2010 2nd International Conference on Future Computer cpf 'Communication

(ICFCC 2010)

Wuhan, China 21-24 May 2010

Volume 1 Pages 1-868



IEEE Catalog Number: CFP1037G-PRT ISBN: 978-1-4244-5821-9

Contents

Preface	٧
Organizing Committees	vii
Survey on Access Control Models Ebrahim Sahafizadeh and Saeed Parsa	V1-1
Intelligent Search Engine Model Based on Similarity Computation Mai Fanjin and Yue Xiaoguang and Zhao Ziqiang	V1-4
An Improved Cache Invalidation Schema Based On Mobile Agent Jinghua Wang, Zhiyun Zhou and Minhua Liu	V1-7
H^{∞} Control of Discrete-time Delayed Systems with Quantized Signals Yingqi Zhang and Caixia Liu	V1-10
The Application of Integrableware in the Educational Games Huilian Ni and Zhijiang Yang	V1-14
Research on Simulation Model of Petri Net about Maintaining Process with Fuzzy Duration	V1-17
Yang Yuan, Li Fang and Hou Chongyuan	
Research on Propagation Characteristics of Electromagnetic Wave in Tunnels with Arbitrary Cross Sections	V1-22
Zhang Chang-Sen and Guo Li-Fang	
Web Image Retrieval in Web Pages Limin Ren	V1-26
Application of Foundation Settlement Prediction Based on Improved Particle Swarm Algorithm and Wavelet De-Noising Ground Settlement Prediction Qiqing Duan, Ruihai Wu and Jiwen Dong	V1-32
An XML Schema-Based Similarity Algorithm Xia Sun, Hong-Bin Cheng and Xiao-Nan Wang	V1-36
Towards Stronger Event Detection in Sparse Coverage Sensor Networks Yong(Yates) Lin, Zhengyi Le, Eric Becker and Fillia Makedon	V1-39
An Improved Genetic FCM Clustering Algorithm Chen Wei, Lu Tingjin, Wu Jizheng and Zhao Yanqing	V1-45
A Novel GPS Antenna with wide Beamwidth Zhao Hong-Mei, Niu Yan-Juan and Liu Teng	V1-49

xii Contents

A Positive-First and Negative-First Fault-Tolerant Routing Schemes for Concave and Convex Faults Jun Chen, Du Xu and Ling Fu Xie	V1-53
An L-Sloted Dual-Band Microstrip Antenna for WiMAX Applications Naizhi Wang and Jianzhou Li	V1-59
Realizing a Loss Proportional Differentiation Assured Forwarding Service through Active Queue Management Hongwei Ma, Weihua Yuan and Song Qin	V1-62
A Survey on the Topology of Wireless Sensor Networks Based on Small World Network Model Zheng Gengzhong and Liu Qiumei	V1-67
Distributed Node Authentication in Wireless Sensor Networks Feng Yang and Xuehai Zhou	V1-72
CUgrep: A GPU-Based High Performance Multi-String Matching System Jiangfeng Peng and Hu Chen	V1-77
Bed Temperature Modeling of Circulating Fluidized Bed Boiler Based on PCA and Neural Network Wei Liao, Si Juanning and Gu Yan	V1-82
Bed Temperature Modeling and Forecasting of Circulating Fluidized Bed Boiler Based on SMO Algorithm Liao Wei, Chen Jianhua and Gu Yan	V1-86
Fault Diagnosis for Turbine Generator Based on Wavelet Packet PCA-SVM Liao Wei, Si Juanning and Gu Yan	V1-90
An Efficient Routing Approach as an Extension of the AODV Protocol Luo Chao and Li Ping'an	V1-95
Real-Time Software GNSS Signal Simulator Accelerated by CUDA Zhang Bo, Liu Guang-Bin, Liu Dong and Fan Zhi-Liang	V1-100
A Distributed Clock Synchronization Method Based on 2-Hop Neighbors' Time Information for Ad Hoc Networks Wang Bo, Ye Xiao-Hui, Long Hong-Bo and Zhao Yu-Ting	V1-105
A New Design Concept for High Performance Fading Channel Simulators Using Random Wobble Hu Kai and Cui Chen	V1-109
Profitability Evaluation of the Power Listed Companies Based on PSO-BP Neural Network Model Wei Sun and Wei Zhao	V1-114

Contents xiii

Mid-Long Term Power Load Forecasting Based on MG-CACO and SVM Method Wei Sun and Wei Zhao	V1-118
Design and Realization of Data Interchange Platform Based on XML Chengyu and Shen haibo	V1-122
Research on Hierarchical Location Management Scheme in LEO Satellite Networks Wang Jinglin and Cao Zhigang	V1-127
An Ontology-Based Web Information Extraction Approach Yi Wei-Guo, Liu Ya-Qing, Yan Ling-Wei and Liu Zhi	V1-132
Optimization of Multimedia Teaching and Learning Environment Yi Jiangang	V1-137
Identifing P2P Flow with Behavior Characteristics Ke Zhu, Hongchao Hu and Peng Yi	V1-140
A Novel Method for Time Series Symbolization Based on Singular Event Features Clustering Wenlong Qu, Yichao He and Wenjing Qu	V1-143
Online Dectection Device for Assembly of Automotive Sliding York Bracket Chundong Zhu and Zhiliang Zhu	V1-147
Finite-Time Control of a Class of Discrete Time-Varying System with Quantized Feedback Yinggi Zhang and Caixia Liu	V1-150
Gas Load Prediction Based on DE-SVM Algorithm Yong Sun, Guoli Yang, Limin Wang, Yongjiang Shi and Yongqiang Wu	V1-155
Multi-User Cognitive OFDM with Adaptive Sub-Carrier and Power Alloaction Dawei Sun, Baoyu Zheng and Xiaorong Xu	V1-159
Performance of Decode-and-Forward Cooperative Communications with Channel Estimation Errors over Rayleigh Fading Channels Junhong Hu and Xujun Chen	V1-164
An Imperative Formal Calculus for Java Bo Xu, Baojian Hua and Ying Gao	V1-168
Digital Implementation of Neural Network Inverse Control for Induction Motor Based on DSP Yongxian Song, Juanli Ma, Hanxia Zhang and Naibao He	V1-174
Fast Collision Detection Based On Projection Parallel Algorithm Shen Xue-Li and Li Tao	V1-179

xiv Contents

A VANETs Routing Algorithm Based on Euclidean Distance Clustering Daxin Tian, Yunpeng Wang, Guangquan Lu and Guizhen Yu	V1-183
Unambiguous Tracking Technique for Sin-BOC(1,1) and MBOC(6,1,1/11) Signals Zhou Yanling, Hu Xiulin and Tang Zuping	V1-188
An Improved Fast Parallel SPIHT Algorithm and its FPGA Implementation Yin-Hua Wu, Long-Xu Jin and Hong-Jiang Tao	V1-191
Applications and Development Trend of Optical Fiber Sensor Huang Yiding, Xu Hairu and Li Jian	V1-196
Automated Security Proof of the ElGamal Encryption Scheme Chen Nan, Li Anle, Gu Chunxiang and Zhu Yuefei	V1-200
Study on Electric Arc's On-line Detection for Low Voltage Switchbox Based on Information Fusion Lv Hui, Yu Qiongfang, Dong Aihua, Yu Qiongfang and Zheng Dezhong	V1-204
The Compass Communication System and its Applications Yonghui Zhu and Zhengdong Bai	V1-208
Fault Diagnosis Based on Confidence Level in Networked Control Systems Changlin Ma and Wei Zhang	V1-212
Delay-Constrained Maximized Lifetime Routing Algorithm in Wireless Multimedia Sensor Networks Zhou Ling and Wang Jian-xin	V1-215
Image Fusion Algorithm Based on Nonsubsampled Contourlet Transform Hai Wang and Zijun Feng	V1-220
A Vehicular Ad Hoc Networks Intrusion Detection System Based on BUSNet Daxin Tian, Yunpeng Wang, Guangquan Lu and Guizhen Yu	V1-225
A Toolkit for Simulating and Verifying Context Aware Systems Shujun Zou, Kaiyu Wan and Zongyuan Yang	V1-230
Study of Variable-Pitch wind Turbine Based on Fuzzy Control Xu Jian-Jun, Yan Li-Mei, Qiu Xiao-Ning, Jiang Chun-Lei and Wang Jian-Ren	V1-235
The Study on New Energy Saving Controller for Oil-Pumping Units in Oilfield Yan Li-Mei, Xu Jian-Jun, Wang Jin-Liang, Xue Chen-Guang and Sha Li-Ni	V1-240
An Improved Routing Protocol for Power-Line Sensor Network based on DSR Hong Li and Li Fen	V1-246
An Event-Triggered Localization Algorithm for Mobile Wireless Sensor Networks Baoli Zhang and Fengqi Yu	V1-250

Contents xv

Analysis and Research of Proportional Conflict Redistribution Rules in Identity Identification Tian Kangsheng, Li Hongfei and Jin Hongbin	V1-254
Research on Particle-Based Simulation for Fire	V1-258
Dawei Qian, Xumin Liu and Yong Guan A Service Oriented Optimization Platform for TE Process Xiangyu Li	V1-263
A System Encapsulation Model for G2 Expert System Based on Web Service Xiangyu Li	V1-268
A P2P-based Collaborative Framework for Virtual Laboratory Hua Ma and Xiang Jing	V1-272
Fast Detection Algorithm based on Sphere Decoding for Overlapped Hybrid Division Multiplexing System YanhuaSun, Hao Wang and Yanhua Zhang	V1-277
Development of an Optimal Real-Time Coal Dispatch Scheme for Coal Power Plants Based on the Priority Qirong Qiu and Xiulian Que	V1-281
Trust-Based Supernode Selection in Peer-to-Peer Systems Yu Jin, Yan Liu and Hongwu Zhao	V1-285
Lock-Up Control Simulation of Torque Converter with Lock-Up Clutch Yang Nianjiong, Qian Lijun and Wu Daojun	V1-290
The Short-Term Traffic Flow Prediction Based on Neural Network Wusheng Hu, Yuanlin Liu, Li Li and Shujie Xin	V1-293
A RBAC Extended Model and its Application in Unified Access Control for Web Application Systems Su Zhang and Xiaoyan Zhang	V1-297
A Lightweight Filter Component for Real-Time Signal Processing in TinyOS Zhang Fan and Li Wenfeng	V1-301
A Distributed Vertical Crawler Using Crawling-Period Based Strategy Bing Zhou, Bo Xiao, Zhiqing Lin and Chuang Zhang	V1-306
Node Behavior Trust Evaluation Based on Behavior Evidence in WSNs Tian Li-Qin, Ni Yang and Lin Chuang	V1-312
The Research and Implementation of Face Detection and Recognition Based on Video Sequences Qiangian Zhao and Hualong Cai	V1-318

xvi Contents

Harbor Detection of Remote Sensing Images Based on Model Qi Chen, Na Wang, Lingjun Zhao, Jun Lu, Canbin Hu, Yongmei Jiang and Gangyao Kuang	V1-322
A Digital Controller for The Pendubot System Using Approximate Output Regulation Approach Xu Luo and Hongtao Wang	V1-326
Study of Antenna Rayleigh-Related Performance Influence on Space-Time Block Coding-MIMO Fading Channel Lei Li, Zheng Li and Guang Bo Sun	V1-331
An Improved ESPRIT Parameters Estimation Method for Mobile Location Ji-Wang Zhang, Ying Liu and Zhi-Wei Wang	V1-334
Network System Survivability Survey: An Evolution Approach Tong Wang, Hui Dai, Kai Xiang and Bing Yu Zou	V1-339
Active Power Filter Based on DSP digital PI control Xudong Cao, Hongfeng Zhen, Lingzhi Cui and Feng Kong	V1-343
DSP-Based Repetitive Control Active Power Filter Hongdong Yin, Guangkuo Song, Lingzhi Cui and Hongfeng Zhen	V1-347
A New Labeling Scheme for XML Trees Based on A Mesh Partition Niu Na and Dong Guoqing	V1-353
Current Control Technique Research on Permanent Magnet Brushless Motor of Aviation Bo Tan, Weiguo Liu, Ruiqing Ma and Jun Zhao	V1-357
Research and Implementation of An Efficient Data Persistence Model Xia Sun, Yiming Zhao, Chang Yao and Runping Yang	V1-361
The Algorithm of Text Classification Based on Rough Set and Support Vector Machine Wang Zhuo and Chu Lili	V1-365
The Design of Multiparty Un-Disavowal Mutual Signature Arithmetic Protocol in Emergency Response System Xufu Peng	V1-369
A Polygon Clipping Algorithm Based on Series Coding Technique Shuangheng Feng and Xuedong Du	V1-373
A Simplified Detection Algorithm for Full-Response STC-CPM System Caihua Shi and Xinjun Du	V1-378
A New Evidence Combination Method Jin Hongbin, Lan Jiangqiao and Li Hongfei	V1-382

Contents xvii

Complement the Comparable Corpus Obtained from Websites Zhou Youliang, Gong Zhengxian and Zhou Guodong	V1-386
Multi-Level Zone Based Hybrid Service Discovery Protocol for Mobile Ad-Hoc Grid Askari Parichehreh, Bahman Javadi and Omid Jafarzadeh	V1-391
A Hybrid Genetic Algorithm for Agile Supply Chain Scheduling Optimization Wang Jianhua and Huang Xianfeng	V1-396
Incremental Bayesian Classification for Chinese Question Sentences Based on Fuzzy Feedback Shuling Di, Hui Li and Pilian He	V1-401
A Survey of Application of Web 2.0 in Chinese Provincial and Municipal Libraries Li Si, Yi Tan, Xiaoming Huang and Wenming Xing	V1-405
Method for Generating Fuzzy Petri Nets Fault Diagnosis Model Based on Rough Set Theory Yuanhua Liang and Bingcheng Yuan	V1-411
Study of the Pseudo-Color Processing for Infrared Forest-Fire Image Tingting Wang, Jianmin Su, Yinglai Huang and Yingshen Zhu	V1-415
Numerical Calculation of Aerodynamic Characteristics of Metro Train Head Bin Yang, Maosong Wan and Qinghong Sun	V1-419
Information Hiding Algorithm for H.264 Based on the Motion Estimation of Quarter-Pixel Hongliu Zhu, Rangding Wang and Dawen Xu	V1-423
Application of GA-BP Artificial Neural Network to Formability Valuation for Steel Materials Zhang Yong, Ge Lijuan and Zong Zheying	V1-428
Shortest Path Algorithm in GIS Network Analysis Based on Clifford Algebra Jiyi Zhang, Wen Luo, Linwang Yuan and Weichang Mei	V1-432
An Image Retrieval Approach Based on Annular Color Moments and Energy Moments Features Ying Deng and Shuangyuan Yang	V1-437
A Low Complexity MIMO Detector Based on Combination of MRC and MMSE Algorithm Zhongliang Fan, Yongsheng Wang, Ding Wang and Jintao Hu	V1-442
Multi-Levels Traffic Classification Technique Chengjie Gu, Shunyi Zhuang, Yanfei Sun and Junrong Yan	V1-448
Probability Logic Reasoning with Threshold-Surety Based on Fuzzy c-Partition Entropy Approach Yong Li and Weiyi Liu	V1-453

xviii Contents

Simulation and Analysis of Vehicle Maneuver Ability and Stability Li Shengqin, Huang Jinchuan and Wang Junhua	V1-458
The Study of the Sand Density Distribution in the Experimental Segment of the Sand Wind Tunnel by Computer Simulation Ming Zhangpeng and Wang Jun	V1-462
ENFAT-AODV: The Fault-Tolerant Routing Protocol for High Failure Rate Wireless Sensor Networks Z. Che-Aron, W. F. M. Al-Khateeb and F. Anwar	V1-467
Application of HPC Technology in the Building of a Virtual Geological Visualization System Seng Dewen and Chen Wenlan	V1-472
Study On Component Hierarchical Retrieval Based On Ontology Dong Cai-Lin, Zhang Zhen-Zhen and Yu Ying	V1-477
The Application of Correlation Algorithm in the Location of Underground Pipeline Water Leakage Ma Yuechao and Li Shuhua	V1-481
Design and Implementation of the Real-Time Regulation Electronic Load Module Based on DSP Wang Zijian, Kong Feng, Xie Chaoping and Huang Zhengwu	V1-485
Design and Implementation of FIR Digital Wave Filter Based on DSP Guo Gaizhi, Zhang Pengju, Yu Zongzuo and Wang Hailong	V1-489
Design and Implementation of Leak Detector Using DSP Based Correlation Calculation Guo Gaizi and Yu Zongzuo	V1-492
Simulation Study on Hybrid Ultracapactior-Battery Power System for PHEV Xiong Rui, He Hongwen, Zhang Xiaowei and Wang Yi	V1-496
Useful Attributes Identification for Unsupervised Information Extraction Result Set Based on REAdaBoost Naïve Bayes Wenke Yin and Ming Zhu	V1-501
Decision Tree Algorithm Based on Average Euclidean Distance Quan Liu, Daojing Hu and Qicui Yan	V1-507
Data Processing and Analyzing Model in Passive Network Performance Monitor System Hongjie Sun	V1-512
Design and Realization of Remote Image Capturing System of Postgraduate Ye Chen, Ye Qian and Ren Zhikao	V1-516

Contents xix

An Improved Protocol Based on Location Information in DTN Qilie Liu, Lei Wang, Yun Li and Yingjun Pan	V1-520
Design of Wireless Embedded Thin Web Server Based on Zigbee Yingqiang Su and Weiqiang Zhang	V1-525
Dynamic Buffer Allocation Based on Traffic Prediction with FIR Neural Network Jiacheng Ou, Yuanming Wu and Jiuhe Zhong	V1-529
A Dynamic Routing, Wavelength and Timeslot Assignment Algorithm for WDM-TDM Optical Networks Li Jia, Jiao Fang-Yuan and Xu Xiao-Xiao	V1-533
The Automatic Checkup Method for PCB Processing Data Based on Knowledge Ming-Xiang Zang, Tian-Tian Wang and Zhan-Wu Huang	V1-538
Provisioning Core Link Bandwidths to Support Streaming Media Han Qiu, Yufeng Li, Ping Lv, Yufeng Li and Dong Liu	V1-543
Decision-Making Model for Mobile Blind Compensation in Jamming Yang Longpo and Xiong Jiajun	V1-548
Effect of Directional Antenna on the Spatial Characteristics of 3-D Macrocell Environment	V1-552
Syed Junaid Nawaz, Bilal Hasan Qureshi, Noor M. Khan and Mohamed Abdel-Mag	Jula
Concurrent Dithered Signed-Error Constant Modulus Algorithm (DSE-CMA) with Soft Decision Directed (SDD) Scheme Hengyun Hu, Ning Xie and Hui Wang	n V1-557
A Survey of Finger Assignment Method for Rake Receivers Zhaorong Liu, Ning Xie and Hui Wang	V1-561
Efficient Maintenance Scheme of Inverted Index for Large-Scale Full-Text Retriev Xiaozhu Liu	val V1-565
A survey of broadband Frequency Invariant Beamformer Hongwei Liu, Ning Xie and Hui Wang	V1-571
Generalized Switch-and-Examine Combining with an Output Threshold Zhaorong Liu, Ning Xie and Hui Wang	V1-575
Mining Frequent Closed Itemsets Using Antecedent-Consequent Constraint and Length-Decreasing Support Constraint Zhi Liu, Qiuying Li, Mingyu Lu and Hao Xu	d V1-580
Improvement Markowitz Investment Profolio Model Based on Genetic Algorithm	n V1-586

xx Contents

Context Aware-Based Learning Resources Retrieval Model for Ubiquitous Learning Environment ZhangYi, Zhang Fan, Cheng Mingfeng and Du Chao	V1-590
The Degree Reduction of the Vector-Valued Disk Bézier curves Mao Shi, Zhengli Ye and Baosheng Kang	V1-596
A Bandwidth Allocation Algorithm for Reducing the Average Delay in GPON Liu Yang, Zhang Guoping and Li Qing	V1-600
Improved Particle Swarm Algorithm with a Novel Local Search Mingqian Wang, Zhiguo Shi and Haishan Zhao	V1-604
High-Precision Inverse Kinematics Based on Discrete Workspace for Obstacle Avoidance Fu Rong and Ju Hehua	V1-608
An Implementation of MPEG Query Format over Relational-Based Multimedia Database Zhang Shaolong and Wu ZhiHua	V1-614
The Hardware Design of Algorithm Processing and Logic Control Unit for Adaptive Polarization Mode Dispersion Compensation Xu Hengying, Zhang Xia, Han Jiguang, Niu Huijuan and Bai Chenglin	V1-618
Compound Structures of Two New Chaotic Attractors in a Uniformly-Coefficient Jerk Model with Arctangent or Hyperbolic Tangent Nonlinearity Banlue Srisuchinwong, Anawat Wangkuntod and Janvit Tippinit	V1-622
A Robust Audio Multi-Watermarking Algorithm Based on Vector Quantization Yun Zhou, Rangding Wang and Diqun Yan	V1-625
Gaussian Mixture Reduction Based on KI Divergence Zhiying Yao and Dong Liu	V1-630
Performance of the Frequency Domain Packet Scheduling for LTE Downlink Zeng Zhaohua	V1-635
Optimal Throughput Analysis of Cognitive MISO System Mingming Li, Jiaru Lin, Dongxu Wang, Li Guo and Jun Li	V1-639
The Application of The Improved Hybrid Ant Colony Algorithm in Vehicle Routing Optimization Problem Rongwen Zhang and Shaomei Zhou	V1-644
High Capacity Blind Information Hiding Schemes Using Tchebichef Moments S. M. Elshoura and D. B. Megherbi	V1-649
Application of Adaptive Hybrid Sequences Niche Artificial Fish Swarm Algorithm in Vehicle Routing Problem Xin Ma	V1-654

Contents xxi

Projective Reconstruction of Seven 3D Points from Two Uncalibrated Images Yuanbin Wang, Bin Zhang and Fenghua Hou	V1-659
Software Reliability Growth Model Based on Fuzzy Wavelet Neural Network Lu Zhao, Jian-Pei Zhang, Jing Yang and Yan Chu	V1-664
XML Processing by Tree-Branch Symbiosis Algorithm Gong Li, Liu Gao-Feng, Liu Zhong and An Ru-Kui	V1-669
A Computer Simulation Study of Seating Comfort of Air-Inflated Seat Cushion Zhang Xinglei and Yu Jianguo	V1-675
Performance Analysis of Viral Soft Handover Communication Based on Cross Entropy Zhu Zhi-Qiang, Xu Guang-Yin, Xu Lin, Lian Jian and Liu Mang-Guo	V1-681
A Deployment Strategy for Target Surveillance Sensor Networks Based on Acoustic Energy Measurements Hao Luo, Zhong Liu and Feng Xue	V1-686
Automatic Identification Phase in Shock Bump Monitoring Ji Chang-Peng	V1-691
An Intrusion Detection Approach Based on Data Mining Ye Qing, Wu Xiaoping and Huang Gaofeng	V1-695
Dynamic Inversion Based on Neural Network Applied to Nonlinear Flight Control System Kechang Qian and Zili Chen	V1-699
Efficient Implementation of Rate Matching for LTE Turbo Codes Chixiang Ma and Ping Lin	V1-704
The Design of Network Fault Diangosis System Based on PNN Yutong Gao and Xin Zhou	V1-709
Application of BP Neural Network and Higher Order Spectrum for Ship-Radiated Noise Classification He Xi-Ying, Cheng Jin-Fang, He Guang-Jin and Li Nan	V1-712
A Fast Phase Unwrapping Algorithm Based on Minimum Discontinuity by Blocking Heping Zhong, Jinsong Tang and Dandan Liu	V1-717
Design of 2.4 GHz PowerAmplifier Used in WLAN 802.11b by pHEMT Dong Jun Hong, Wang Qi Feng and Xie Feng	V1-722
Data Aggregation Scheme Using Neural Networks in Wireless Sensor Networks Ling-Yi Sun, Wei Cai and Xian-Xiang Huang	V1-725

xxii Contents

Research and Simulation on the Scalability of High-Productivity Computer's Interconnection Network Ting Chen, Limin Xiao, Li Ruan	V1-730
A Soft Real-Time Communication Method Based on Linux Ming-Xiang Zang, Hao You and Fu-Ying Guo	V1-737
Research on Major Hazard Installations Monitoring System Based on WSN Zhong Rongbai and Chen Guohua	V1-741
RFID Data Cleaning Based on Adaptive Window Lingyong Meng and Fengqi Yu	V1-746
An Unequal Layered Clustering Approach for Large Scale Wireless Sensor Networks Xinyuan Zhao and Neng Wang	V1-750
An Incremental Associative Classification Algorithm Used for Malware Detection Feng Shaorong and Han Zhixue	V1-757
The Optimization in IMS Session Setup Using a Caching Scheme Xiaojing Wang, Qizhi Zhang, Changqin Huang and Anna Song	V1-761
Improvement of Chinese Spam Filtering Method Based on Bayesian Classification Wu Jiansheng and Zhao Xingwen	V1-765
A Quick CGA Generation Method Su Guangxue, Wang Wendong, Gong Xiangyang, Que Xirong, Jiang Sheng and Gao Xuesong	V1-769
Modeling Group Users' Interests From Perspective of Different Network Packet Levels Jian-Guo Ma, Qiang Ma and Ling Xing	V1-774
Research on Monorail Car's Wireless Positioning and Speed Measurement Lin Gao, Huixia Xue, Wenbin Li, Jun Liu, Junmei Zhang and Liu Yang	V1-778
Bidirectional Square Root Search Syed Zaki Hassan Kazmi, Syeda Shehla Kazmi and Syeda Sobia Hassan Kazmi	V1-783
A Spectrum Sensing Algorithm Based on Estimating the Number of Source Signals Yigang Zhou and Fei Tian	V1-786
Design of Communications Model in Double Systems Based on Multi-Core Platform Xiaorui Wang, Yudong Guo, Weiyu Dong, Yong Li, Guang Shi and Xian Yu	V1-791
A Kind of Feedback Image Retrieval Algorithm Based on PSO, Wavelet and Subblock Sorting Thought Kaiping Wei, Tingwen Lu, Wu Bi and Honghong Sheng	V1-796

Contents xxiii

A cooperative Model Virtual-Machine Monitor Based on Multi-Core Platform Yudong Guo, Xiaorui Wang, Weiyu Dong, Guang Shi and Yong Li	V1-802
Data Reuse in Sliding Window Operations Base on Storing Block Targeted Hardware Compilation Taogang Liu, Rongcai Zhao, Yuan Yao and Jin Qu	V1-808
LNMF Learning for Color Face Recognition Xiaoming Bai and Chengzhang Wang	V1-813
Direction Of Arrival Estimation Based On Smooth Support Vector Regression He Xiang, Jiang Bin, Zhong Jingli, Sun Yueguang and Zemin Liu	V1-818
An Evaluating Method of Spider Detection Techniques by Trap Fan Chunlong, Yu Zhouhua and Xu Lei	V1-823
An Improved Algorithm of Constrained Delaunay Triangulation Based on the Diagonal Exchange Zhu Yong-Jie and Yan Lin	V1-827
Analyze about Time Synchronization Technique in Auto-Test Network System Luo Yuan and Wang Lei	V1-831
An Improved Genetic Algorithm for Time Dependent Vehicle Routing Problem Duan Zheng-Yu, Yang Dong-Yuan and Wang Shang	V1-835
Acquisition Time for Laser Uplink Communication to Space-Borne Satellite Using Transmit Diversity in Atmospheric Turbulence Hemani Kaushal, V. K. Jain and Subrat Kar	V1-840
An Improved Virtual Reality Engine For Substation Simulation Meng Fanqi and Kan Yunqi	V1-846
The Study and Implementation of Micro-Blog Search Engine Based on Nutch Kai Zhang, Yuncheng Du, Xueqiang Lv and Shuicai Shi	V1-850
A DTN Congestion Avoidance Strategy based on Path Avoidance Daowen Hua, Xuehui Du, Lifeng Cao, Guoyu Xu and Yanbin Qian	V1-855
Author Index	V1-861

2010 2nd International **Conference on Future Computer** cpf 'Communication

(ICFCC 2010)

Wuhan, China 21-24 May 2010

Volume 2 Pages 1-856



IEEE Catalog Number: CFP1037G-PRT ISBN:

978-1-4244-5821-9

Contents

Preface	٧
Organizing Committees	vii
Study and Simulation of Air Formation Attack-to-Ground Decision Making Based on Rough Set Theory Li Zhang and Pengfei Li	V2-1
Computer Aided Calculation of Matching Between Engine and Hydraulic Torque Converter Wu Huirong, Feng Li and Zhang Haisong	V2-6
The Application of Improved HSV Color Space Model in Image Processing Li Shuhua and Guo Gaizhi	V2-10
A High-Speed Digital Underwater Communication Solution Using Electric Current Method Zhiqiang Wu, Bin Li and Jiadong Xu	V2-14
User Pairing Transmission Scheme in Uplink Coordinated Multi-Point Reception Qiang Li, Shu Fang, Yang Yang and Zhongxia Pan	V2-17
Design 2.4 GHz Wide Bandpass Filter Using the Closed Loop Ring Resonator with the Compound Stub Majid Shakeri and Majid Bavafa	V2-23
Robust Visual Tracking Via Weighted Incremental Subspace Learning Cheng Qian, Shuchang Xu and Shanyuan Zhang	V2-26
Multi-Dimensional Vector Discrete Cosine Transform Coefficients Matrix Scan Mode for Image Compression Aijun Sang, Lin Cong, Ping Fu and Linlin Deng	V2-30
A Novel Approach to Delineating the Service Area of Facilities in a Network Yujie Hu, Xiang Li and Menglei Li	V2-35
Scale-Based Adaptive Smoothing Xiaoliang Qian, Lei Guo and Bo Yu	V2-40
Optimization of the Surface Mount Technology Based on the Max-Min Ant System Jianguo Jiang, Xiaoze Chen, Mingxiang Zang, Zhongxu Wang and Zhiwen Tan	V2-45
Logical Modeling for Spatio-Temporal Phenomena–With the Perspectives of Concurrent Processing and Signal Transmission Xu Aigong and A. H. Lakmal	V2-48
Visual Tracking for Arbitrary Shaped Object Hui Zhang, Baojun Zhao, Jianke Li and Jichao Jiao	V2-53

xii Contents

Study of Task Profile Oriented Embedded Software Test Aimed to Improve Reliability Yumei Wu, Zhengwei Yu and Zhifang Liu	V2-58
A High Performance Optical Network on Chip based on Clos topology Jing Zhang, Huaxi Gu and Yintang Yang	V2-63
An authentication algorithm of audio aggregate Based on the (k, $n/k=n$) method Yiqun Xiong and Rangding Wang	V2-69
Research on USB driver for Data Acquisition Guo Li, Mingli Li, Gensen Zhao and Jinmei Zang	V2-74
Low Complexity Soft Decision Feedback Equalizer for Multilevel Modulation He Hui-Ying and Chen Shao-Chang	V2-79
A Classification Method Based on PAM Algorithm and Discrete Preprocess Huaizhen Yang and Lei Li	V2-82
Microscopic Traffic Simulation Oriented Road Network Data Model Daimin Tang, Xiang Li and Yijuan Jiang	V2-87
Modeling and Simulation of Fuzzy Control to Traction Control System of the Four-Wheel-Drive Vehicle Zhixin Liu, Yongwan Shi, Hong Chen and Xiaolong Zhang	V2-92
Performance of Scarani-Acin-Ribordy-Gisin Protocol in Quantum Key Distribution Yuanyuan Zhou, Xuejun Zhou and Xiaoqiang Li	V2-96
RBF Intelligent Model of Rectangular PDGS-LPF Jin Taobin, Jin Jie, Li Yuan, Kong Xi and Yang Shan	V2-101
Modeling and Simulation on Bearing Strength Evaluation of Unpaved Road Jin-Chun Zhan, Xiao-Song Guo, Hong-Jie Cheng and De-Lin Cui	V2-105
Computer simulation for the response of soil and different types of piles Dun-hua Lu and Zhong-Ming He	V2-110
Study on Casting Ultrasonic Signal Extraction Algorithm Based on Improved MP Liu Tao	V2-115
Smart Card-Based Authenticated Key Exchange Protocol with CAPTCHA for Wireless Mobile Network Ya-Jun Fan, Qiao-Yan Wen and Hua Zhang	V2-119
Data Mining Strategies and Techniques of Internet Education Public Sentiment Monitoring and Analysis System Mingzhang Zuo, Lixin Diao, Qiang Liu and Peishun Wang	V2-124
A Fast Single Pattern Matching Algorithm For The Longer Pattern Wang Jun-Bo, Kang Fei and Li Yang	V2-128

Contents xiii

Strong Convergence Theorems for Hemi-relatively Nonexpansive Mappings Xiufang Liu	V2-132
Semi-Blind Orthogonal Procrustes Channel Estimation in OFDM Hu Feng, Li Jianping and Cai Chaoshi	V2-136
An Approach to Increase MSC Capacity Fuxiang Gong and Wang Qing	V2-140
Distributed Regional Traffic Signal Control Model for High-Density Network Hu Xiaojian, Jiang Jun and Lu Jian	V2-145
A Flexible Workflow Management System Model Based on Ontology Wang Zhen-Wu and Wan Benting	V2-150
Research and Improvement for Feature Selection on Naive Bayes Text Classifier GuoQiang	V2-156
Data Gathering Routing Algorithm Based on Energy Level in Wireless Sensor Networks Zheng Wang and Yunsheng Liu	V2-160
A Multicast Advanced Algorithm Based on Node Heterogeneity for P2P MMOG Yan Wang and Zhao-Kui Li	V2-165
Research on the B2C E-commerce Based on Agent Technique Weijian Huang, Jing Jin, Liang Huang and Wei Du	V2-169
Research and Implementation of ForCES Redirect Channel Based on Linux Kernel Dan Hu, Weiming Wang and Chuanhuang Li	V2-173
A Fast and Low Complexity Zero-Watermarking Based on Average Subimage in Multiwavelet Domain Xiaonian Tang, Jianchun Wang, Chengbao Zhang, Huiming Zhu and Yan Fu	V2-178
On the Performance of Multicell MU-MIMO Uplink Transmission Scheme Based on SVD Haitao Li	V2-183
Optimal Sensing Time Based on the Target Function in Cognitive Spectrum Sensing Tingting Liu, Jianxin Wang and Feng Shu	V2-187
Research and Design of Elliptic Curve Cryptography Yingjie Qu and Zhengming Hu	V2-191
A Personalized Search Engine Model based on RSS User's Interest Zongli Jiang and Xiaojia Deng	V2-196

xiv Contents

Sparse Representation Based Feature Extraction of Protein Mass Spectrometry Data for Cancer Classification Yongying Jiang, Lei Zhu, Bin Han, Yaojia Wang and Ying Xu	V2-200
A Data-Mining Approach for Technology Innovation: A Case of Heavy-Duty and Large-Size CNC Machine Tool Industry in Hubei Ying Zhang, Weilai Huang and Qin Yuan	V2-204
Tracking a Mobile Target Using Bright Square in Wireless Sensor Network A. Manaviat, M. Fathy and M. Nikzad	V2-208
Reliability Evaluation System Based on Software Architecture Jun Wang and Weiru Chen	V2-215
Semiconductor Manufacture System Dynamic Scheduling Based on HCTPN and GA Guo-Jun Su and Xiong-Hai Wang	V2-219
Weighted Spanning Tree Clustering Routing Algorithm Based on LEACH Huazhong Zhang, Peipei Chen and Shulan Gong	V2-223
The Application of VxWroks-Based Power PC in Temporary Speed Restriction Server Zheng Changzong, Duan Wu and Lu Peiling	V2-228
A New Distributed Uplink Packet Scheduling Algorithm In WiMAX Newtorks Sonia Nazari and Hamid Beigy	V2-232
The Application Research of Network Learning Behavior Analysis Huan Huang, Qingtang Liu, Tao Huang, Linjing Wu and Shuai Yuan	V2-237
Mining Frequent Closed Itemsets Over Data Stream Based On Bitvector and Digraph Guanglu Zhang, Jingsheng Lei and Xinghui Wu	V2-241
Domain Ontology-Based Personalized Recommendation Research Qing Yang, Junli Sun, Yan Li and Kaimin Cai	V2-247
A Method of Billiard Objects Detection Based on Snooker Game Video Wei Shen and Lifang Wu	V2-251
Network Transmission Strategy for Raster Data Xinguang Li, Hong Fan and Xuehao Fu	V2-256
A Dynamic Selection Algorithm for Extending the Lifetime of Two-Tiered Sensor Network	V2-260
Yin Li, Liansheng Tan and Na Li	
Assessment of Appropriate Exploitation of Mine Ecological Economics Based on PSR Model Sun Shun-li	V2-266

Contents xv

Feature Selection Method Based on Category Discriminability Zongli Jiang and Wenfeng Nie	V2-270
A Novel Retrieval Model of Product Information in E-Commerce Huang Wei, Chen Xin, Zhang Liyi, Liu Qihua and Xiao Yun	V2-273
Design and Implementation of ZigBee Based Wireless Sensor Network for Remote SpO2 Monitor Zhou Yan and Zhu Jiaxing	V2-278
A Parallel Algorithm to Solve Symmetric Tridiagonal Linear Systems Yan Zhong, Zhi-Gang Luo and Feng Wu	V2-282
A Congestion Control Scheme Based on Smith Principle and Fuzzy Control Fuzhe Zhao	V2-287
Antenna Pattern Synthesis Based On The Particle Swarm Optimal Algorithm Duan Li, Xue Yong_Yi and Zhao Yi_Song	V2-292
The Optimization Techniques for Time Synchronization Based on NTP Peng Ruiqing, He Peng, Yuan Wenxue, Guo Min and Zhao Bin	V2-296
Powertrain Mount System Optimization Based on Interior Noise Analysis He Jianfeng, Jin Xiaoxiong and Zhang Qiang	V2-300
Cognitive Radio Routing Algorithm Based on the Smallest Transmission Delay Li Yun, Qin Fengxie, Liu Zhanjun and Zhuang Hongcheng	V2-306
KIDS: K-Anonymization Data Stream Base On Sliding Window Junwei Zhang, Jing Yang, Jianpei Zhang and Yongbin Yuan	V2-311
Improving KNN Based Text Classifications Zongli Jiang and Yi Deng	V2-317
The Design and Implementation of Protocol Test Cases Automatically Generating System Based on TTCN-3 Zhao Yulan, Jia Yazhe and Zhang Hongyu	V2-322
A New Technology of Query Expansion Based on New User Interest Model Zongli Jiang and Zhizuo Yu	V2-326
Selecting Error Patterns Based on Symbol Reliability For OSD Algorithm Dong Zi-Jian and Qiao Guo-Lei	V2-330
Improved Layering Protocol for Wireless Cooperative Networks Pannir Selvam Elamvazhuthi, Parag Shankar Kulkarni and Bikash Kumar Dey	V2-333
Research on Current Controller of Magnetorhelogical Damper System Yanyang Wang, Yinong Li and Ling Zheng	V2-338

xvi Contents

A Resource Allocation Using Game Theory Adopting AMC Scheme in Multi-Cell OFDMA System Seung Hyun Paik, Sungkwang Kim and Hong Bae Park	V2-344
Design and Analysis of Heartbeat Protocol in NIDS Cluster Wei Huang, Gengyu Wei, Nan Hu and Yixian Yang	V2-348
Dynamic Distribution-Aware Data Dissemination for Vehicular Ad Hoc Networks Lei Wu, Ming Liu, Xiaoming Wang and Haigang Gong	V2-353
Research on MDC Transmission over Wireless Mesh Network Zhu Xiao-Liang, Zhang Guo-Qing, Song Xiao-Juan, Hu Yu and Xiang Xiao-Ying	V2-361
Design of Integrated Multi-Mode Service Platform for E-Learning Zhu Xiao-Liang, Xiang Xiao-Ying, Hu Yu, Song Xiao-Juan and Zhang Guo-Qing	V2-366
An Approach of Test Sequence Generation for Component-Based Software Binbin Qu, Zuwen Chen and Yansheng Lu	V2-370
Multi Marker Propagation — Web Log Mining Algorithms Based on Weighted Matrix Cluster Jianguo Jiang, Zhiwen Tan, Na Zhao, Zhongxu Wang, Xiaoze Chen and Chunyan Liu	V2-374
A Fast Algorithm for Multi-String Matching Based on Automata Optimization* Yue Hu, Pei-Feng Wang and Kai Hwang	V2-379
A CAN-Based Protocol for Reliability Testing of Embedded Software Yi Zhang, Hong Li, Jian Wu, Jun Deng and Duan Luo	V2-384
Extended Individual Memory Based Multi-Objective Particle Swarm Optimization Zhou Chao, Zhang Guo-An and Zhou Hui	V2-390
Research of Dynamic Authentication Mechanism Crossing Domains for Web Services Based on SAML Zhang Yong-Sheng and Yang Jing	V2-395
Random Filter Based Ultra-Wideband Channel Estimation Zhang Xian-Yu, Liu Yu-Lin, Zhang Jian-Xin, He Ji-Wei and Wang Kai	V2-399
A New Antenna Selection Scheme for Correlated MIMO Channels Jianxin Dai and Ming Chen	V2-404
Runtime Protecting System for Java Applications with Dynamic Data Flow Analyzing Bo Feng, Miao Zhang, Guoai Xu, Xinxin Niu and Zhengming Hu	V2-408
Performance of Coarse and Fine Timing Synchronization in OFDM Receivers Ali A. Nasir, Salman Durrani and Rodney A. Kennedy	V2-412
Research on FSM for the Wireless Communication Qin Ningning and Xu Baoguo	V2-417

Contents xvii

Image Similarity Analysis on MIE Encryption Algorithm Xiaoqiang Zhang, Shilong Ma, Guiliang Zhu, Weiping Wang and Mengmeng Wang	V2-421
New Energy Model: Prolonging the Lifetime of Ad-hoc On-Demand Distance Vector Routing Protocols (AODV) AL-Gabri Malek, ChunLin Li, Li Layuan and WangBo	V2-426
A Secure End-to-End Protocol For Conference Mobile Call Qifan Yang and Tiancheng Zhang	V2-430
An Extension Model of Rough Set in Incomplete Information System Yun Wu and Qingshun Guo	V2-434
Architecture Design of Campus Information Convergence System for E-Learning Based on Web Service Technology Jianhua Jiang, Shuxin Guo and Jie Zhang	V2-439
Improved Modulation Classification of MPSK Signals Based on High Order Cumulants Zhang Shan, Zhou Xin and Wu Ying	V2-444
Performance Evaluation of Block LZSS Compression Algorithm Weiling Chang, Xiaochun Yun, Binxing Fang, Shupeng Wang and Xiangzhan Yu	V2-449
Segmentation of Infrared Image Using Support Vector Machine Jing Xia, Jiyin Sun and Hui Li	V2-455
A New Tracking Algorithm in Cellular Networks Mao Yongyi, Zhang Ying and Zhou Kanglei	V2-459
Design of Time Difference of Arrival Estimation System Based on Fast Cross Correlation Hongcheng Yan and Wenyi Liu	V2-464
Improved Algorithm for Independent Component Analysis Ji Ce, Yu Yang and Yu Peng	V2-467
A Novel Energy-Efficient Algorithm for Wireless Sensor Networks Linping Wang, Wu Bi, Tingwen Lu, Zhen Cai and Zufeng Wang	V2-471
On the Hybridization of Particle Swarm Optimization Qin Yang	V2-475
Study of an Explanation Mechanism in Expert System Based on Fault Tree for Safety Risk Assessment Wenhua Song, Huifang Shi and Qinggong Li	V2-479
Image Registration Method Based on EM Algorithm Xiaojuan Zhao	V2-484

xviii Contents

Efficient Frequencies Estimation Using Bayesian Approach For Parsimonious Time-Varying Auto-Regressions Zheng Hua, Pei Chengming and Liu Donglai	V2-489
Response Time Analysis of Mixed Scheduling Over CAN Yinkang Dong, Hongbing Ma, Hongwei Xu and Kai Wen	V2-494
Base Station Acoustic Source Locating System Analysis and Design Shixuan Yao, Hetian Yang and Baoliang Li	V2-499
Cooperative Relay Selection Strategies in Two-Hop IEEE 802.16 Relay Networks Liu Zhanjun, Chen Chunlin, Li Yun, Liu Qilie and Zhuang Hongcheng	V2-504
Video Stabilization Algorithm Based on Video Object Segmentation Gang Zhang, Luming Yu and Wenlong Wang	V2-509
Width Extraction of JPEG Fragment Via Frequency Coefficients Scale Similarity Measuring Ye Xu and Ming Xu	V2-513
Mining Unusual Data Over Data Streams Wei Xia and Zhang Wei	V2-518
Study on the Optimization of the Personalized E-Learning System Based on Web3.0 Xiong Hui-Xiang and Xu Ying	V2-522
Data Mining Model and Its Application in Financial Prediction Xu Huafeng and Li Qiuhong	V2-527
Attribute Reduction Based on Improved Judgment of Consistent Set Sichun Yang, Wei Zhang and Chao Gao	V2-532
The Optimization Study of Network Coding for Coding-Aware Wireless MESH Networks	V2-537
Jianliang Meng and Xikun Pan	
A Novel Pulse for CR-UWB Using Compressed Chirp Waveforms and Modified TDCS	V2-541
Shubin Wang, Zheng Zhou, Haifeng Dou and Kyungsup Kwak	
An Effcient Overlay Network Based on Many Rings which Embed Inverse Kautz Digraphs	V2-546
Zhaojun Xiang, Jingjing Song, Jing Shi, Hong Wang and Jiguo Yu	
PVMsim: A Parallel Simulation Platform to Evaluate Virtual Machines Junmin Wu, Xiao Yu Zhao, Xiu Feng Sui and XiaoLiang Yang	V2-551
A Privacy Data Set Release Method for Balancing Privacy Protection and Usability Yi Ren and Zhiting Xiao	V2-557

Contents xix

Two-Dimensional Sparse Principal Component Analysis for Face Recognition Cuntao Xiao	V2-561
Modelling and Performance Analysis of AFDX Based on Petri Net Zhang Jiandong, Li Dujuan and Wu Yong	V2-566
Design of the Monitoring and Analysis System of the Internet Education Public Sentiment Peishun Wang, Mingzhang Zuo and Lixin Diao	V2-571
Research on the Dynamical Properties of Beijing Road Traffic Network Xiaoliang Sun, Limin Jia, Zundong Zhang and Yong Qin	V2-575
The Multiphase Dynamics in Urban Traffic Systems Zundong Zhang, Limin Jia, Xiaoliang Sun and Yong Qin	V2-580
The Robustness of Trust-Based Recommender Algorithm Under Random Attack Fuguo Zhang	V2-585
A Fast and Efficient Multiple Step Algorithm of Iris Image Quality Assessment Chunlei Shi and Longxu Jin	V2-589
ARM9-Based Real-Time Acquisition of Orchard Soil Information and GPRS Wireless Transmission Control System Huixia Xue, Lin Gao, Wenbin Li, Jun Liu, Junmei Zhang and Liu Yang	V2-594
Research and Implementation of a Safe File System Based on the Mandatory Hardware Confirming Control Technology Kehe Wu, Shuai Yuan, Wenchao Cui and Zhitao Guan	V2-599
Detection and Optimized Disposal of Near-Duplicate Pages Junping Qiu and Qian Zeng	V2-604
Wireless Handheld Ordering Terminal Based on Embedded System Jie Zhou	V2-608
A Novel Reconstruction Approach for Pixel-Domain Distributed Video Coding Baoguo Du and Hong Shen	V2-614
Block-Based Weighted Pixel-Value Superposition Algorithm for Inter-Frame Error Concealment Xuangou Wu and Hong Shen	V2-619
A Dynamic Web Services Composition and Realization on the Base of Semantic Zhang Hai-Tao and Gu Qing-Rui	V2-624
Study on the High Speed Communication System for Automation Equipments Gao Junli, Quan Ninghui and Song Haitao	V2-628

xx Contents

Research and Implementation of Data Verification Method in Electronic Circuit Design	V2-632
Jianguo Jiang, Min Li, Changlan Cai, Xiaolin Li, Zhiping Du and Zhongxu Wang	
SAR Image Despeckling Using Directionlet Transform and Gaussian Scale Mixtures Model	V2-636
Ning Ma, Zeming Zhou, Peng Zhang and Chun He	
Research and Application of OLAM Architecture Fushan Wang	V2-641
Exploration of Strengthening and Cultivating the Programming Thought Mode to Improve the Computer Personnel Quality Fushan Wang	V2-645
Adaptive Deformation Estimation of Moving Target by Weight Image Analysis Xu-Guang Bai and Ming Dai	V2-649
Solving SAT Problem with a Revised Hitting Set Algorithm Youjun Xu, Dantong Ouyang, Yuxin Ye and Jialiang He	V2-653
A Computable Film Structure Model Zhicheng Zhao	V2-657
Adaptive-Normalized Min-Sum Algorithm Xiaofu Wu, Yue Song, Long Cui, Ming Jiang and Chunming Zhao	V2-661
Implementation of Handheld Remote Sense Image Calibration System Software Kaihua Xu, Jian Chen, Rui Wang and Yuhua Liu	V2-664
Application of Fuzzy Algorithm In the Direction Of Intelligent Car Yuan Quan, Zhang Yunzhou, Wu Hao and Wang He	V2-669
Transmitted-Reference Chirp Ultra-Wideband (UWB) Wireless Communication System	V2-674
Zhang Jian, Hu Han-Ying, Kang Rong-Zong and Li Xia	
An Edge-Adaptive Structure Tensor Kernel Regression for Image Interpolation Hongyi Liu and Zhihui Wei	V2-681
An Authentication Protocol Without Trusted Third Party on P2P Network Yonghong Zhou and Huaiqing Lin	V2-686
A Segment-Based Advertisement Search Method from TV Stream Zhicheng Zhao and Xiaodan Liu	V2-690
Design of Robust Channel Estimation Scheme for the OFDM-Based System Under Harsh Fading Channels 7i-Wei Thena	V2-694

Contents xxi

Joint Channel Estimation and Interference Suppression for the Chinese Digital Television Terrestrial Broadcasting Systems Zi-Wei Zheng	V2-698
Design and Realization of High-performance Computing Platform Accounting System	V2-702
Zhenya Chen, Ying Yang, Lijuan Chen and Chunxiao Wang	
Robust Frame Synchronization Scheme for the Chinese TDS-OFDM-Based DTTB Systems Zi-Wei Zheng	V2-706
Selecting Good Expansion Terms based on Google Similarity Distance Jing Luo, Bo Meng, Xinhui Tu and Jinguang Gu	V2-710
On the Application of Multimedia Technology in Constructing New Accounting Mode of Accounting Teaching YongLu and Zhu Chen	V2-715
AVI: Based on the Vertical and Intersection Operation of the Improved Apriori Algorithm Yan Zhang and Jing Chen	V2-718
Particle Filters for Beam-Space High Resolution DOA Estimation Shanbin Zhang, Wentao Fan and Xinhua Zhang	V2-722
A Low Jitter Scheduling Scheme for Combined-Input-Crosspoint-Queued Switch Ning Xu and Xueshun Wang	V2-726
P2P Routing Advanced Algorithm Using Super-Nodes and Self-Organizing Clustering Zhao-Kui Li and Yan Wang	V2-730
A Relative Probability Based Incentive Mechanism in P2P Systems Runhua Zhang, Ying Liu and Jianpin Wu	V2-734
Effects of Basis-Mismatch in Compressive Sampling of Continuous Sinusoidal Signals	V2-739
Daniel H. Chae, Parastoo Sadeghi and Rodney A. Kennedy	
Decoy Quantum Key Distribution: Modeling and Application Hao Yang, Daqing Wang and Yu Liu	V2-744
Grey Theory Based Reputation System for Secure Neighbor Discovery in Wireless Ad Hoc Networks Liang Hong, Wu Chen, Li Gao, Guoqing Zhang and Cai Fu	V2-749
Performance of Differential Chaos-Shift-Keying Digital Communication Systems Over Several Common Channels Chen Yiping, Shi Ying and Zhang Dianlun	V2-755

xxii Contents

Study of an Electronic Seal System Based on Elliptic Curve Cryptography and Public-key Infrastructure Xu Jian and Ma Bin	V2-760
The Third Kind of Communication Network Jinxin Zhang and Mangui Liang	V2-764
Investigation of Discrete Wavelet Transform for Signal De-noising in Weight-in-Motion System Xu Jian and Ma Bin	V2-769
A Hybrid Model Used to Predict Flow Stress Wu Bing and Wang Yan-Ping	V2-773
An Adaptive Expanding AntBudget Search Algorithm for Unstructured P2P Networks Zhi Chen, Jiaoyao Liu and Jing Li	V2-777
Performance Analysis for Complex FastICA Algorithms in MIMO OFDM Systems Yu Du, Yechang Fang, Nansong Wu and Kang Yen	V2-782
A Novel Resilient Multi-Path Establishment Scheme for Sensor Networks Jing Wang and Xiaola Lin	V2-787
Image Fusion Algorithm Based on Regional Variance and Multi-Wavelet Bases Hua Tian, Ya-Nan Fu and Pei-Guang Wang	V2-792
Research on Carrier Tracking in Hybrid DS/FH Spread Spectrum TT&C System Chen Zhu, Wang Yuan-Qin, Yang Wen-Ge and Wang Zai-Yuan	V2-796
Design of Elevator Audio Player Controlled by Wireless Communication Xintong Zhang, Chengdong Wu, Yuanlong Wang, Bingyang Li and Yunzhou Zhang	V2-801
A Rigorous Proof of A Fundamental Theorem In The Drift Analysis of Evolutionary Algorithms	V2-805
Yu -Shan Zhang, Zhi-Feng Hao and Han Huang	
Buffer Scheduling Policy in DTN Routing Protocols* Lei Yin, Hui-Mei Lu, Yuan-Da Cao and Jian-Min Gao	V2-808
Research of Enterprise Portal Interface Based on Information Security Liu Liqun and Huang Zhidan	V2-814
Research of DPRP Routing Protocols in the Precision-Attack Efficiency Evaluation System	V2-819
Huang Zhidan and Liu Liqun	
A Hierarchical Cluster-Based Optical Network-on-Chip Hui Li, Huaxi Gu and Yintang Yang	V2-823

Contents xxiii

The Establishment and Application of Based on DSP Image Processing Dynamic Muli-threshold Template	V2-828
Li Xin-Chun, Zhao Lu and Zhao Shuang-Hua	
A Model Analysis Method of Cognitive Radio Based on Game Theory Meng Zhang and Shijin Liu	V2-833
Research of automotive network FlexRay/CAN gateway based on DSP Wan Qin, Kong Feng and Fu Xiuwei	V2-837
Computation of Renameable Horn Backdoors for Quantified Boolean Formulas Jun-Cheng Yang, Shu-Xia Li and Jin-Yan Wang	V2-841
A Hybrid Decision Method for Multi-Resolution Model of Logistics Location Li-Yan Zhang, Yan Sun and Jian Ma	V2-845
Author Index	V2-851

2010 2nd International Conference on Future Computer cpf 'Communication

(ICFCC 2010)

Wuhan, China 21-24 May 2010

Volume 3 Pages 1-883



IEEE Catalog Number: CFF ISBN: 978-

CFP1037G-PRT 978-1-4244-5821-9

Contents

Preface	\
Organizing Committees	vi
Discovering Collaborative Users Based on Query Context for Web Information Seeking Jie Yu, Fangfang Liu and Jie Gong	V3-1
Majority Decision Based Weighted Symbol-Flipping Decoding for Nonbinary LDPC Codes	V3-6
Bing Liu, Jun Gao, Gaoqi Dou and Wei Tao	
Improved Winning Probability Model in Go Based on Strong Group Quantization and Multi-Level Species Compete-Die Out Algorithms	V3-11
Lei Yu, Xiaojun Zhang, Chunni Dai and Jingao Liu	
Blind Fractionally Spaced Equalization and Timing Synchronization in Wireless Fading Channels Ali A. Nasir, Salman Durrani and Rodney A. Kennedy	V3-15
Pragmatic Analysis of Progress Reports — Through a Case Study of Communications Between Local and Head Offices of a UK University Ning Zhang and Kecheng Liu	V3-20
Identifying Heavy-Hitter Flows Fast and Accurately Ningbo Zhang, Fengyu Wang, Bin Gong and Liangxiong Li	V3-26
Automated Verification of Loops with Assignments Only by Recurrence Solving and Optimization Problems Jianying Xing, Mengjun Li and Zhoujun Li	V3-31
The Design and Realization of DSRC Logic Analyzer Based On USB Jia Luo, YingQing Xia, Aisheng Li and Cheng Yang	V3-37
Application of the Virtual Reality Technologies in Power Systems Guoxiaoli, Fengli and Liuhong	V3-41
The Analysis and Realization of the P2P Network Security Guoxiaoli, Zhaozhiming and Guoping	V3-45
Online Image Fusion of Remotely Sensed Satellite Imagery Using Web Services Chain Bin Xie, Gongbo Xu and Le Yu	V3-49
Optimization of Viterbi Decoder Parameters for WRAN System Mehdi Ahmadi and Sied Mehdi Fakhraie	V3-53

xii Contents

Modulation Classification of MQAM Signals Based on Density Spectrum of the Constellations	V3-57
Changyi Yin, Bingbing Li, Yanling Li and Bing Lan	
Modelling and Performance Evaluation of IEEE 802.22 Physical Layer Mehdi Ahmadi, Ehsan Rohani, Pooya Monshizadeh Naeeni and Sied Mehdi Fakhraie	V3-62
Weight-Based Fairness Allocation Alogrithms for Mesh Network Yang Tao, Pengmin Sun and Jian Li	V3-67
A Novel Subspace Clustering Algorithm with Dimensional Density Wangfei Huang, Lifei Chen and Qingshan Jiang	V3-71
Cloning and Homologous Analysis of a Partial Lipase Gene in Staphylococcus Caprae TCCC 11546 Chen Yi-Peng, Gao Qiang, Qiao Na-Na, Wang De-Pei, Wang Bin-Zhe and Zhao Wen-Yi	V3-76
Handover Algorithm Based on Movement State for Cellular Relaying Networks Qian-Bin Chen, Yu Liu, Lun Tang and Rong Chai	V3-81
Formal Analysis of Improved EAP-AKA Based on Protocol Composition Logic Peng Liu and Peng Zhou	V3-86
Key Frame Extraction Based on Information Entropy and Edge Matching Rate Liping Ren, Zhiyi Qu, Weiqin Niu, Chaoxin Niu and Yanqiu Cao	V3-91
An Improved Method of Differential Fault Analysis on the SMS4 Key Schedule Wei Li	V3-95
A Routing Scheme for Dynamic Event Region Tracking In Wireless Sensor Networks	V3-100
Guidan Li, Yugeng Sun, Liping Liu, Ting Yang and Qiang Zhang	
Effective XML Data Storage and Distributed Query Retrieval System Su-Cheng Haw, Chien-Sing Lee and Hau-Lee Tong	V3-104
Ad Hoc Grid Task Scheduling Algorithm Considering Trust-Demand Wang Haobo, Li Chunlin, Yan Chunxiang, Li Qingqing, Li Jun	V3-109
Key-Peers Based Topology Control for Unstructured P2P Networks Cuihua Zuo, Hongcai Feng and Cao Yuan	V3-114
Cognitive Information Technology Adaptive Implementation Control and Nash Equilibrium Realization in Case Teaching Dai Zhi-Min and Guo Lu	V3-119
Estimating TOF by Parameter Estimation of Double Exponential Model Wang Bo, Guo Gang, Dong Qingwei and Feng Qi	V3-124

Contents xiii

Study on the Application of Zigbee in Monitor System for Coal Mine Fei Wang, Weijie Wang, Xiaohui Qin and Xuezeng Zhao	V3-127
Two-Way Combinatorial Clustering Network Shengyu Cao and Laifu Liu	V3-132
Design on MEMS-IMU Aided GNSS Phase Locked Loop Based on Fuzzy Adaptive Algorithm within Ultra-Tightly Integration Huang Xun, Gao Qi-Xiao, Chen Yong-Bing, Li An and Liu Ya-Li	V3-138
Grid-Cloud: IT Platform for Service Science Peijie Huang, Piyuan Lin and Hong Peng	V3-143
User Fairness of IEEE802.11 WLAN Downlink Xu Jian, Xu Ming, Guo Ming and Lin Xin	V3-148
Bundle Transport Model of Satellite Delay Tolerant Networks Haizheng Yu, Jianfeng Ma and Hong Bian	V3-153
A Power Efficient Routing Algorithm Based on Betweenness Cheng-Chin Lin, Yihjia Tsai and Wen-Fa Huang	V3-158
Cluster-Based Multi-Channel System for Improving Performance of Large-Scale Wireless Multi-Sink Sensor Networks C. T. Kone, M. David and F. Lepage	V3-163
Research on Deep Web Sources Classification Technology Huilan Zhao	V3-169
An Effective Detailed Placement Algorithm For Large-Scale Mix-Mode IC Design Yi Diao, Yongqiang Lv, Haixia Yan and Qiang Zhou	V3-172
Solving Fixed Point Equation by Niche Particle Swarm Optimization Liangdong Qu and Dengxu He	V3-177
Run-Time Workload Driven Structure in Statistics for the Cloud Yuanyan Gu and Yujia Ge	V3-181
A miRNA Target Interaction Filter Based on Markov Model Jiang Xiaozhou, Luo Zhigang, Shi Jinlong and Ding Fan	V3-185
Novel DOA Estimation of Wideband Source Using Non-Uniform Linear Antenna Arrays Zuo Wei and Gao Jun	V3-189
Combining Data Trust in Reputation Systems to Boost P2P Security Jianguo Chen, Xiang Xu and Stefan D. Bruda	V3-194
An Importance Sampling Method Based on the Variance Minimization with Applications to Vehicle Routing Problem Yue Qiu	V3-200

xiv Contents

Performance Analysis of MAC Protocol in Wireless Self-Organizing Network Based on Finite State Machine Zemao Zhao and Fei He	V3-206
A Grid-Based Collaborative Mode for Spatial Data Interoperability Hao Wu, Nan Chen, Shaozhi Xiao, Xiuwen Chi and Wei Cui	V3-211
Analysis and Implementation of the City Conflagration Automatic Alarm Network Monitoring System Hong Hong and Liu Fang	V3-215
Physical Layer Multicasting Over 2-Hop Network using Dual Amplify and Forward Relay M. Adnan, M. Iqbal, Y. Wang, D. Yang and Wei Xiang	V3-219
Word Sense Disambiguation of Semantic Document Bin Shi, Liying Fang, Jianzhuo Yan and Pu Wang	V3-224
Research on the Adaptive Mechanism of Telecommunication Networks Based on Modularity Liu Guoliang and Qiu Tao	V3-229
ORAS: Opportunistic Routing with Asynchronous Sleep in Wireless Sensor Networks Shucheng Liu, Mo Sha and Liusheng Huang	V3-234
Mobile TV in Iran Mohsen Gerami	V3-239
Improved Decoding Architecture for Non-Binary Split LDPC Codes Defined Over Finite Groups Bilal Shams, David Declercq and Vincent Heinrich	V3-243
Balanced Locality-Aware Packet Schedule Algrorithm On Multi-Core Network Processor	V3-248
Pengcheng He, Jinlin Wang, Haojiang Deng and Wu Zhang	
Self-Learning Scheduling Approach for Wireless Sensor Network Jianjun Niu	V3-253
A Fast Rectangular Spreading Technique in Global Placement Xiaowei Ma, Yongqiang Lv, Haixia Yan and Qiang Zhou	V3-258
A Speed Observer for Speed Sensorless Control of Induction Motor Sun Kai and Zhao Yanlei	V3-263
A New Robust Algorithm to Improve the Dynamic Performance on the Position Control of Magnet Synchronous Motor Drive Sun Kai and Zhao Yanlei	V3-268

Contents xv

BP Network Model Optimized by Adaptive Genetic Algorithms and The Application on Quality Evaluation for Class Teaching Yuan Lizhe, Xiao Bo and Wei Xianjie	V3-273
Context-Based Dynamics of Trust Wen-Xing Sun, Feng-Ming Liu and Xi-Yu Liu	V3-277
Low Complexity MMSE Precoding and Decoding for Multiuser MIMO Zhou Huayu, Zong Rong and Zhang Qin	V3-282
Application of ANN for the Prediction of Building Energy Consumption at Different Climate Zones with HDD and CDD Yan Cheng-Wen and Yao Jian	V3-286
A Dynamic Scheme Based on Load Adapation for Wireless Network MAC Protocol	V3-290
Bao Li-Yong, Zhao Dong-Feng and Zhao Yi-Fan	
The Research on Available Bandwidth Estimating in Mobile Ad Hoc Networks Wang Ru-Yan, Dai Qi and Wu Da-Peng	V3-295
Fast RE Set Matching for Network Content Inspection Huang Yuping	V3-301
Applied Granular Matrix to Attribute Reduction Algorithm Zhong Luo, Guo Cui-Cui, Mei Lei, Hu Lei, Pan Jia-Wei and Su Yong-Chang	V3-306
Computer Simulation of Doppler Ultrasound Blood Flow Signals from Intracranial Aneurysms in a Pulsatile Flow Lifang Wang, Janying Yuan, Hong Wei and Xiaohua Zhou	V3-311
An Efficient Opportunistic Multicast Routing for Mobile Ad Hoc Networks Yang WenZhong, Huang ChuanHe, Zhang ZhenYu, Wang Bo and Wang Tong	V3-316
A Dynamic (t, n) Threshold Signature Scheme with Provable Security Danni Liu, Xingwei Wang, Lei Guo and Min Huang	V3-322
Research of Universal Data Acquisition System Rule-Based Shen Zihao and Wang Hui	V3-326
FAST TCP Performance under Perturbation Imposed Queueing Delay in Equilibrium	V3-330
Fei Ge, Zukerman Moshe, Ji Li and Liansheng Tan	
Automatic Reception of High-Frequency CW Telegraph with Support Vector Machine	V3-335
Zhou Xiao-Na, Li Guo-Jun, Jiang Yong and Zeng Li	
An Improved Method for Feature Weighting to Document Categorization Zhili Pei, Yuxin Zhou, Lihua Wang, Lisha Liu, Yinan Lu and Ying Kong	V3-339

xvi Contents

Design and Implementation of an Embedded VoIP System Using Bluetooth Technique Yu Jijiang and Lian Fiyu	V3-344
An Optimization Method of Network Teaching Management Based on Web Mining Techniques Liu Xiang-Ying and Yang Lian-He	V3-348
The Design on the Wireless Wrist Device of Vital Movement Index for Solitary Elders Xiaodong Li and Shaorui Jia	V3-353
Research of Still Image Compression Based on Daubechies 9/7 Wavelet Transform Qiu-Yuan Cai, Geng-Sheng Wang and Yun-Xin Yu	V3-357
High Reliable Multi-Hop Transmission for Sensor Data in Mine Tunnels Li-jia Chen, Hao Deng, Wei Gao and Zhen Dai	V3-362
Narrowband Interference Suppression in Time-Hopping Impulse Radio Si Chen, Bang-Ning Zhang, Daoshen Guo and Qin-Yu Zhang	V3-367
Intelligent Dispatch for Public Traffic Vehicles Based on Improved Genetic Algorithm Zhu Chang-Sheng, Liang Jian-Bo, Feng Wen-Yi and Miao Xu-Gang	V3-372
Research on the Development of Web Directory Service in China Feng Ding, Lan Lan and Te Ma	V3-376
New Multicast Routing Algorithm For QoS Routing In Communication Network Ruimin Yao and Jun Fei	V3-379
An Opened Model with Web Service in Discrete Event Simulation Gong Li, Liu Gao-Feng, Liu Zhong and An Ru-Kui	V3-383
Distributed GEP Query Optimization on Grid Service Deng Yong and Wang Ru-Chuan	V3-387
Design and Modeling of a 12-bit SAR ADC IP with Non-Lumped Capacitor Array Pei Xiaomin and Wang Peiyuan	V3-392
Performance Analysis of MIMO-OFDM Systems on Nakagami-m Fading Channels Xihong Chen, Qiang Liu and Maokai Hu	V3-396
To Achieve Anonymous Communication in Moblie P2P Networks Cheng Dapeng and Mao Yanyan	V3-401
Circuit System Analogy To Equilibrium Models and Its Application In One-way Transportation Networks Zhang Shuichao and Ren Gang	V3-404

Contents xvii

An Efficient Nonuniform Channelizer Based on Adjacent Channel Merging Yang Jun and Yuan Sijie	V3-408
Study for Measurement Method for Coal Volume on Base of GPU Liu Yanling, Qin Jian and Xie Ning	V3-412
Steiner Tree Heuristic Algorithm Based On Weight Ning Yang and Yan Hu	V3-415
Research on IPV4/IPV6 Translation Gateway based on NAT-PT Technology Yang Ying, Lan Hai-Tao and Liu Ping	V3-419
Application of the Improved BP Neural Network Model to Deformation Analysis of an Earth-Stone Dam Jang Ruibo, Pan Jiechen, Yang Mingdong and Xu Liang	V3-423
The control Algorithm Research of the Warp Tension Based on Single Neuron Adaptive PID	V3-427
Lei Li, Jiancheng Yang, Yongli Zhao, Yan Liu and Liangchao Cong	
Research on Fault Monitoring for Railway Automatic Blocking and Continuous Transmission Lines Yan Suyun, Wang Yi and Shu Hong	V3-432
	V2 42/
A Novel Approach of Eye Movement and Expression Qi Huang, Yang-Yu Fan and Tao Lei	V3-436
A Simple Single Radio Multi-Channel Protocol For Wireless Mesh Networks Zhang Zaichen and Yu Xutao	V3-441
Study on the Sequence of Steps in the QR Code Image Preprocessing Xiong Zou, Guo-Dong Liu and Jian-Min Wang	V3-446
Application and Study of Wavelet Transform in the QR Code Image Preprocessing	V3-450
Xiong Zou, Guo-Dong Liu and Jian-Min Wang	
Multi-Scale Processing for Network Traffic with Long-Range Dependence Based on Fractional Differencing Liu Xuewen and Shen Lei	V3-454
A Robust Sliding-Mode Control Strategy of Permanent Magnet Synchronous Motor	V3-457
Shu-Zhen Zhang and Qiu-Lin Yang	
Resaerch and Simulation Test Based on Fuzzy Self-Adaptive PID for Secondary Cooling Control System During Continuous Casting Wenhong Liu and Zhi Xie	V3-461

xviii Contents

The Study on the College Campus Network ARP Deception Defense Yafeng Xu and Shuwen Sun	V3-465
Key Nodes and Corridors Identifying Method for Large-Scale Evacuation Network Based on Information Centrality Guiyan Jiang, Zhengyan Wu, Qiao Li and Chunqin Zhang	V3-468
A Design on Routing Protocol in Sensor Networks Based on Clustering Optimization Ru Li, Da-Wei Hu and Wan-Li Zhao	V3-473
Towards Minimum Variance and Robustness Controller for LTI System Demonstrated on a Permanent Field DC-Motor Mahmood M. Al Imam and M. M. Mustafa	V3-478
Research on Interval Skyline Over Data Stream Peng Zou, Wencong Cheng and Yan Jia	V3-484
Design of 50MHz-1GHz Low Noise and High Linearity MMIC Amplifier Jian Xu, Gong-Zhi Wang, Ying Zhang and Jing Huang	V3-489
Prewarning system for Preventing Rear-End Collisions on Freeways Xinshuai Che, Shaohui Xi, Xu Bai and Chunyan Han	V3-492
An Engineering Design Model of Multi-Cell Series-Parallel Solar Array Wang Xiaolei, Yang Liang and Yan Pan	V3-498
Face Feature Detection and Normalization Based on Eyeball Center and Recognition	V3-503
Sheetal Chaudhari, Kishor S. Kinage, Archana Kale and S. G. Bhirud A Comparative Study of Four Different Temperatures on Structural Character of α -syn12 Peptide in Solution Liling Zhao	V3-508
Steerable Wavelet Based Fusion Model for High-Resolution Remotely Sensed Image Enhancement Wang Jian, Peng Xiangguo, Zhou Feng and Zhao Yindi	V3-512
A Novel Image Evaluation Method for Three-dimensional Laser Scanning in Full Degrees of Freedom Wang Yibo, Qian Yaochuan, Yang Junwei and Wang Qiang	V3-517
Distributed Spectrim Allocation Algorithm Based on Nash Bargaunung Solutuion Li Yan and Yang Zhen	V3-522
A New Method of Speech Model Based On Periodic Expanded Chenafena Zhao, Hao Wana and Zheniun Yue	V3-527

Contents xix

The Attributes Similar-Degree of Complex Networks Shaohua Tao and Xiaopeng Yue	V3-531
Design of Low Voltage Ultra High-Speed 1:16 DEMUX By $0.18\mu\mathrm{m}$ CMOS Process Xie Feng and Xu Yanyi	V3-536
A New Type of Computer Network Architecture Junhui Zheng, Yan Wang and Jianyang Li	V3-540
Joint Bandwidth Guaranteed Scheduling and Shortest Path Routing Algorithms in Multi-Channel Wireless Mesh Networks Kai Xiang, Yuanyuan Zeng and Tong Wang	V3-544
Pulse Radar Altimeter Terrain Return Model and its Simulation Zhang Hua and Hu Xiulin	V3-549
Multi-Scale Analysis and Fractal Signature (MSFS): A New Approach to Invariant Corner Extraction for Image Registration Feng Gao, Gongjian Wen, Bingwei Hui and Huanzhang Lu	V3-553
Algorithm of Modified Polar Coordinates UKF for Bearings-Only Target Tracking Dan Wang, Hongyan Hua and Haiwang Cao	V3-557
Research on Equipment Utilization in Computer Composition and Maintenance Experiment Curriculum Zengqingjiang, Zhangqingguo and Zhangwei	V3-561
The Study of TOPMD Statistical Properties and Design of TOPMDE Niu Huijuan, Bai Chenglin, Zhang Xia, Xu Hengying and Han Jiguang	V3-565
Design of Intelligent Node Based on Distributed Hybrid Net Control System Yao Xiaofeng, Xue Xu and Wu Defeng	V3-569
Caching Algorithm For Streaming Media on P2P Network Zhang Ying-Hui and Tan Ai-Ping	V3-573
An Improved Least Square Channel Estimation Algorithm for Underwater Acoustic OFDM Systems Wang Chen, Li Qi and Fang Yanjun	V3-577
Study of Proportion and Fuzzy Control Method Upon Precision Micro-Flow Valve Chen Hai-Chu, Yang Hui, Zhang Hua and Zhang Rui-Hua	V3-581
Natural Image Understanding Via Sparse Coding Qiang Hou, HePing Pan, Juan Li and Ti Wu	V3-586
An Integrated Resource Allocation Algorithm for CPU Intensive and I/O Intensive Jobs in Multi-Core Cluster Aihua Liang, Zhuo Liu, Limin Xiao and Li Ruan	V3-591

xx Contents

An Efficient Parallel Storage Scheme in Data Grid Environment Weizhong Lu, Yuanchun Zhou, Jianhui Li and Baoping Yan	V3-595
Opportunistic Routing Transmission Coordination Using Bit Map Wei Chen, Jing Jin, Juan Wang and Zhi-Guang Qin	V3-600
IADX: A Storage Pattern of Bio-Information Based on XML Yang Jin-Cai, Zhao Sen and Liu Xiao-Jiao	V3-605
Frequency Hopping Sequences with Given Minimum Gap Zhang Huaqing	V3-611
Location Semantics in Positioning Services Zhao Dongqing and Zhang Xiguang	V3-615
A Hybrid-Mesh Application Layer Multicast based on Sub-Streams Scheduling Jun Yue, Chanle Wu, Lian He and Shi Cheng	V3-620
The Denoising Method of SAR Image Based on Retinex Liudandan and Tangchunrui	V3-625
Transport Volume Forecast Based on GRNN Network Yang Zhengxiang, Xu Guimin and Wang Jinwen	V3-629
Maintain History Information in DHT Based P2P System Under Churn Dehui Liu, Feng Chen, Gang Yin, HuaiMing Wang and Peng Zou	V3-633
A New Semi-Supervised Support Vector Machine Learning Algorithm Based on Active Learning Li Cunhe and Wu Chenggang	V3-638
Attitude Information Deduction Based on Single Frame of Blurred Star Image Liu Tai-Yang, Wang Shi-Cheng, Liu Xing-Miao and Li Ren-Bing	V3-642
Implementation and Design of VPN Gateway Data Transmission Module Lei Guang-Bo and Chen Jie	V3-647
Test System for Single Sheet Iron Loss Hong Ye, Huizhong Yu and Weisi Gu	V3-651
Decision-Making Based on Risk Attribute in Decentralized System Zhu Shenglin, Zhang Mingwu and Yang Bo	V3-656
Mining Maximal Patterns Based on Improved FP-Tree and Array Technique Huajin Wang, Chunan Hu and Yuhuan Chen	V3-660
Research on GPS/DR Make-Up Orientation Method in Vehicle Orientation Navigation Technology Che Lina and Xu Aigong	V3-665

Contents xxi

Automatic Control Mechanism of Cutting for the EBZ-160 Roadheader Hou Jian and Mao Jun	V3-668
Preventing Black Hole Attack in Mobile Ad-Hoc Networks Using Anomaly Detection Yibeltal Fantahun Alem and Zhao Cheng Xuan	V3-672
Application of ANN in Food Safety Early Warning Zhen Liu, Lingyong Meng, Wei Zhao and Fengqi Yu	V3-677
A Novel Time-Aware Block Scheduling Model for Media Streaming in Peer-to-Peer Overlay Networks Jingxing Liao, Wenguo Yang and Tie Liu	V3-681
A Micromouse Maze Sovling Simulator Jianping Cai, Jianzhong Wu, Meimei Huo and Jian Huang	V3-686
An Embedded Wireless Transmission System Based on the Extended User Datagram Protocol (EUDP) Yuanlong Wang, Chengdong Wu, Xintong Zhang, Bingyang Li and Yunzhou Zhang	V3-690
Asynchronous Anti Phishing Image Captcha Approach towards Phishing Gaurav Kumar Tak, Navin Badge, Pranay Manwatkar, Ashok Ranganathan and Shashikala Tapaswi	V3-694
SOA Governance and Accounting Control Yanfang Niu	V3-699
A Fragile Watermarking Algorithm Based on Fractal Compression and Differentials Record Theory An Hu, He Xiaolong, Yang Zhigang, Zhang Wuji, Peng Jun and Zhang Bing	V3-702
Downlink Joint Subchannel and Power Allocation in Cognitive OFDM Systems with QoS Guarantee for Primary Users Xuan Qu, Mo Li, Jianfeng Zhang and Youyun Xu	V3-706
Research and Implementation of Serial Communication between Computer and Electronic balance Based on B/s Mode Tu Xiao-Qin, Wu Sheng and Luo Bin	V3-712
The Numerical Simulation of Pollutants Transport Through Landfill Liner Under Coupling of Temperature and Chemical Osmotic Pressure Lu Haijun and Zhang Chuancheng	V3-716
Fast Mode Decision Algorithm in H.264/AVC Base on Statistical Feature Donghui Zhou and Chunjiang Duanmu	V3-721
Robot Path Planning Based on Modified Genetic Algorithm Wang Yan-Ping and Wu Bing	V3-725

xxii Contents

Model and Algorithm for Hot-Rolling Bath Planning Wang Yan-Ping and Wu Bing	V3-729
Vegetation Edge Feather Extracting Based on Wavelet Transform Yanghang, Zhang Lifu, Fang Junyong and Tong Qingxi	V3-733
Design and Implementation of Muti-Language Mangement in Auto Parts Management System Bai Guimei and Yang Shangsen	V3-738
A Spline-Based Hammerstein Predistortion for 3G Power Amplifiers with Hard Nonlinearities	V3-741
Xiaofang Wu, Ningjing Zheng, Xiaoli Yang, Jianghong Shi and Huihuang Chen	
Impact of Reception Combining on Performance of Amplify-and-Forward Protocol Wei Liu and Dandan Zhou	V3-746
Efficient Certificate Management in VANET Ghassan Samara, Wafaa A. H. Al-Salihy and R. Sures	V3-750
From Natural Language Requirements to Requirement Ontologies Rong Li, Keqing He and Huafeng Chen	V3-755
Evaluation System of Water Inrush in Coalmine Based on J2EE Donglin Dong, Wenjie Sun, Zhenqi Lv, Jian Li and Zengjiang Qian	V3-759
Automatic Knot Adjustment by a Improved Genetic Algorithm Li Pingping, Zhao Xiuyang and Yang Bo	V3-763
Improved Layed Architecture for Developing Semantic Web Application Kun Liu, Shengqun Tang, Jia Wan, Song Ding and Xue Qin	V3-769
Web Annotation Researches for Remote E-Learning Yi Baolin, Xu Xianglian, Qiao Haiquan and Chen Yongjun	V3-773
The Topology Optimization of Controlling Hubs in P2P Networks Shishun Wu, Yuhua Liu and Kaihua Xu	V3-778
Modeling of Scale-Free Network Based on Pagerank Algorithm Yi Zhang, Yuhua Liu, Kaihua Xu and Zhenrong Luo	V3-783
The Design of Variable Frame Length LT Code Based on Limiting Conditions Zhao Danfeng, Qian JinXi and Wu Yuping	V3-787
Construction Analysis of Low-Density Parity-Check Codes for Free-Space Optical Communication Xiao Xuena	V3-791
Caching Policy for Reliable Multicast in Ad Hoc Networks Lixia Chen, Gang Feng and Yide Zhang	V3-794

Contents xxiii

CALM: Cellular Aggregated Location Management in Mobile Ad Hoc Networks Akbar Momeni, Karim Khazaei and Aghil Essmaeili	V3-800
Mixed-Strategy Based Discrete Power Control Approach For Cognitive Radios: A Matrix Game-Theoretic Framework Chungang Yang and Jiandong Li	V3-806
CommuTrust: A Trust and Secure Architecture in Community-Based P2P Overlay Networks Feiteng Xue, Gang Feng and Yide Zhang	V3-811
Congestion Control with the Fixed Cost at the Domain Border Zhiqiang Shi, Yuansong Qiao, Zhimei Wu, Eoghan Conway and Enda Fallon	V3-817
Capacity Analysis for Dual-Hop Cooperative System with Multiuser Scheduling in Nakagami-m Fading Channels Wei-Guang Li and Ming Chen	V3-822
Outage Capacity of Dual-Hop Decode-and-Forward Relaying System Over Generalized Fading Channels Wei-Guang Li and Ming Chen	V3-827
A Model of Electrical Signals in Senecio Cruentus Based on RBF Neural Networks Lanzhou Wang and Jinli Ding	V3-832
Frame Discussion on A General Sales Management System Wang Kangping and Zhang Yanhong	V3-837
Building LST Grid Service Based on Globus & Cactus Zhan Shaobin, Jin Houzhong and Gao Yuefang	V3-843
SME ERP System Research and Implementation Changchun Pan and Yangbing	V3-847
User-Role Assignment of RBAC by Propositional Formula Based on NTFS Liu Hui and Han Lansheng	V3-851
Author Index	V3-855