

2017 7th International Conference on Cloud Computing, Data Science & Engineering (Confluence 2017)

**Noida, India
12 – 13 January 2017**



**IEEE Catalog Number: CFP1769Y-POD
ISBN: 978-1-5090-3520-5**

**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:	CFP1769Y-POD
ISBN (Print-On-Demand):	978-1-5090-3520-5
ISBN (Online):	978-1-5090-3519-9

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

Technical Papers

Algorithms

- ▶ **The Detailed Experimental Analysis of Bucket Sort.....1**
Neetu Faujdar and Shipra Saraswat
- ▶ **A Practical Approach of GPU Bubble Sort with CUDA Hardware.....7**
Neetu Faujdar and Satya Prakash Ghrera
- ▶ **Handwritten Hindi Numeric Character Recognition and Comparison of Algorithms.....13**
Apoorva Chaudhary and Roshan Lal Chhoker

Artificial Intelligence and Soft Computing

- ▶ **Web Log Analyzer Tools:Comparative Study to Analyze User Behavior.....17**
Shakti Kundu and M. L. Garg
- ▶ **Keystroke Dynamics Based User Authentication using Numeric Keypad.....25**
Baljit Singh Saini, Navdeep Kaur and Kamaljit Singh Bhatia
- ▶ **Lexicalizing Linked Data for Human Friendly Web.....30**
Rivindu Perera, Parma Nand, Wen-Hsin Yang and Kohichi Toshioka
- ▶ **A Survey on Driver Behavior Detection Techniques for Intelligent Transportation Systems.....36**
Rishu Chhabra, Seema Verma and C. Rama Krishna
- ▶ **Genetic Programming and K-Nearest Neighbour Classifier Based Intrusion Detection Model.....42**
Shweta Malhotra, Vikram Bali and K.K. Paliwal
- ▶ **An Efficient Hybrid Approach using Differential Evolution and Practical swarm Optimization.....47**
Paurush Bhulania, Heena Saxena and Sanjiv Kumar Tomar
- ▶ **Designing Optimal Architecture of Neural Network with Particle Swarm Optimization Techniques Specifically for Educational Dataset.....52**
Devika Chhachhiya, Amita Sharma and Manish Gupta
- ▶ **Application of Neural Networks Based Method for Estimation of Aerodynamic Derivatives.....58**
R. K. Chauhan and S. Singh
- ▶ **Cuckoo Search based Workflow Scheduling on Heterogeneous Cloud Resources.....65**
Harshpreet Singh and Rajneesh Randhawa
- ▶ **MSATS: Multilingual Sentiment Analysis via Text Summarization.....71**
Rupal Bhargava and Yashvardhan Sharma
- ▶ **License Plate Localization based on Kapur Optimal Multilevel Threshold.....77**
Nur Aliyatul Husna Bt Yahya, Abbas Salimi Bin Zaini, Azizi Bin Abdullah, Siti Norul Huda Bt Sheikh Abdullah, Mohd Zamri Murah and Shariffpudin Basiron
- ▶ **Substantiation of K-Means and Affinity Propagation Algorithm.....82**
Preeti Arora, Deepali Virmani and Shipra Varshney

- ▶ **Interpretive Structure Modelling (ISM) for Feature Dependency in Sentiment Analysis.....86**
Hina Gupta, Nitasha Hasteer and Rana Majumdar
- ▶ **Software Effort Estimation using Machine Learning Techniques.....92**
Monika and Om Prakash Sangwan
- ▶ **Study of Optimization Methods for Tuning of PID Gains for Three Link Manipulator.....99**
Tribhi Kathuria, Ayush Gupta, Jitendra Kumar, Vineet Kumar and K.P.S. Rana
- ▶ **Root Cause Analysis of Software Bugs using Machine Learning Techniques.....105**
Harsh Lal and Gaurav Pahwa
- ▶ **Neuro Signals:Future Biomertic Approach Towards User Identification.....112**
Barjinder Kaur and Dinesh Singh
- ▶ **Efficient Coordinator Guided Particle Swarm Optimization for Real-Parameter Optimization.....118**
Prativa Agarwalla and Sumitra Mukhopadhyay
- ▶ **Automated Transcription of Instrumental Music Using SheetScore-Mapping API and Fuzzy Classification Technique.....124**
Pooja Maheshwari and Garima Mehta
- ▶ **Safety and Security in Smart Cities Using Artificial Intelligence-A Review.....130**
Shweta Srivastava, Aditya Bisht and Neetu Narayan
- ▶ **Comparative Study Of Metaheuristic Algorithms Using Knapsack Problem.....134**
Dikscha Sapra, Rashi Sharma and Arun Prakash Agarwal
- ▶ **Remotely Sensed Image Thresholding using OTSU Differential Evolution Approach.....138**
Smriti Sehgal, Sushil Kumar and M. Hima Bindu
- ▶ **Post-Disaster Relief Distribution UsingTwo Phase Bounded Heuristic Approach.....143**
Bhupesh Kumar Mishra, Keshav Dahal and Zeeshan Pervez
- ▶ **Hindi Handwritten Character Recognition using Multiple Classifiers.....149**
Madhuri Yadav and Ravindra Purwar
- ▶ **A Comparative Study of Ensemble Learning Methods for Classification in Bioinformatics.....155**
Aayushi Verma and Shikha Mehta
- ▶ **Reflexive Hybrid Approach to Provide Precise Answer of User Desired Frequently Asked Question.....159**
Aayushi Verma and Anuja Arora
- ▶ **A Comparative Study of Bat and Cuckoo Search Algorithm for Regression Test Case Selection.....164**
Arvinder Kaur and Arun Prakash Agrawal
- ▶ **Computational Intelligence Based Approaches to Software Reliability.....171**
Tamanna and Om Prakash Sangwan

Big Data

- ▶ **Survey of Performance Modeling of Big Data Applications.....177**
Tanuja Pattanshetti and Vahida Attar

- ▶ **Index of Intrastate Stability Prepared by Text Big Data Analytics.....182**
Olga Kolesnichenko, Dariya Yakovleva, Lev Mazelis, Gennady Smorodin, Sergey Balandin and Yuriy Kolesnichenko
- ▶ **A Predictive Approach to Task Scheduling for Big Data in Cloud Environments using Classification Algorithms.....188**
Vidushi Vashishth, Anshuman Chhabra and Apoorvi Sood
- ▶ **Emerging Trends in Applications of Big Data in Educational Data Mining and Learning Analytics.....193**
Sagardeep Roy and Shailendra Narayan Singh
- ▶ **Overcoming the Limitations of von Neumann Architecture in Big Data Systems.....199**
Mohamed Shaafiee, Rajasvaran Logeswaran and Andrew Seddon
- ▶ **Passenger Reviews Reference Architecture using Big Data Lakes.....204**
Hari Bhaskar Sankaranarayanan and Jayprakash Lalchandani
- ▶ **Recommendation Generation Using Typicality Based Collaborative Filtering.....210**
Sharandeep Kaur, Rama Krishna Challa, Shano Solanki, Naveen Kumar Shalini Sharma and Khushleen Kaur
- ▶ **Handling Non-Functional Requirements For Big Data and IOT Projects in Scrum.....216**
Vaibhav Sachdeva and Lawrence Chung
- ▶ **IoT based Vehicle Parking Manager.....222**
Jatin Desai, Aditya Bhanje, Sneha Biradar and Dion Fernandes
- ▶ **Variegated Data Swabbing: An Improved Purge Approach for Data Cleaning.....226**
Deepali Virmani, Preeti Arora, Anusha Dabra and Neha Sharma
- ▶ **An IOMT Based Medical-Aid-Alarm System with Online Server Assistance.....231**
Nishant Gaur, Praveen Kumar Sharma and Sanjeev Thakur
- ▶ **IoT-Fog-Cloud based architecture for Smart City: Prototype of Smart Building.....237**
Joy Dutta and Sarbani Roy
- ▶ **Multi-Modal Travel in India: Big Data Approach for Policy Analytics.....243**
Hari Bhaskar Sankaranarayanan and Ravish Singh Thind

Cloud and Virtualization

- ▶ **Role of Predictive Modeling in Cloud Services Pricing: Survey.....249**
Meetu Kandpal, Monica Gahlawat and Kalyani Patel
- ▶ **Analysis of Various Task Scheduling Algorithms in Cloud Environment: Review.....255**
Neelam Panwar and Manmohan Singh Rauthan
- ▶ **Efficient Management of Distributive Cloud Computing System for Scientific Applications.....262**
Anil Barnwal
- ▶ **Workload Scheduling in Cloud: Comprehensive Survey and Future Research Directions.....269**
Shishira S. R., A. Kandasamy and K. Chandrasekaran

- ▶ **Deadline Constrained Scheduling of Scientific Workflows on Cloud using Hybrid Genetic Algorithm.....276**
Gursleen Kaur and Mala Kalra
- ▶ **Understanding the Business Strategy Factors that Drive the Business Impacts of Cloud Computing.....281**
Fagmie Davids and Jean-Paul Van Belle
- ▶ **Cloud Security Ecosystem for Data Security and Privacy.....288**
Akshay Arora, Anmol Rastogi, Abhirup Khanna and Amit Agarwal
- ▶ **Implementation of K-Means Clustering in ECB Framework Of Cloud Computing Environment.....293**
Stobak Dutta and Sabnam Sengupta
- ▶ **A Graph Semantic Based Approach for Modeling of Enterprise Cloud Bus System Dynamics.....298**
Gitosree Khan, Sabnam Sengupta and Anirban Sarkar
- ▶ **Implementation of Pinger on Android.....306**
Rohan Sampson, Shivnarayan Rajappa, A. Sai Sabitha, Abhay Bansal, Bebo White and Les Cottrell
- ▶ **Data Mining Using Enhanced Decision Table Classifier for Online Shopping.....313**
Shaffy Goyal and Namisha Modi
- ▶ **UID: Cloud Based UID Application.....319**
Shubham Gupta and Rahul Johari
- ▶ **A Survey: Cloud Hosted Website Protection using Soft Computing Techniques.....325**
Sukhada Bhingarkar and Deven Shah

Computer Networking

- ▶ **Preferred Device Early Availability for Faster User Response.....331**
Amit Kumar and Rakesh Kumar
- ▶ **A Power Saving Mechanism through Rebroadcasting Iteration Control in Mobile Ad hoc Network.....337**
Maddhi Sunitha, Podili V. S. Srinivas and Temberveni Venugopal
- ▶ **Rendering the Multistage Network Algorithm in Cyber-Film Format and Its Code Generation.....344**
Kenn Mark K. Escaran and Robert R. Roxas
- ▶ **Parallel Generation of RSA Keys – Review.....350**
Maria Lakkadwala and Sharada Valiveti
- ▶ **Online Influence Maximization Using Rapid Continuous Time Independent Cascade Model.....356**
Annu Kumari and Shailendra Narayan Singh
- ▶ **A Survey on Secure Gateway Discovery in MANET.....362**
Jay Prakash, Rakesh Kumar and Jaweria Usmani

- ▶ **Asymmetric Encryption Based Secure and Efficient Data Gathering Technique in VANET.....369**
Arun Malik and Babita Pandey
- ▶ **Genetic Algorithm Based Clustering Approach for Wireless Sensor Network to Optimize Routing Techniques.....373**
Padmalaya Nayak and Bhavani Vathasavai
- ▶ **In Silico Screening of Small Molecule Modulators of Zika Virus Proteins.....381**
Rajesh Pal, Gauri Misra and Puniti Mathur
- ▶ **Rural Communication Enhancement Using Mobile Ad-Hoc Network.....387**
K.K Paliwal, Surjeet Singh and Suman Bajaj
- ▶ **Architectural Scheme for Future Embedded Systems Involving Large Number of Processing Cores.....392**
Sana Jafar, Ranjana Rajnish, Pankaj Kumar and Minsa Jafar
- ▶ **Statistical Tool for Clock Offset Selection in Time Synchronization Protocols of Wireless Sensor Network.....397**
Divya Upadhyay and Ashwani Kumar Dubey
- ▶ **Threats to Security of Wireless Sensor Networks.....402**
Akshat Tyagi, Juhi Kushwah and Monica Bhalla
- ▶ **Device Independent Activity Monitoring using Smart Handhelds.....406**
Jayita Saha, Chandreyee Chowdhury and Suparna Biswas
- ▶ **Performance Improvement of Communication Based High Speed Train Control system with Packet Drops during Handover under worst Case Scenario.....412**
Bhupendra Singh, Shobhna Tiwari and Rajesh Mishra
- ▶ **Distributed and Highly-Scalable WAN Network Attack Sensing and Sophisticated Analysing Framework based on Honeypot Technology.....416**
Daniel Fraunholz, Marc Zimmermann, Simon Duque Antón, Jörg Schneider and Hans Dieter Schotten
- ▶ **Queueing Approach based MANET Performance Analysis.....422**
Aleem Ali and Neeta Singh
- ▶ **A Novel Approach for Encoding and Decoding of High Storage Capacity Color QR Code.....425**
Ashwdeep Singh, Vikas Verma and Gaurav Raj
- ▶ **Analysis of Security Attacks in Smart Home Networks.....431**
Utkarsh Saxena, J.S Sodhi and Yaduveer Singh
- ▶ **Decentralized Content Downloading Service: Intelligent way of Traffic Congestion Control.....437**
Rajneesh Tanwar, K. Krishnakanth Gupta, Sunil Kumar Chowdhary, Abhishek Srivastava and Michalis Papoutsidakis
- ▶ **Airborne Internet – The Internet in the Air.....441**
Neetu Gupta and Abhishek Aggarwal
- ▶ **Experimental Study of IP Spoofing Attack in 6LoWPAN Network.....445**
Monali Mavani and Krishna Asawa

- ▶ **Evaluating the Performance of Density Grid-Based Clustering Using ABC Technique for Efficient Routing in WSNs.....450**
Er. Rimpay Sharma and Er. Shivani Sharma
- ▶ **Novel IDS Security against Attacker Routing Misbehavior of Packet Dropping in MANET.....456**
Rohit Chourasia and Rajesh Kumar Boghey
- ▶ **Optimal Storage and Repair in Distributed Storage System.....461**
Swati Mittal Singal, Nitin Rakesh and Rakesh Matam
- ▶ **Securing Cloud, SDN and Large Data Network Environments from Emerging DDoS Attacks.....466**
Jeanette Smith-perrone and Jeremy Sims
- ▶ **3D Implementation of Heterogeneous Topologies on MPSoC.....470**
Paurush Bhulania, M.R. Tripathy and Ayoub Khan
- ▶ **Adaptive Virtual MIMO Single Cluster Optimization in Small Cell.....474**
Triantafyllos Kanakis, Michael Opoku Agyeman and Anastasios Bakaoukas
- ▶ **Towards the Practical Design of Performance-Aware Resilient Wireless NoC Architectures.....479**
Michael Opoku Agyeman, Wen Zong, Triantafyllos Kanakis, Kin-Fai Tong and Terrence Mak

Data Mining and Open Source Platforms

- ▶ **An Enterprise Resource Management Model for Business Intelligence, Data Mining and Predictive Analytics.....485**
Athul Jayaram and Swati Singal
- ▶ **Educational Data Mining and Learning Analysis.....491**
Akansha Mishra, Rashi Bansal and Shailendra Narayan Singh
- ▶ **Mining of Educational Data for Analysing Students' Overall Performance.....495**
Rashi Bansal, Akansha Mishra and Shailendra Narayana Singh
- ▶ **Tree Structured Data Processing on GPUs.....498**
Yifan Lu, Lu Yang, Virendrakumar C. Bhavsar and Neetesh Kumar
- ▶ **Effect of Temperature and Rainfall on Paddy Yield Using Data Mining.....506**
Kuljit Kaur and Kanwalpreet Singh Attwal
- ▶ **A Review on Knowledge Extraction for Business Operations using Data Mining.....512**
Sanyam Bharara, A. Sai Sabitha and Abhay Bansal
- ▶ **Dynamic Service Composition towards Database Virtualization for Efficient Data Management.....519**
Anshuk Dubey and Sanjukta Pal
- ▶ **A Study On Prediction Of Breast Cancer Recurrence Using Data Mining Techniques.....527**
Uma Ojha and Savita Goel
- ▶ **Enhanced Feature Mining and Classifier Models to Predict Customer Churn for an E-retailer.....531**
Karthik B. Subramanya and Arun Somani

- ▶ **QoS Implementation in Web Services Selection and Ranking using Data Analysis.....537**
Triveni Mishra and Gaurav Raj
- ▶ **Software Application to Prevent Suicides of Farmers with asp.net MVC.....543**
A. Yaganteeswarudu and VishnuVardhan Y.

Geometric Modeling, Graphics and Visualization / Others

- ▶ **Niche Modelling of Endangered Philippine Birds using GARP and MAXENT.....547**
Chuchi Montenegro, Lorraine Allie Solitario, Samantha Faye Manglar and Daphne Danica Guinto
- ▶ **The Internet of Things: Governance Model.....552**
Deeksha Razdan and Chaitanya Joglekar
- ▶ **A Rating Approach based on Sentiment Analysis.....557**
Anshuman, Shivani Rao and Misha Kakkar
- ▶ **DSets-DDC Clustering.....563**
Shefali Chateja and Anuja Bhargava

Image & Video Processing

- ▶ **A New Algorithm To Secure Image Steganographic File.....570**
Alok Sharma, Nidhi Sharma and Ankit Kumar
- ▶ **Controlling Devices using Facial Expression Identification and Recognition for Assisting Physically Disabled.....574**
Ashutosh Gupta, Gaurav Chitranshi and Vishal Sharma, Himanshu Singh
- ▶ **iCuTe – An IoT Application for Indian Currency Recognition in Vernacular Languages for Visually Challenged People.....577**
Vishwas Raval and Apurva Shah
- ▶ **A Survey on Brain Tumor Detection Using Image Processing Techniques.....582**
Luxit Kapoor and Sanjeev Thakur
- ▶ **Metadata Based Multi-Labeling of YouTube Videos.....586**
Neha Agarwal, Rajat Gupta, Sandeep Kumar Singh and Vikas Saxena
- ▶ **Performance Analysis of Frequency Domain based Feature Extraction Techniques for Facial Expression Recognition.....591**
Neha Janu, Pratistha Mathur, Sandeep Kumar Gupta Shubh Lakshmi Agrwal
- ▶ **Gender Classification System for Half Face Images using Multi Manifold Discriminant Analysis.....595**
Kanwal Deep Kaur, Preeti Rai and Pritee Khanna
- ▶ **A Secure and Robust Image Watermarking System Using Wavelet Domain.....599**
Amra Siddiqui and Arashdeep Kaur
- ▶ **An Efficient Automated Attendance Management System Based on Eigen Face Recognition.....605**
Rekha E. and Ramaprasad P.

- ▶ **Comparative Analysis of Joint Encryption and Watermarking Algorithms for Security of Biomedical Images.....609**
Siddhant Bansal and Garima Mehta
- ▶ **Hybrid Object Detection using Improved Three Frame Differencing and Background Subtraction.....613**
Neha Srivastav, Shubh L. Agrwal, Sandeep K. Gupta, Saurabh R. Srivastava, Blessy Chacko and Hemant Sharma
- ▶ **Performance of Image Fusion Technique Using 4x4 Block Wavelet Cosine Transformation.....618**
Blessy Chacko, Shubh L. Agrwal, Sandeep K. Gupta, Harendra Chahar, Saurabh R. Srivastava and Neha Srivastav
- ▶ **A Classification of Emotion and Gender Using Approximation Image Gabor Local Binary Pattern.....623**
Kamaljeet Singh Kalsi and Preeti Rai
- ▶ **Review and Comparison of Face Detection Algorithms.....629**
Kirti Dang and Shanu Sharma
- ▶ **Building CBR based Diagnosis System using jCOLIBRI.....634**
Seema Sharma and Deepti Mehrotra
- ▶ **Hyper Spectral Image Classification using Multilayer perceptron Neural Network Functional Link ANN.....639**
Anita Thakur and Deepak Mishra
- ▶ **The Role of Visualization in Tele-Rehabilitation:Case Study.....643**
Bhavana Maradani and Haim Levkowitz
- ▶ **CCTV Quality Assessment for Forensics Facial Recognition Analysis.....649**
Mohamad Firham Efendy Md Senan, Wafa Mohd Kharudin, Siti Norul Huda Sheikh Abdullah and Nur Afifah Mohd Saupi

Miscellaneous

- ▶ **Crowdsourced Software Development: Exploring the Motivational and Inhibiting Factors of the South African Crowd.....656**
Floyd Moodley, Jean-Paul Van Belle and Nitasha Hasteer
- ▶ **Dependency between Type of Product Purchased and Payment Method Opted by Indian Consumer in Mobile Shopping.....662**
Shanti Verma and Kalyani Patel
- ▶ **Novel Approach in Classical Pade Approximation.....667**
Parvendra Kumar and Sunil Kumar Chaudhary
- ▶ **Revealing the Scope of Mind Wandering Software: Effects, Techniques and Applications.....671**
Priyanka Chaudhary, Lalita Chaudhary, Priyanka Tripathi and Tanu Varshney
- ▶ **Evaluating the Accessibility, Usability and Security of Hospitals Websites: An Exploratory Study.....674**
Arvinder Kaur, Diksha Dani and Gaurav Agrawal

- ▶ **Social Media Opinion Analysis for Indian Political Diplomats.....681**
Gaurav Dubey, Shilpi Chawla and Kirandeep Kaur
- ▶ **Implementing Free Wi-Fi in Underprivileged Communities: Case Study of Project Isizwe.....687**
Adheesh Budree, Sheril Chacko and Louis. CH. Fourie
- ▶ **Sentiment Analysis of the Demonitization of Economy 2016 India, Regionwise.....693**
Falguni Gupta and Swati Singal
- ▶ **Bug Report Collection System (BRCS).....697**
Arvinder Kaur and Shubhra Goyal Jindal
- ▶ **Logic of Digital Competition: Framework for Impact of Digital Architecture on Firm Performance in Software based Ecosystems.....702**
Chetan Juneja, R.S. Rai and Hemant Kothari
- ▶ **Advanced Crowd Management using ICT for Just in Time Monitoring and Real Time Alerts.....708**
Adiba Abidin, Divya Lal and Sunil Kumar Chowdhary
- ▶ **5G-A Deep Insight and Its Future in India.....714**
Rashmi Rupam, Gaurav Dubey and Shailendra Narayan Singh
- ▶ **Contrastive Study of Simple PageRank, HITS and Weighted PageRank Algorithms: Review.....721**
Tuhena Sen and Dev Kumar Chaudhary

Signal & Speech Processing

- ▶ **Understanding Sarcasm in Speech Using Mel-Frequency Cepstral Coefficient.....728**
Abhinav Mathur, Vikas Saxena and Sandeep K. Singh
- ▶ **Development of Full Duplex Intelligent Communication System for Deaf and Dumb People.....733**
Surbhi Rathi and Ujwalla Gawande
- ▶ **Design and Implementation of FFT Pruning Algorithm on FPGA.....739**
Ch. Vinodh Kumar and K.R.K. Sastry
- ▶ **Vector Quantizer Design for Speech Signal Compression.....744**
Kandarp K. Patel and Mark L. Fowler
- ▶ **Dual Band Compact Antenna with Series of Hexagonal Cut and Coupling Structure for Isolation Enhancement.....750**
Sanjay Chouhan, Manish Gupta and Debendra Kumar Panda
- ▶ **Design of Low Power Magnitude Comparator.....754**
Akash Gupta, Manohar Khatri, Sachin Kumar Rajput, Anu Mehra and Shikha Bathla
- ▶ **Linearity Improvement of LNA using Derivative Superposition: Issues and Challenges.....759**
A. I. Mecwan and N. M. Devashrayee
- ▶ **Performance Analysis of Meta-Material based Bow-Tie Shaped Fractal Antenna for THz Application.....764**
Devesh Kumar, M. R. Tripathy, Daniel Ronnow, Geethu PS, Lucky Saurabh

- ▶ **Effect of Thickness of Substrate on Antenna Design for Advance Communication.....770**
Smrity Dwivedi

Software Engineering

- ▶ **Software Defect Prediction Analysis Using Machine Learning Algorithms.....775**
Praman Deep Singh and Anuradha Chug
- ▶ **LMS on Sticks: Development of Handy Learning Management System.....782**
Dave E. Marcial, Mark B. Onte, Janice Antoniette V. Forster, Jonathan Mark N. Te and Maria Lourdes S. Curativo
- ▶ **Enhancing Unified Process Workflows using UML.....788**
Darothi Sarkar, Monika Bhalla and Swati Mittal Singal
- ▶ **Software Requirement Prioritization based on Non-Functional Requirements.....793**
Umang Garg and Abhishek Singhal
- ▶ **Implementation of Object Oriented Software Engineering on LabVIEW Graphical Design Framework for Data Acquisition in Large Volume Plasma Device.....798**
Ritesh Sugandhi, Pankaj Srivastava, Prabhakar Srivastav, Amulaya Sanyasi, Lalit Mohan Awasthi, Vijaysinh Parmar, Keyur Makadia, Ishan Patel and Sandeep Shah
- ▶ **Parameter Estimation of Software Reliability Growth Models Using Krill Herd Algorithm.....804**
Ankur Choudhary, Piyush Malhotra and Anurag Singh Baghel
- ▶ **Aspect Oriented Software Testing.....809**
Anu Bajaj and Om Prakash Sangwan