

2013 International Conference on Computer Sciences and Applications

(CSA 2013)

**Wuhan, China
14-15 December 2013**



**IEEE Catalog Number: CFP1348V-POD
ISBN: 978-1-72; 2/222; /:**

2013 International Conference on Computer Sciences and Applications

CSA 2013

Table of Contents

Message from the General Chair.....	xviii
Organizing Committee.....	xix
Technical Program Committee.....	xx

Session 1: Computer Security

Risk Assessment of Security Systems Based on Entropy Theory and Neyman-Pearson Criterion	1
<i>Haitao Lv and Ruimin Hu</i>	
Belief-Based Security Protocol Message Block Design Method	6
<i>Simin Liu and Junyao Ye</i>	
Research on Encryption Model Based on AES and ECC in RFID	9
<i>Yiran Lin, Kaige Kang, and Yue Shi</i>	
A Secure Communication Approach for Mobile Intelligent Terminal	14
<i>Fan Zhang, Cong Zhang, Mingdi Xu, and Minghui Yang</i>	
Secret Sharing of Digital Raster Maps Based on Image Scrambling	18
<i>Xingke Liu and Ke Chen</i>	
A Malware Analysis Platform Based on Taint Analysis	22
<i>Fan Zhang, Minghui Yang, and Mingdi Xu</i>	
The Analysis of Critical Technology on Cloud Storage Security	26
<i>Lianfu Yin</i>	
Data Security Access Control Model of Cloud Computing	29
<i>Jun Hu, Lei Chen, Yunhua Wang, and Shi-Hong Chen</i>	
A Hierarchical Access Control Technology for Cloud Storage	35
<i>Jiang Lan and Gu Chunhua</i>	
Analysis of a Virtualization-based Recovery Approach for Intrusion Tolerance Systems	41
<i>Jianhua Huang and Qing Ai</i>	

Web User Trust Relationship Prediction based on Evidence Theory	47
<i>Baoping Feng, Yuan Yao, Xianglin Zuo, Qian Zhang, Tianyi Zhang, Junhua Wang, and Wanli Zuo</i>	
Biometric Authentication System Based on Palm Vein	52
<i>Ali Mohsin Al-Juboori, Xiangqian Wu, and Qiushi Zhao</i>	
Discussion on the MACD and MA Expert Systems of Securities Software	59
<i>Hai-Ping Huang and Pin Wang</i>	
Discussion on RSI and KDJ Expert System of Securities Software	63
<i>Pin Wang and Hai-Ping Huang</i>	
Static and Dynamic Verification Method of Trusted Embedded Software Systems	67
<i>Bo Huang, Yong Xu, and Guoqing Wu</i>	
Study of the AES Realization Method on the Reconfigurable Hardware	72
<i>Yuwen Zhu, Hongqi Zhang, and Yibao Bao</i>	
Research on Elliptic Curve Cryptographic Algorithms Based on Chaotic System	77
<i>Ming-Lai Liu, Guang-Zheng Wei, Geng Zhao, and Shao-Po Zhang</i>	
New Research on Elliptic Curve Cryptosystem Algorithm Based on System of Chebyshev Polynomial	82
<i>Guang-Zheng Wei, Geng Zhao, Ming-Lai Liu, and Shao-Po Zhang</i>	
Complete Web Security Testing Methods and Recommendations	86
<i>Li Qian, Jiahua Wan, Lu Chen, and Xiuming Chen</i>	
 Session 2: Communication and Networking	
An Improved ACO-Based Security Routing Protocol for Wireless Sensor Networks	90
<i>Zhong Luo, Runze Wan, and Xiaoping Si</i>	
Research on WinPcap Capture IPv6 Packet Method	94
<i>Zhenqi Wang and Dankai Zhang</i>	
Information Service Platform of China Human Resources in Science and Technology Based on WEBGIS	98
<i>Qiao Guo and Daya Zhou</i>	
Time Reversal and Fast Marching Method Applied in Wireless Indoor Positioning	102
<i>Guoping Chen, Wenshan Wang, and Li Wang</i>	
The Study of Farmers' Professional Cooperatives Information Service System	106
<i>Xiang Sun, Baoguo Wu, Qingxue Li, Huarui Wu, and Cheng Chen</i>	
Analysis of the B2C Online Travel in China: Using Mangocity.com as an Example	110
<i>Shuxia Dong and Yi Zhou</i>	
An Implementation of WBAN Module Based on NS-2	114
<i>Ning Gu, Yong Jiang, Jun Zhang, and Hai-Tao Zheng</i>	

Optimization of WEB Data Collection Technology Based on HITS Algorithm	119
<i>Desheng Mei, Weibo Li, and Pin He</i>	
Detecting Frauds in Restaurant Reviews	123
<i>Weiwen Yang and Linchi Kwok</i>	
Direction Search Algorithm in Ad-hoc Network Based on P2P Network	130
<i>Dan Liu and Xiao Hong Ni</i>	
DDChord—A Double Deck P2P System Based on Chord	134
<i>Xiaoyun Zeng</i>	
A Comparison of Approaches to Web Service Evolution	138
<i>Ruo Meng and Chengwan He</i>	
Design and Implementation of On-Line Answering System for Visually Impaired College Students	142
<i>Dawei Xu and Cunjiang Yu</i>	
Study on WSN's Fault-Tolerant Topology Control Based on GA	146
<i>Xiaoli Xiao and Zhiqian Zhou</i>	
The Intelligent SMT Workshop Monitoring System Based on ZigBee Wireless Sensor Network	150
<i>Yu Fang and Li Tan</i>	
An Energy Balanced Wireless Sensor Network Hierarchical Routing Algorithm	154
<i>Kaiguo Qian</i>	
POR: A Packet-Based Opportunistic Routing Protocol for Wireless Sensor Networks	158
<i>Ziwei Liu, Chuanbo Wei, Cheng Qin, Hui Li, Xiaoguang Niu, and Lina Wang</i>	
A Novel Cooperative Spectrum Sensing Approach Against Malicious Users in Cognitive Radio Networks	163
<i>Wang Zhendong, Wang Huiqiang, Feng Guangsheng, Lv Hongwu, and Zhu Qiang</i>	
A Fast Scheduling Algorithm for Multiuser MIMO-MRC Based Cognitive Radio Networks	167
<i>Shuai Deng, Wei Chen, and Dong Tang</i>	
Ethernet Interface Design Based on 51 MCU	171
<i>Zhijian Yin and Wei Li</i>	
The Research about Digital Teaching Practice Based on Information Flow	175
<i>Li Weiyang</i>	
Energy Consumption Balance Cluster-Head Selection Algorithm for Wireless Sensor Network	179
<i>Lu Gao and Zhongmin Li</i>	
An Exploration of Network Course on Bb E-Learning Platform	183
<i>Shuping Wang, Gaoyue Rong, and Haimin Mi</i>	

Research of Intelligent Home Heterogeneous Gateway	187
<i>Weilong Zhou, Zhi Zhang, Bin Zou, and Hui Nei</i>	
A Versatile Signal Generator for 3G Mobile Communication Jamming	190
<i>Jian Xu, Ting Lin, Zeming Gan, and Zhiyin Gan</i>	
Session 3: Algorithms and Simulation	
An Algorithm for Approximating Set Cover and Its Application on Logic Circuit Optimization	194
<i>Wanggen Li, Changzi Wang, Liang Wang, and Zhenxing Hu</i>	
An Improved CAPTCHA Based on Chinese Characters	199
<i>Dinghua He</i>	
Relative Location Estimation Algorithm Based on Coordinates Inner Product Matrix-Based Maximum Likelihood	203
<i>Huan Dai, Keqing Li, and Wei Xiao</i>	
A Survey on GPU Techniques in Astronomical Data Processing	206
<i>Meng Xiao, Hui Deng, Feng Wang, and Kaifan Ji</i>	
Research on Software Protection Method Based on USBKey	210
<i>Yang An, Bo Zhao, and Yuanming Li</i>	
Application of STAMP-Based Safety Analysis on Navigation Software Development Management	214
<i>Xiaojie Xu, Deming Zhong, Minyan Lu, and Xiaohong Bao</i>	
The Computer Implementations of an Efficient Iterative Algorithm Based on the Inverse Newton Interpolation	219
<i>Daxin Zhu and Xiaodong Wang</i>	
The Topology Construction Power Control Algorithm Based on Birthday Paradox	223
<i>Zhang Qi and Han Ping</i>	
A New Algorithm of Drop Speed Measuring of Infusion Monitoring Device	229
<i>Jiang Ma, Yuqiao Wen, Jie Yin, Duoli Zhong, Kun Yang, Wei Zeng, Lingyan Du, and Kang Huang</i>	
Optimization Model and Algorithm for China Railway High-Speed Maintenance Job Work Order Scheduling	233
<i>Jinping Qi and Xianfeng Zha</i>	
The Case Analysis of Genetic Algorithm	237
<i>Jiqing Liu and Junming Chang</i>	
An Algorithm for K Vertices-Constrained Shortest Paths	241
<i>Sun Gangming and Wang Pin</i>	
Influence of Shopping Related Sharing on Chinese Consumer Decision-Making	245
<i>Min Li and Jun Zhang</i>	

Design and Realization of Submarine Cable Equipments Training Simulator	250
<i>Zipeng Wu, Xiushan Zhang, and Fu Lin</i>	
Research and Implementation of Clustering Analysis Algorithms Based on I-MINER	254
<i>Zhang Qun</i>	
Parallel Construction of Binomial-Like Independent Spanning Trees on Twisted Cubes	258
<i>Yan Wang, Jianxi Fan, Wenjun Liu, and Baolei Cheng</i>	
An Online Static Index Pruning Algorithm	262
<i>Liu Xiaofeng</i>	
A Scheduling Algorithm of Dependent Tasks on Virtual Computing Environment	266
<i>Zhang Qian, Liang Hong, and Shi Jin</i>	
Statistically Linearized State Estimation Algorithm with Correlated Noises	272
<i>Li Dan, Wang Renxiang, and Wang Wei</i>	
An Implementation of the Dynamic Auction Algorithm under Price Rigidities	277
<i>Qiang Li and Zaifu Yang</i>	
Fast Search Algorithm of Nonlinear LUT Based on K-D Tree	281
<i>Mou Wu, Kai Xie, and Guangquan Zeng</i>	
Physically Based Simulation of Fluid Movement	285
<i>Qinpei Yu, Guo Li, Luobao Shan, Ku Bo, Xiao Fei, Yuheng Fang, Yuanxiao Xi, and Zhangke Bin</i>	
Evacuation Simulation Based on 2.5D Cellular Automata: To Consider Individual Character and Following Behavior	288
<i>Junming Chang</i>	
 Session 4: Artificial Intelligence	
Prediction of Short-Term Traffic Flow Based on PSO-Optimized Chaotic BP Neural Network	292
<i>Song Li, Liu Wang, and Bo Liu</i>	
Short-Term Load Forecasting with Elman Neural Network Based on Body Amenity Indicator and Innovation	296
<i>Qian Rutao, Zhang Hao, Peng Daogang, and Zheng Kai</i>	
An Improved Mining Strategy of Preferred Paths in Web Applications Based on RBF Neural Network	300
<i>Xiang Li, Ningjiang Chen, Qiqi Xie, Shilong Dong, Lirong Zhu, and Ying Tan</i>	
Prediction of Market Demand Based on AdaBoost_BP Neural Network	305
<i>Song Li, Jing Wang, and Bo Liu</i>	
Deformable Part Model Based Crossroad Recognition for Unmanned Vehicles	309
<i>Zipeng Xiao, Tao Wu, Zhen He, and Linlin Jin</i>	
A Survey on Hand Gesture Recognition	313
<i>Lingchen Chen, Feng Wang, Hui Deng, and Kaifan Ji</i>	

Study on Automatic Recognition Technology for Exhaust Pipe Weld	317
<i>Zhi-Zhao Jiang, Jun-Qiao Xiong, Xiao-Jing Yang, and Shi-Qi Xiong</i>	
Target Recognition in Naval Battlefield Based on Principal Component Analysis and Neural Networks	321
<i>Qun Fang, Zihong Wang, and Dong Mei</i>	
Class-Nearest Neighbor Classifier for Face Recognition	325
<i>Xuansheng Wang, Zhen Chen, and Zheqi Lin</i>	
Face Recognition under Varying Illumination Based on Local Binary Patterns with Circle Threshold	329
<i>Jianqiang Xu, Xiaoping Li, and Feng Xie</i>	
L1-Graph Based Neighborhood Preserving Embedding with an Application to Face Recognition	333
<i>Jianqiang Xu, Feng Xie, and Fei Zhou</i>	
Hidden Conditional Random Fields for Face Recognition	337
<i>Huachun Yang</i>	
Face Recognition Using Hidden Conditional Random Fields and Support Vector Machine	341
<i>Huachun Yang</i>	
A Bus-Arrival Time Prediction Model Based on Historical Traffic Patterns	345
<i>Haitao Yu, Randong Xiao, Yong Du, and Zhiying He</i>	
Research on Intelligent Route Programming for DIY Travel	350
<i>Dejun Peng and Chengyi Zhang</i>	
Research on Key Techniques of Warehouse Management System Based on Two-Dimensional Bar Code	353
<i>Jun Wu, Dan Xu, and Zhenwei Li</i>	
A Fuzzy Intelligent-Integration PID Idle Control Strategy for Gas Fueled SI Engine	357
<i>Yonghua Xiong, Shichun Yang, Wenzhuang Gou, Hong Jiang, and Kun Tan</i>	
Application of ARMA Model in Ultra-short Term Prediction of Wind Power	361
<i>Jianyong Zhang and Cong Wang</i>	
Vehicle and Pedestrian Detection Using Support Vector Machine and Histogram of Oriented Gradients Features	365
<i>Zhiqian Chen, Kai Chen, and James Chen</i>	
A Conceptual Model for Flood Disaster Risk Assessment Based on Agent-Based Modeling	369
<i>Bin Linghu, Feng Chen, Xiaotian Guo, and Wenbo Li</i>	
Research of Ubiquitous Learning Evaluation Model Based on Fuzzy Comprehensive Evaluation	374
<i>Rong Li and Lingyun Yuan</i>	

A Hybrid Approach Using Maximum Entropy Model and Rules to Identify Tibetan Person Names	377
<i>Yangji Jia, Jing Jiang, and Hongzhi Yu</i>	
The Face Recognition Algorithm Based on Wavelet Stretching Transformation Pre-processing	381
<i>Tongzhou Zhao, Bin Luo, and Tingting Luo</i>	
The Composite Operator of Graded-Variable Precision Rough Sets and Its Properties	386
<i>X.Q. Tian</i>	
Research on Climb Performance and 4D Trajectory Prediction of Aircraft	390
<i>Xiaoyan Zhang and Yunxiang Han</i>	
Metric Space of LR Fuzzy Variables	394
<i>Shaowen Yao</i>	
An Automatic Tag Recommendation Algorithm for Micro-blogging Users	398
<i>Xiang Wang, Shudong Li, Xueqing Zou, Ruhua Chen, and Bin Zhou</i>	
 Session 5: Computer Applications	
Interactive Motion Recovery of Chinese Kung-Fu for Computer Games	402
<i>Haisheng Yi</i>	
Design of a Fuse-Time Testing System on STM32	406
<i>Jianping Tong and Yuehua Zou</i>	
The Research and Application of Custom Rules Constructed in Jena Intelligent Reasoning Query	410
<i>Hao Han and Yusheng Li</i>	
The Research and Implementation of the HCI System Based on Bioelectricity	414
<i>Lian Li</i>	
A Fault Detection Approach for MPSoC	418
<i>Liu Tang, Zhangqin Huang, Yibin Hou, Fengcai Fang, and Huibing Zhang</i>	
A Simulation Analysis of Facility Layout Problems in Reconfigurable Manufacturing Systems	423
<i>Long Zheng, Liying Zhu, Bo Wang, and Lihao Bai</i>	
A Research on the Fundamentality and Experimental Teaching Methods of the Course of “University Computer”	428
<i>Fengxia Li, Tian Song, and Sanyuan Zhao</i>	
Parallel Exploration of State Space with Reduced Cross Transitions Partitioning	431
<i>Eleazar Jimenez Serrano</i>	
One Method for Dynamic Reconstruction on Sparse Observation System	437
<i>Lei Yang and Guiju Li</i>	
Research on the Vehicle Stowage Problem Based on Stable Matching Theory	442
<i>Yang Yong and Huang Guang</i>	

A 3D Sketch-Based Modeling Design System with Paper-and-Pencil Interface	446
<i>Songhua Ma and Ling Tian</i>	
Hybrid Programming Based on Matlab Engine Technology	454
<i>Huan Li and Wenhua Ye</i>	
A Filter Diagonal Quasi-Newton Method with Weak Secant Equation	458
<i>Qunyan Zhou and Dan Hang</i>	
Runtime Invocation Analysis of API Objects in Large Code Base	463
<i>Majid Ali Khan, Shahabuddin Muhammad, and Tufail Muhammad</i>	
Research on Internationalization of 3D Slicer	469
<i>Luping Fang, Zhengjie Wan, Wenye Zeng, and Ping Cao</i>	
R&D for Home Sleep Apnea Syndrome Observation System	474
<i>Lu-Ping Fang, Ze-Min Meng, and Sheng-Sheng Lin</i>	
An Effective Search Results Semantic Optimization Clustering Method for XML Fragments	479
<i>Zhong Minjuan</i>	
Parallel Computing Based Bitcoin Currency System Analysis Approach	483
<i>Zhaokai Luo, Wenfeng Shen, and Luokai Hu</i>	
Identification and Check of Inconsistencies between UML Diagrams	487
<i>Xianhong Liu</i>	
Accuracy Analysis on Sub-pixel Mapping Using Normalized Fourier Descriptor	491
<i>Bitao Fu</i>	
DBIMAT: A Runtime Program Monitoring and Performance Analysis Tool Based on Dynamic Program Instrumentation Frameworks	495
<i>Huazhuang Yao, Wang Shuai, Guo Chao, and Yongyan Wang</i>	
An Effective Way to Generate Complex Instructions for Media Processors	503
<i>Xiaoming Ju, Lu Zhang, and Yong Jiang</i>	
Study of STATCOM on Reactive Power Compensation Strategy of Wind Farm	508
<i>Hui Li, Shuca Li, Hao Zhang, and Weihua Bao</i>	
Reuse-Oriented Test Case Management Framework	512
<i>Wenning Zhang and Dong Zhao</i>	
Multiple Sequence Alignment Based on Profile HMM	516
<i>Li Xu</i>	
Research of Public News Monitor Software Based on Chinese Semantic Model	519
<i>Yafu Xiao, Xiongfai Shao, Jianzhou Liu, and Yanjie Zhang</i>	
Construction and Application of Open Curriculum System Based on Streaming Media Technology	524
<i>Ye Bi</i>	

Analysis and Application of Dynamic Parsing Model for Transaction Message	527
<i>Yanhong Fan, Ye Li, and Liangui Wang</i>	
The Research of Conduction Problem Based on Extenics	531
<i>Hui Peng</i>	
The Application of Code Reuse Technology Based on the MVC Framework	534
<i>Xiaoyue Wang, Bin Xu, and Rui Gu</i>	
The Airworthiness Certification System Development Based on VB	538
<i>Si Qingmin, Zhang Yutao, Wang Ruojun, and Wang Zhi</i>	
Research of Network Support System for University Logistics Management	541
<i>Kongjun Bao and Gaofeng Shen</i>	
NC Machine Tool Compensation System Based on Computer Virtual Technology	545
<i>Dekun Yue and Yongmin Jiang</i>	
Numerical Research on the Acoustic Features of the Vocal Tract in a Horseshoe Bat, Rhinolophus Hipposideros	549
<i>Ting Li and Xin Ma</i>	
A Survey of Acceleration Techniques for SMT-Based Bounded Model Checking	554
<i>Leyuan Liu, Weiqiang Kong, Takahiro Ando, Hirokazu Yatsu, and Akira Fukuda</i>	
Time Series Prediction Model of Concrete Corrosion in Sulfuric Based on SVM	560
<i>Yang Gao and Zhigang Song</i>	
A Model of Microkernel Based on Spatial-Temporal Isolation in Haskell	564
<i>Fan Zhang and Xiaopeng Wang</i>	
Calculation of Electronical and Optical Properties of PtN	570
<i>Yi-Fei Liu, Yuan Zhao, and Ni Zhu</i>	
Application of ASTER DEM in the Investigation of Tourism Resources and Environment	573
<i>Wei Luo, Ling Mao, and Baoli Liu</i>	
The Semi-formal Meta-model of C# Blueprint Based on Class Diagram and OCL	577
<i>Luguang Liu and Jianbin Liu</i>	
Computational Model of Preference Reversal in Judgment and Choice	581
<i>Gao Feng</i>	
 Session 6: Signal Processing and Image Processing	
Modified Color Texton Histogram for Image Retrieval	585
<i>Qin-Jun Qiu, Yong Liu, Da-Wei Cai, and Jia-Zheng Tan</i>	
The Improvement of Audio Noise Reduction System Based on LMS Algorithm	590
<i>Yin Wu, Wei Zhao, and Qin Zhang</i>	
A Video Coding Scheme with Adaptive Intra-frame Selection	595
<i>Tianhao Guo and Dabo Guo</i>	

Threshold of Denoising Weak Electrical Signals in Plants from Daubechies Wavelet Transform	600
<i>Changcheng Li, Laiwu Yin, Dong Chen, and Xiaohong Tang</i>	
Adaptive Blind Detection Color Image Watermarking Algorithm Based on Transform Domain	604
<i>Dan Liu and Xiao Hong Ni</i>	
Super Resolution Image Created Automatically from Mosaics	608
<i>Leandro L. De Almeida, Francisco A. Da Silva, Maria Stela V. De Paiva, and Lúcio André De C. Jorge</i>	
The Study of Parallel Ortho-rectification Method of Line-Array Image Based on GPU	615
<i>Yuxia Yang, Zhaohua Liu, and Jingyu Yang</i>	
Feature Extraction of Human Viruses Microscopic Images Using Gray Level Co-occurrence Matrix	619
<i>Qing Liu and Xiping Liu</i>	
Evaluation of Similarity Measures and Optimization Methods for 2D/3D Rigid Registration in Image Guided Interventions	623
<i>Ran Zhang, Lei Wang, Wei Xia, and Xin Gao</i>	
A Video Annotation Method Based on Color Statistics	627
<i>Guojing Xuan</i>	
Two-Step Noise Variation Estimation Based on Image Segmentation	631
<i>Zhiming Wang</i>	
Design and Implementation of the License Plate Positioning System Based on the DSP	635
<i>Yuping Li and Hongxia Wu</i>	
The Design of Underwater Acoustic Broadband Amplifier Signal Generator and Controller Based on Virtual Instrument	639
<i>Shan Zhao, Changyu Sun, and Xinhua Chen</i>	
Medical Image Reconstruction Based on ITK and VTK	642
<i>Hui Dong, Ling Xia, Jin Zhang, and Andong Cai</i>	
Filtering Algorithm for Image with Mixed Noises Based on Vague Sets	646
<i>Bo Wei, Xiyu Wang, and Zhenxi Li</i>	
A Novel Crack Detection Algorithm for Solar Panel Surface Images	650
<i>Bo Feng, Xuanjing Shen, Jianwu Long, and Haipeng Chen</i>	
Efficient Homotopy Method for Total Variation Image Registration	655
<i>Jin Zhang, Ke Chen, and Bo Yu</i>	
Interactive Clothing Image Segmentation Based on Superpixels and Graph Cuts	659
<i>Li Weilong</i>	

Session 7: Cloud Computing

Mobile Cloud Computing: Standard Approach to Protecting and Securing of Mobile Cloud Ecosystems	663
<i>Ranbijay Kumar and S. Rajalakshmi</i>	
Dependency Design for Large Cloud Applications	670
<i>Rui Liu and Xin Sheng Mao</i>	
A Hybrid Trust Service Architecture for Cloud Computing	674
<i>Zhongxue Yang, Xiaolin Qin, Yingjie Yang, and Tarjana Yagink</i>	
The Application of Cloud Computing Technology in Distance Education Network	681
<i>Hui Peng</i>	
A Model of Cloud Computing Resources	684
<i>Youchan Zhu and Yaduan Wang</i>	
Mobile Sensor Cloud Computing: Controlling and Securing Data Processing over Smart Environment through Mobile Sensor Cloud Computing (MSCC)	687
<i>Ranbijay Kumar and S. Rajalakshmi</i>	

Session 8: Information Science

A Method of Discretization of Continuous Attributes in Knowledge Discovery	695
<i>Xuequan Tian</i>	
Research and Development of Active Knowledge Aided System in the Design of Cylinder	699
<i>Xiai Zhang, Hongfei Cui, and Jianxiong Li</i>	
Knowledge Network Platform of Collaborative Knowledge Innovation System Construction	703
<i>Dawei Xu and Cunjiang Yu</i>	
Model Analysis in Information Behavior	707
<i>Zeng Dan and Xue Shengjun</i>	
On-Line Boosting Tracking Based on Color Information and Haar-Like Features	711
<i>Lu-Feng Yao, Jian-Zhong Wang, and Yang Fan</i>	
A Survey on Intelligent Information Processing System: A Machine Ailment Diagnosing Based on KNN Similarity Degree	715
<i>Xiping Wang and Wenxue Tan</i>	
Battlefield Situational Information Discovery Based on Ontology	719
<i>Weifeng Shan, Jiwen Zhou, Hao Hu, and Peng Wang</i>	
The Research of Water Quality Information Mining Based on Pareto Law and Information Entropy	723
<i>Yuting Bai and Shimin Wang</i>	

A Method on Extracting Registry Information from Windows CE Memory Images	728
<i>Shumian Yang, Lianhai Wang, Shuhui Zhang, and Jian Liu</i>	
Permutation Conditional Mutual Information and Its Application to Epileptic EEG	733
<i>Jing Li, Xianzeng Liu, and Gaoxiang Ouyang</i>	

Session 9: Computer Architecture and Engineering

A New Load Balancing Scheduling Algorithm Based on Linux Virtual Server	737
<i>Mengna Zhang and Hongyang Yu</i>	
A Low Power Area Efficient Full Custom 3-Read 3-Write General Purpose Register in 65nm Technology	741
<i>Youzhong Li, Lijun Zhang, Qixiao Zhang, Ziou Wang, and Lingfeng Mao</i>	
Design of Pulse Electroplating Power Supply Based on High Performance Embedded Networking Technology	745
<i>Li-Chun Xu</i>	
Extension Implementation of TCM in the Embedded System Based on FPGA	749
<i>Yang An, Bo Zhao, and Hongbo Li</i>	
Design and Implementation of Programmable Sequence Controller Based on FPGA	753
<i>Juguang Li, Fan Wang, and Hua Zhang</i>	
An Application-Oriented Top-Down Scheme for FPGA-Based Embedded System Design with 3D Graphics Applications	756
<i>Yukun Liu, Liwei Guo, Jiamin Liu, Yong Yue, Carsten Maple, and M. James C. Crabbe</i>	
Multimedia Resource Sharing Based on UPnP Protocol and Embedded Device	765
<i>Kangda Hu and Dongsheng Yin</i>	
A User-Configured Low Power Optimizing Mechanism on Embedded System	769
<i>Xinlei Zhang, Lihua Song, He Sun, and Gaoshang Ye</i>	
The Design and Implementation of Virtual Machine System in Embedded SoftPLC System	775
<i>Minghui Zhang, Yanxia Lu, and Tianjiao Xia</i>	

Session 10: Database and Data Processing

OffRoadScene: An Open Database for Unstructured Road Detection Algorithms	779
<i>Erke Shang, Haiyang Zhao, Jian Li, Xiangjing An, and Tao Wu</i>	
Research on Key Technology of Three-Dimensional Laser Scanning Data Processing	784
<i>Jianyang Li and Fenqin Zhou</i>	
The Application of GML in Spatial Data Conversion	788
<i>Xueqin Yu and Tao Zhang</i>	
The Numerical Simulation of Profile Control Factors Affecting on Bei 301 Block of Hailar Oil Field	792
<i>Fei Li</i>	

Short-Term Load Forecasting with WNN Based on Body Amenity Indicator	795
<i>Wu Liang, Qian Rutao, Peng Daogang, and Zhang Hao</i>	
Numerical Computation and Analysis on the Flow Characteristics of Smoke in the Fire of High-Rise Building	799
<i>Junming Chang</i>	
Strengths and Weaknesses in Data Flow Diagrams in GIS	803
<i>Zdena Dobesova</i>	
Method of Generating Simulation Vessel Traffic Flow in the Bridge Areas Waterway	808
<i>Wuxiong Xu, Xiumin Chu, Xianqiao Chen, and Yicheng Li</i>	
A Comparison of Approaches to Legacy System Crosscutting Concerns Mining	813
<i>Tong Chen and Chengwan He</i>	
The Dissemination Model of Digital Music in Big Data Era	817
<i>Li Yang and Dan Hu</i>	
On Arbitrage System of Precious Metal Futures Market in China Based on C++	821
<i>Feng Xu and Yue Liu</i>	
An Efficient Reduction Method for Data Mining	825
<i>Lifen Hou, Yonghao Wang, and Xinyu Liu</i>	
A Data Modeling Approach for Electronic Document Based on Metamodel	829
<i>Ming Zhe and Kang Ruihua</i>	
Relaxed Unfolding for Time Petri Nets	833
<i>Franck Carlos Vélez Benito and Luis Allan Kunzle</i>	
Author Index	840