Software Development	Rashmi Popli, Naresh Chauhan	57
<b>Section II: Semantic Web</b>				
<b>S. No</b>	<b>Paper ID</b>	<b>Paper Title</b>	<b>Authors</b>	<b>Page No.</b>
1	91	A Novel Architecture of Ontology Mapping System for Hidden Web Retrieval	Manvi, Ashutosh Dixit, Komal Kumar Bhatia, Rajiv Mishra	62
2	143	Retrieval of Movie Character using Semantic Graph Matching Techniques	Amita Jajoo, Shanthi Kumaraguru	68

3	85	Handling Skewed Results In News Recommendations by Focused Analysis of Semantic User Profiles	Shikha Agarwal, Archana Singhal	7
4	70	An Analysis of Semantic Heterogeneity Issues and their Countermeasures Prevailing in Semantic Web	Vijay Rana, Gurdev Singh	80
5	97	Web 1.0 to Web 3.0 - Evolution of the Web and its Various Challenges	Keshab Nath, Subhash Basishtha, Sourish Dhar	86
6	171	Modifying Ant Colony Optimization by Introducing the Concept of Perception Radius	Geetika Arora, Satakshi Rana, V. K. Panchal	90
7	179	Stemmer for Resource Scarce Language using String Similarity Measure	Abhijit Debbarma, B S Purkayastha, Paritosh Bhattacharya	96

### Section III: Data Mining and Database

S. No	Paper ID	Paper Title	Authors	Page No.
1	122	Effects of Aggregation and Data Size on Query Performance & Memory Requirements of a Data Warehouse	Alok Dubey, Archana Kamal, Suresh C. Gupta	99
2	168	R-Train: A Dynamic Structure for High-Dimensional Objects	Ochin, Ranjit Biswas	105
3	181	Development of a Concurrency Control Technique for Multilevel Secure Databases	Pooja Sapra, Suresh Kumar	111
4	140	Design and Implementation of Three Phase Commit Protocol (3PC) Algorithm	Nitesh Kumar, Laxman Sahoo, Ashish Kumar	116
5	138	Architectural Framework of Mobile Based Web Miner	Neha Gupta , Saba Hilal	121
6	73	Social Network Analysis: Hardly Easy	Atul Srivastava, Anuradha Pillai , Dimple Juneja Gupta	128
7	150	An Improved K-Means Clustering Algorithm: A Step Forward for Removal of Dependency on K	Anupama Chadha , Suresh Kumar	136
8	216	Finding Outliers Using Mutual Nearness Based Ranks Detection Algorithm	Ram Niwas Gurjar, Neeraj Sharma, Manoj Wadhwa	141
9	219	Study and Analysis of Social Network Aggregator	Charu Virmani, Anuradha Pillai . Dimple Juneja	145
10	178	Methods for Privacy Protection Using K-Anonymity	Vijay Sharma	149
11	132	Text and Image Based Spam Email Classification Using KNN, Naïve Bayes and Reverse DBSCAN Algorithm	Anirudh Harisinghaney, Aman Dixit, Saurabh Gupta, Anuja Arora	153
12	28	Proposed Intrusion Detection on ZRP Based MANET by Effective K-Means Clustering Method of Data Mining	Srivastava Sumit, Mitra Deepankar, Gupta Devanshi	156
13	46	An Efficient Neuro-Fuzzy Approach for Classification of Iris Dataset	Vaishali Arya, R. K. Rathy	161
14	196	Deep Web Data Extraction Using Query String Formation	Meenskashi Sharma,Supriya	166
15	42	Mechanism for Learning in Knowledgebase	Anurag Singh , Adesh Chandra , Gyanendra Trived	170

### Section IV: Network Technologies

S. No	Paper ID	Paper Title	Authors	Page No.
1	25	Trust Based QOS Protocol(TBQP) Using Meta-heuristic Genetic Algorithm for Optimizing and Securing MANET	Sherin Zafar, M K Soni	173
2	104	A Reliable Solution Against Packet Dropping Attack due to Malicious Nodes Using Fuzzy Logic in MANETS	Alka Chaudhary, V. N. Tiwari, Anil Kumar	178
3	125	Performance Improvement of OLSR Protocol by Modifying the Routing Table Construction Mechanism	Sharma Shelja, Kumar Suresh	182
4	194	Effect of variation in Constraints on the performance of MANET Routing Protocol	Prem Chand, M. K. Soni	188
5	190	Request Response Detection Algorithm for Detecting DoS Attack in VANET	Usha Devi Gandhi , R. V. S. M Keerthana	192
6	184	Performance Estimation of DSR, DSDV and AODV in TCP, UDP and SCTP	B. Suvarna, G.Parimala, K V Krishna Kishore, R Prathap Kumar	195
7	78	A Dependable Routing Framework for Seamless Traffic Flow over the Computer Network	Rajiv Kumar, Vipul Sharma, Sumit Vardhan	199
8	172	Challenges in Wireless Body Area Network-A Survey	Kusum Grewal Dangi, Supriya P. Panda	204
9	126	Implementation of Soft Handover in 3G Using OPNET	Charu Rawal, Mukesh Sharma	208
10	218	Mobility Management in Distributed Computing System using QualNet	Monika Sharma, Mukesh Kumar, Mani Shekhar	212
11	165	A Hierarchy Based Routing Protocol for Disaster Recovery System	Indu Kashyap, R. K Rathy, Diwakar Pandey	217
12	221	Quality of Service Provisioning Transport Layer Protocol for WBAN system	Madhumita Kathuria, Sapna Gambhir	222
13	208	Performance Evaluation of the Dependable Properties of a Body Area Wireless Sensor Network	Venki Balasubramanian , Andrew Stranieri	229
14	129	Multicriteria Decision Examination IN Wireless Sensor Network	Sarvesh S S Rawat , Sanjiban S Roy , Suman Shasank , Jatin Arora	235
15	193	Re-Organizable Wireless Mesh Network Using ARS	Rakhi S. Shende, Kishor P.Patil	240
16	149	Transmission Energy Management for Wireless Ad-hoc Network	Krishan Kumar Raman, V P Singh	245
17	33	SAERP: An Energy Efficiency Real-time Routing Protocol in WSNs	Kaebah Yaeghoobi S. B., M. K. Soni, S. S. Tyagi, Omid Mahdi Ebadati E.	249
18	202	Design of an Intelligent Security Robot for Collision Free Navigation Applications	Meha Sharma, Rewa Sharma, Gaurangi Kaushik, Kamna Ahuja	255

19	161	Model Checking of a Cash Machine System	Vartika Jindal, Mahil Carr	258
20	185	Smart Vehicle Connectivity for Safety Applications	Usha Devi Gandhi, Arun Singh, Arnab Mukherjee, Atul Chandak	262
21	166	Semantic Description of Mobile Application for Location Tracking	Shaveta Bhatia, SabaHilal	267
22	118	Engineering a Sustainable Banking System for Rural India	Sekhar Vadari , Chandra Mohan Malladi	273
23	163	Raspberry Pi based Interactive Home Automation System through E-mail	Sarthak Jain, Anant Vaibhav, Lovely Goyal	277
24	204	Energy Efficient Wireless Mobile Networks	Veenu Mor, Harish Kumar	281

### Section V: Security

S. No	Paper ID	Paper Title	Authors	Page No.
1	195	PARC4: High Performance Implementation of RC4 Cryptographic Algorithm using Parallelism	Disha Handa, Bhanu Kapoor	286
2	16	A Robust Substitution Technique to implement Audio Steganography	Rohit Tanwar, Sona Malhotra, Bhasker Sharma	290
3	177	A Bug Mining tool to identify and analyze security bugs using Naive Bayes and TF-IDF	Diksha Behl, Sahil Handa , Anuja Arora	294
4	141	Enhancing Network Security by Implementing Preventive Mechanism using GNS3	Kuldeep Tomar, S. S. Tyagi	300
5	199	Payload Minion Stenographic Technique for Color Images	Prahalad Sahay Ghasa, Prakriti Trivedi, Anjali Chandwani, Madan Lal Tetrawal, Abhinash Jha, Ayush Kumar	306
6	180	A New Method towards Encryption Schemes: Name Based Encryption Algorithm	Aasif Hasan, Neeraj Sharma	310
7	36	Digital Image Chaotic Encryption (DICE: A Partial Symmetric Key Cipher for Digital Images)	Akhil Kaushik, Satvika, Krishan Gupta, Anant Kumar	314
8	4	ASK Cipher for Small Amount of Data	Akhil Kaushik, Krishan Gupta , Satvika	318
9	38	Audio Steganography	Rohit Tanwar, Monika Bisla	322

### Section VI: Neural Network

S. No	Paper ID	Paper Title	Authors	Page No.
1	164	Conflict Resolution of Autonomous Cars Using Game theory and Cellular Automata	Santosh Krishnan, Amit Rane, Siddhi Waman	326

2	5	Supervised Learning for Neural Network Using Ant Colony Optimization	Ravinder Rathee, Seema Rani, Anita Dagar,	331
3	148	Intelligent Data Analysis Algorithms on Processor using Biofeedback Signal for Estimating Emotions	Tanu Sharma, Bhanu Kapoor	335
4	34	A Region based Classification of SAR Images Using Intelligent Moment Analysis Algorithm	Ritu devi, Anil Kumar	341
5	45	A Hybrid Technique for License Plate Recognition Based on Feature Selection of Wavelet Transform and Artificial Neural Network	Jitendra Sharma, Khushboo Saxena, Amit Mishra, Shiv Kumar	347
6	101	Comparative Analysis of Feed Forward and Radial Basis Function Neural Networks for the Reconstruction of Noisy Curves	Kavita, Navin Rajpal	353
7	135	Transliteration of Knowledge Retrieval in Urdu from Holy Quran using state of the art Information Technologies	Zameer Ahmed Adhoni, Zaheer Ahmed Adhoni, Abdul Ahad Siddiqi, Latifa El Mortaji	359
8	27	Efficient resolution of Mixed Pixels using Bio-Inspired Heuristics	Tanu Varshney, Daya Gupta, Lavika Goel, V. K. Panchal	364
9	19	Thermal Aware Energy Efficient Bengali Unicode Reader in Text Analysis	Ashraf Uddin, Md Atiqur Rahman, Sumit Banshal, Teerath Das, Tanesh Kumar, Bishwajeet Pandey	369

### Section VII: Cloud Computing

S. No	Paper ID	Paper Title	Authors	Page No.
1	139	A Novel Cloud based and Cyclic Approach to solve a Classification Problem	D. Bujji Babu, R. Siva Rama Prasad	374
2	174	Efficient Architecture for Secure Outsourcing of Data and Computation in Hybrid Cloud	Sonali Lunawat, Abhijit Patankar	380
3	39	Performance Evaluation of Load Balancing Policies Across Virtual Machines in a Data Center	Vasudha Arora, S. S. Tyagi	384
4	211	Performance Optimization of PVM Based Parallel Applications using Optimal Number of Slaves	Sampath S, C K Subbaraya, Bharat Bhushan Sagar, Nanjesh B R	388
5	26	New Fault Tolerant Scheduling Algorithm Implemented using Check pointing in Grid Computing Environment	Suman Jain, Jyoti Chaudhary	393
6	69	The Quantum Way Of Cloud Computing	Harpreet Singh, Abha Sachdev	397

### Section VIII: Compression Techniques

S. No	Paper ID	Paper Title	Authors	Page No.
1	76	Lossless Compression Based KMP Technique	Krishan Gupta, Mukesh Sharma, Pallavi Sharma	401

2	146	A New Lossless KMK Technique for Image Compression	Krishan Gupta, Kirti Saneja, Mukesh Sharma	405
3	197	RGB Based KMB Image Compression Technique	Krishan Gupta, Mukesh Sharma, Bhavna Sangwan	409
4	123	An efficient Data Encryption Standard Image Encryption Technique with RGB Random Uncertainty	Sonam Pathak, Rachana kamble	413
5	68	Comparative Analysis of Motion Estimation Algorithms on Slow, Medium and Fast Video Sequences	Shaifali Madan, Navin Rajpal	422
6	113	DWT AND LSB Based Audio Steganography	Neha Gupta, Nidhi Sharma	428

### Section IX: Electronics

S. No	Paper ID	Paper Title	Authors	Page No.
1	93	Comparative Performance Analysis of XOR-XNOR Function Based High-Speed CMOS Full Adder Circuits	Dhanabal R, Bharathi V, Bhavani Prasad y, Ramana Reddy K.V., Harish Babu N	432
2	87	Hybrid ECG Signal Compression System: A Step towards Efficient Tele-Cardiology	Rashima Mahajan, Dipali Bansal	437
3	18	Reliable ALU Design with Optimized Voltage and Implementation on 28nm FPGA	Kumar Satyam, B Pandey, P Saigal, T Kumar, T Das, Jyotsana Yadav	443
4	32	Capacitance Scaling Based Energy Efficient FIR Filter For Digital Signal Processing	B Pandey, Tanesh Kumar, Teerath Das, Rahul Yadav, Om Jee Pandey	448
5	37	Implementation of Reed-Solomon CODEC for IEEE 802.16 network using VHDL code	Priyanka Dayal, Rajeev Kumar Patial	452
6	47	Design of Power Optimized Memory Circuit Using , High Speed Transreceiver Logic IO Standard on 28nm Field-Programmable Gate Array	Sweety, Bishwajeet Pandey, Tanesh Kumar, Teerath Das	456
7	60	Implementation of Floating Point MAC Using Residue Number System	Dhanabal R, Barathi V, Naamatheertham R Samhitha, Neethu Acha Cherian, Pretty Mariam Jacob , Sarat Kumar Sahoo	461
8	64	Simulation of Energy Efficient Bi-Directional Visitor Counting Machine on FPGA	S. M. Mohaiminul Islam, Md. Mahbub-E-Noor, S. M. Tanvir Siddiquee, T Das, T Kumar, K Gaurav, B Pandey	466
9	72	Impact of Different Types of Distributed Generation on Radial Distribution Network	Kushal Manoharrao Jagtap, Dheeraj Khatod	473

10	222	Design of Simulink Model to Denoise ECG Signal Using Various IIR & FIR Filters	Seema Nayak, M K Soni, deepali Bansal	477
11	167	Resolving the paradox between IEEE 802.15.4 and Zigbee	Agrata Kumar, Anjali Sharma, Kusum Grewal	484
12	183	A Review on SOI MOSFET and Kink Reduction using Selective Back Oxide Structure	BinduThakral, Alok K. Kushwaha, Garima Bakshi, Manica	487
13	105	An IVP Based Programming Technique for DG Siting & sizing in Radial Distribution Systems	Rajkumar Viral, Dheerak K. Khatod	491
14	80	Performance Analysis of Three-phase Four-wire Shunt Active Power Filter	Harsha Vanjani, U. K. Choudhury	496
15	217	Conception & Implementation of a Novel Digital Image Watermarking Algorithm using Cascading of DCT and LWT	Vivek Tomar, Arvind Kumar, Ankur Choudhary	501
16	145	An Improved Directional Median Filter for Restoration of Images Corrupted with High Density Impulse Noise	Vikrant Bhateja, Chirag Malhotra, Aviral Verma, Kartikeya Rastogi	506
17	49	High-Performance 64-Bit Binary Comparator	Anjuli, Satyajit Anand	512
18	220	A Comparative Study of Lead, Lag, Lead-lag and Robust Controllers for a Position Control System	Anuli Dass, Shyama Kant Jha	520
19	187	Mel Frequency Cepstral Coefficients Based Text Independent Automatic Speaker Recognition using Matlab	Amit Kumar Singh, Rohit Singh, Ashutosh Dwivedi	524