

2012 International Conference on Computer Communication and Informatics

(ICCCI 2012)

**Coimbatore, India
10-12 January 2012**

**Volume 1
Pages 1-260**



**IEEE Catalog Number: CFP1208R-PRT
ISBN: 978-1-4577-1580-8**

Content

Volume 1

Digital Image and Video Processing

- CS 4005 Thermal Image Analysis and Segmentation 1
CS 4017 Hyperbola Summation Based Synthetic Aperture Radar Technique For Ground Penetrating Radar Image Focusing 7
CS 4018 A proposed technique of online face authentication to be used for the user identification 12
CS 4019 FFT Implementation of Kirchhoff's Migration for Ground Penetrating Radar Image Focusing 17
CS 4023 A Selective Encryption scheme for H.264 video based on Permutation code and Dynamic Keys. 22
CS 4025 Enhancement of optic cup to disc ratio detection in glaucoma diagnosis. 27
CS 4027 Navigation-Pattern Based Relevance Feedback For High Efficient Content-Based Image Retrieval 32
CS 4029 A Study on Feature Extraction Techniques For Text Independent Speaker Identification 36
CS 4034 Fusion Based Multi Scale RETINEX with Color Restoration for Image Enhancement 41
CS 4037 Laplace Equation based Adaptive Median Filter for Highly Corrupted 48
CS 4038 Prediction of Meteorological Images based on Relaxation Labelling and Artificial Neural Network from a given Sequence of Images 53
CS 4052 Variational Level Set Segmentation for the Human Motion Capture Analysis 58

Computer Vision and Image Analysis - I

- CS 2001 Symbolic Verification of Web Crawler Functionality and Its Properties 63
CS 3006 A Secure Ambient Assisted Living (AAL) Environment: An Implementation View 69
CS 4030 Advanced analysis of anatomical structures using hull based neuro-retinal optic cup ellipse optimization in glaucoma diagnosis 76
CS 5028 Bit Plane Average Filtering to Remove Gaussian Noise From High Contrast Images 88
CS 5064 Object Oriented Modeling Framework of a Kohonen Network Based Character Recognition System 93
CS 6101 A modified algorithm for clustering based on particle swarm optimization and k-means 100

Computer Vision and Image Analysis - II

- CS 5061 Pixel Bit Manipulation for Encoded Hiding- An Inherent stego 105
CS 5062 Vehicle position estimation for driving pattern recognition using a monocular vision system 111
RC 0002 A Novel Fire Recognition Algorithm Based on Flame's Multi-features Fusion 116
RC 0009 Finding Suspicious Masses of Breast Cancer in Mammography Images using Particle Swarm Algorithm and its Classification using Fuzzy Methods 122
RC 1010 An Effective Image Noise Filtering Algorithm using Cellular Automata 127
RC 1027 Construction of image ontology using Low level Features for Image Retrieval 132
RC 1036 Comparison of DCT and Wavelets in Image coding 139

Computer Vision and Image Analysis – III

- CS 5003 Feature Extraction using Marker Based Watershed Segmentation on the Human Face 143
CS 5020 Automatic recognition and analysis of human faces and facial expression by lda using wavelet transform 148

CS 5026	Semi-Automatic Tumor Segmentation Based on Modified Sparse Field Method	152
CS 5027	Novel approach for spatial domain authentication system design in telemedicines	158
CS 5032	Real time smart car lock security system using face detection and recognition	163
CS 5033	Digital Sand Model using Virtual Reality Workbench	169
CS 5034	Face Recognition based on DWT and DBC	175
CS 5036	Segmentation of Moving Objects in Visible and Thermal Videos	181
CS 5059	Development of γ -Convex hypergraph model for contour-based image analysis	186
CS 5060	Hand gesture recognition for indian sign language	191
CS 6004	Spectrometric Techniques for Diagnosis of Breast	195

Data Mining and Cloud Computing - I

CS 6003A	Novel Reputation Evaluation Scheme for Volunteer Clouds	199
CS 6009	Intelligent Item Assigning for Classified Learners in ITS using Item Response Theory and Point Biserial Correlation	204
CS 6011	Storing XML documents and XML policies in Relational Databases	209
CS 6012A	Cryptosystem for XML documents	214
CS 6016	Data Mining Based Network Intrusion Detection System	217
CS 6019	Securing Cloud Computing Environment Against DDoS Attacks	223
CS 6023	SQL Query Based Data Synchronization in Heterogeneous Database Environment	228
CS 6038A	Self Appreciating Approach of Text Classifier Based on Concept Mining	233
CS 6063	Comparison of Network Intrusion Detection Systems in Cloud Computing Environment	238
CS 6065A	Smart Ambulance for the Synchronized Health Care	244
CS 6067	Survey On Data Mining Techniques to Enhance Intrusion Detection	250
CS 6071	Abstract Information Model for Presenting Database Query Results	255

Content

Volume 2

Data Mining and Cloud Computing – II

- CS 6072A Novel Approach to Build Kannada Web Corpus 261
- CS 6073Static and Dynamic Software Metrics Complexity Analysis in Regression Testing 267
- CS 6076Mining Closed Sequences with Constraint Based on BIDE Algorithm 273
- CS 6078Kernel Based K-Means Clustering Using Rough Set. 278
- CS 6085TCP/IP ACCELERATION 283
- CS 6092Design Issues in Developing Speech Corpus for Indian Languages – A survey 287
- CS 6096Threats and Vulnerabilities on TCP/OBS Networks 291
- CS 6097Link Farm Detection using SVMLight Tool 296
- CS 6098New Approach for Model Merging and Transformation 301
- CS 6100An Approach For Measuring Semantic Similarity between Words Using SVM and LS-SVM 306
- CS 6115Sequence clustering using motif algorithm 310
- CS 6117Building Clusters with Distributed Features for Text Classification Using KNN 314

Data Mining and Cloud Computing – III

- CS 6103Dynamic Web Services Discovery and Selection Using QoS-Broker Architecture 320
- CS 6091A New Performance Modelling and Measurement Method for Service-Oriented Cloud Applications (SOCAs) 325
- CS 6082Learning Agent based Knowledge Management in ITS 332
- CS 6120Time stamping method for consistent data dissemination to read write mobile clients 337
- CS 6125Performance Evaluation of DSR, OLSR and ZRP Protocols in MANETs 342
- CS 6126Scenario-based Performance Comparison of Reactive, Proactive & Hybrid Protocols in MANET 347
- MD 1001Blot eLearning System 352
- RC 0003 Schedulability Analysis of Task Scheduling in Multiprocessor Real-Time Systems Using EDF Algorithm 358
- RC 1011 Critical Path Analysis in Data-Driven Asynchronous Pipelines 367
- RC 1023 Performance Evaluation of Geographical Routing Protocols: An Empirical Study 376
- RC 1038 Harnessing and Securing Cloud in Patient Health Monitoring 382

Geo Informative systems, Grid Computing

- CS 1010Healthcare Data Access Control Using Extended XACML-SRBAC Model 387
- CS 1014Better Alternative Run-Time Polymorphism in C++ 391
- CS 2008A Minimum Makespan Grid Workflow Scheduling Algorithm 396
- CS 2013Effective Memory Utilization for Resource Discovery in a Grid System 402
- CS 2018An Efficient Clustering Algorithm based on Z-Score 407
- CS 2021Processor Co-Allocation Enabling Advanced Reservation of Jobs in Multiclustur Systems 411
- CS 2023Efficient Failure Handling in Grid Using Checkpointing, Replication and Load Balancing 417
- CS 2029Dwelling-Time Based Resource Scheduling Algorithm Using Fuzzy Logic in Grid Computing 421

Mobile Communication

- EC 1017 Real and Complex Eigen functions: An analysis of the 2-D Fourier Transform" 428
- EC 1018 A Novel Hybrid Scheme using MLE with Pulse Shaping for ICI Cancellation in OFDM Systems 434
- EC 2003 A Comparison of Queue Management Schemes in High performance Input-Queued Switches 439
- EC 2005 Statistical Approach for Behavior Detection of Routing metrics in MANET 443
- EC 2007 Single Channel Speech Enhancement Using Spectral Gain Shaping Method and Dereverberation for Digital Hearing Aids 446
- EC 3007 Performance Enhancement of MC-CDMA system through Turbo Multi-user Detection 452
- EC 3009 Design and simulation of two-port RF MEMS resonators 459
- EC 3010 Non-Uniform Circular-Shaped Antenna Array Design And Synthesis- A multi-Objective Evolutionary Approach 462
- EC 3012 Design and Implementation of Orthogonal based Haar Wavelet Division Multiplexing for 3GPP networks 466
- EC 3018 Channel Estimation of WCDMA with Synchronized OFDM System for MIMO communication 472
- EC 3019 Anti-Interference for Anti-Corrupt 3G Spectrum-A Multi Carrier Approach 478
- EC 3021 Random & AWGN Road for MC-CDMA & CDMA Bus to Phase Hide - A MUX in MUX Stego 482
- RC 0007 Spectrum Sensing: Approximations for Eigenvalue Ratio Based Detection 488

Wireless communication and Network Security

- EC 4007 A Single Band Notched CPW Antenna Design 493
- EC 4011 Comparative analysis of PARR reduction for multi carrier system 497
- EC 5011 Bloom Filter Optimization using cuckoo search 502
- EC 5018 Clustering schemes for mobile ad hoc networks: a review 507
- EC 5019 Fast and secure data transmission in MANET 513
- EC 5020 Countermeasures against Multicast Attacks on Enhanced-On Demand Multicast Routing Protocol in MANETs 518
- EC 7007 Secure Lightweight Mobile Payment Protocol Using Symmetric Key Techniques 525
- EC 7010 SHYPE to maintain the ATM system stability. 531
- EC 7013 Legitimate Chance Inspection for Identifying Legitimate Clients under DDoS Attacks 537

Content

Volume 3

Wireless Sensor Networks – I

- EC 6003 Security In Wireless Sensor Networks with Public key Techniques 541
EC 6009 Qos analysis for scheduling schemes in wireless networks 547
EC 6013 Optimal 1-coverage by Homogeneous Mobile Sensor Nodes using Tri-Hexagonal scheme 552
EC 6019 High quality meta heuristic approach for maximizing the lifetime of heterogeneous wireless 557
EC 6022 A SCENARIO BASED APPROACH FOR GATEWAY DISCOVERY USING MANET ROUTING PROTOCOL 563
EC 6024 Efficiency Evaluation of Routing Protocols for Vehicular Ad-Hoc Networks Using City Scenario 569
EC 6036 Performance Analysis of LEACH with Gray Hole Attack in Wireless Sensor Networks 576
EC 6037 Energy-efficiency of Virtual Cooperative MIMO Techniques in Wireless Sensor Networks Vibhav 580
RC 0006 Simple Median Based Information Fusion in Wireless Sensor network 585

Wireless Sensor Networks – II

- EC 6038 An Adaptive Traffic Load Based Scheduling Protocol for Wireless Sensor Networks 592
EC 6039 A Survey on Wireless Sensor Network : An Application perspective 598
EC 6040 Analysis of Effect of Mobility on Performance of AODV in Mobile Ad hoc Network 603
EC 6041 Energy Efficient Realization of Clustering Patch Routing Protocol in Wireless Sensors Network 607
EC 6045 Priority based congestion control for heterogeneous traffic for multipath in wsn 613
EC 6058 DELAUNAY TRIANGULATION Coverage strategy for wireless sensor networks 618
EC 6062 Reforming Clusters Using C-LEACH in Wireless Sensor Networks 623
RC 1015 Energy Efficient Localization of Primary Users for Avoiding Interference in Cognitive Networks 627

VLSI and Embedded Systems

- EC 8002 A Novel Approach to Ternary Multiplication 632
EC 8006 Power efficient architecture of pre-computation- Based content-addressable memory 636
EC 8012 An Efficient Design Technique of Circular Convolution Circuit using Vedic Mathematics and McCMOS Technique 641
EC 8023 Investigating the performance of CNFET using 10T SET D-Flip Flop 646
EC 8024 Design of Fault Tolerant Full Adder/Subtractor Using Reversible Gates 651
EC 8025 Survey Of Low Power Testing Of VLSI Circuits 656
EC 9003 Microprocessor Cache Compressor design using P-Match Algorithm 663
EC 9005 Developing ARM Based PDA Using Inferno OS 668
RC 1024 A Novel High Dynamic Range 4-Module Set $\{2^{2n+1}, 2^{2n+1}, 2^{n+1}, 2^{n-1}\}$ with Efficient Reverse Converter and Review Improving Modular Multiplication's Dynamic Range with this Module Set
Soft Computing Techniques and Feedback Control Systems 672

Energy Efficient Drives, Power Quality Improvement and Expert Systems

- EE 3003 Estimation of Optimal Single phase Inverter's Switching angles Using Pattern Search Method" 678
EE 3016 Performance Enhancement of Vector Controlled Drive with Rotor Flux based MRAS Rotor Resistance Estimator 684

EE 3018 Dynamic Optimization of Injection Molding Process variables by Evolutionary Programming Methods 690
EE 3022 Advancement of MOSFET with the application of Hafnium 696
EE 4003 Design of Unified Power Quality Conditioner (UPQC) to Improve the Power Quality Problems by Using P-Q Theory 700
EE 4007 Power Quality Improvement Using Neural Network Controller Based Cascaded H-Bridge Multilevel Inverter Type DSTATCOM 707
EE 5016 Analysis of Tacit Knowledge Sharing and Codification in Higher Education 713
EE 5017 Application of Genetic Algorithm for Efficient Multi-Factory Supply Chain Inventory Optimization with Lead Time 719
EE 5021 Artificial Neural Networks design for Classification of Brain Tumour 725
EE 6002 Intelligent Analyzer For Home Care Blood Pressure Measurement 731
RC 1018 The Forecasting Effects of Using Compact Fluorescent Lamps on Human Being, Environment AND Electrical Power Quality in Bangladesh 736
RC 1022 Design of Fuzzy PID controller for brushless DC motor 742

Soft Computing Techniques and Feedback Control Systems

EE 1003 Comprehensive Learning Particle Swarm Optimization for Economic Load Dispatch 749
EE 1004 Determining the Optimal Location and Sizing of Distributed Generation Unit using Particle Swarm Optimization Algorithm 755
EE 1005 ENHANCEMENT OF POWER TRANSMISSION CAPABILITY OF HVDC SYSTEM USING FACTS CONTROLLERS 762
EE 1006 Effective Optimization Technique for Power System Stabilization using Artificial Bee Colony 769
EE 2001 "An Estimation Algorithm of a Second-Order Phase-Locked Loop System" 775
EE 2003 "Impact of Fractional Order Integral Performance Indices in LQR Based PID Controller Design via Optimum Selection of Weighting Matrices" 779
EE 2004 Experimental Validation of PID Based Cascade Control System through SCADA-PLC-OPC Interface 785
EE 2010 Analysis of Gold Code and Its Correlation Property 789
EE 2012 "Improve the Transient Response of Speed and Torque Ripple Minimization of the BLDC Motor by Varies Controllers" 795
EE 2014 Statistical Method for Fault Detection in Synchronous Generators 801
EE 2015 Simulation of PMSM based on Current Hysteresis PWM and Fed PI Controller 805
EE 2017 "EMI Analysis and Evaluation of an Improved Flyback Converter" 810
EE 2018 Inverse Optimal Control Formulation for Guaranteed Dominant Pole Placement with PI/PID Controllers 817