# Table of Contents

## Preface
- xxvii

## Conference Organization
- xxviii

## Program Committee
- xxix

## Reviewers
- xxxi

## Intelligent Computation

1. **A Cloud Model Based Computational Intelligence Algorithm for Parameter Identification of Chaotic Systems**
   - Junfeng Chen and Tiejun Wu

2. **A Genetic Algorithm Based on a New Fitness Function for Constrained Optimization Problem**
   - Dalian Liu, Du Jinling, and Chen Xiaohua

3. **A Genetic Algorithm Based on Duality for Linear Bilevel Programming Problems**
   - HeCheng Li

4. **A Heuristic Genetic Process Mining Algorithm**
   - Jiafei Li, Jihong OuYang, Jiafei Li, Jihong OuYang, and Mingyong Feng

5. **A Hybrid Method for Solving Global Optimization Problems**
   - Jinhua Li and Jie Liu

6. **A Hybrid Multiobjective Differential Evolution Algorithm Based on Improved \( \varepsilon \)-Dominance**
   - Ning Dong and Yuping Wang

7. **A Hybrid Simplex Multi-objective Evolutionary Algorithm Based on Preference Order Ranking**
   - Guo Xiaofang

8. **A Line-up Competition Differential Evolution Algorithm for the Generalized Assignment Problem**
   - Ma Li-Xiao, Zhao Zhan-fang, and Chen Shi-qing

9. **A New Filled Function Algorithm for Constrained Global Optimization Problems**
   - Liu Jie
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A New Improved Particle Swarm Optimization Algorithm</td>
<td>42</td>
</tr>
<tr>
<td>Yuhong Duan and Yulin Gao</td>
<td></td>
</tr>
<tr>
<td>Application of the PSO-SVM Model for Credit Scoring</td>
<td>47</td>
</tr>
<tr>
<td>Ling Yun, Qiu-yan Cao, and Hua Zhang</td>
<td></td>
</tr>
<tr>
<td>Approximate Solution of Fuzzy Sylvester Matrix Equations</td>
<td>52</td>
</tr>
<tr>
<td>Xiao-Bin Guo</td>
<td></td>
</tr>
<tr>
<td>Energy-efficient Multi-task Scheduling Based on MapReduce for Cloud Computing</td>
<td>57</td>
</tr>
<tr>
<td>Xiaoli Wang and Yuping Wang</td>
<td></td>
</tr>
<tr>
<td>Exploring Centrality-Lethality Rule from Evolution Constraint on Essential Hub and Nonessential Hub in Yeast Protein-Protein Interaction Network</td>
<td>63</td>
</tr>
<tr>
<td>Dong Yun-yuan, Yang Jun, Liu Qi-jun, Wang Yong-xian, and Wang Zheng-hua</td>
<td></td>
</tr>
<tr>
<td>Glowworm Swarm Optimization Algorithm for Solving Multi-constrained QoS Routing Problem</td>
<td>66</td>
</tr>
<tr>
<td>He Deng-xu, Zhu Hua-Zheng, and Liu Gui-qing</td>
<td></td>
</tr>
<tr>
<td>Hybrid Genetic Algorithm for TSP</td>
<td>71</td>
</tr>
<tr>
<td>Lai Nian and Zheng Jinhua</td>
<td></td>
</tr>
<tr>
<td>Improved BFO with Adaptive Chemotaxis Step for Global Optimization</td>
<td>76</td>
</tr>
<tr>
<td>Ben Niu, Hong Wang, Lijing Tan, and Li Li</td>
<td></td>
</tr>
<tr>
<td>Improved Differential Evolution Algorithm with Adaptive Mutation and Control Parameters</td>
<td>81</td>
</tr>
<tr>
<td>Li Hui-rong, Gao Yue-lin, Li Chao, and Zhao Peng-jun</td>
<td></td>
</tr>
<tr>
<td>Improvement of the MapReduce Model Based on Message Middleware Oriented Data</td>
<td>86</td>
</tr>
<tr>
<td>Ge Junwei, Xian Jiang, and Yiqiu Fang</td>
<td></td>
</tr>
<tr>
<td>Inertia Weight Particle Swarm Optimization with Boltzmann Exploration</td>
<td>90</td>
</tr>
<tr>
<td>Feng Chen, Xinxin Sun, and Dali Wei</td>
<td></td>
</tr>
<tr>
<td>MOEA/D with Uniform Design for the Multiobjective 0/1 Knapsack Problem</td>
<td>96</td>
</tr>
<tr>
<td>Yan-Yan Tan, Yong-Chang Jiao, and Xin-Kuan Wang</td>
<td></td>
</tr>
<tr>
<td>Monitoring the PSO Process Based on Fuzzy Random Variables</td>
<td>101</td>
</tr>
<tr>
<td>J.Q. Feng, C. Xu, and W.X. Xie</td>
<td></td>
</tr>
<tr>
<td>Multi-objective Optimization of Bus Dispatching Based on Improved Genetic Algorithm</td>
<td>106</td>
</tr>
<tr>
<td>Jinling Du, ChunXiao Wang, and Feng Zhang</td>
<td></td>
</tr>
<tr>
<td>New Heuristic Algorithm of RNA Secondary Structure Prediction with Pseudoknots</td>
<td>110</td>
</tr>
<tr>
<td>Zhen Dong Liu, Zhijun Zhang, Zaixue Liu, and Daming Zhu</td>
<td></td>
</tr>
<tr>
<td>Optimality Conditions for Fractional Programming with B (p, r, a) Invex Functions</td>
<td>115</td>
</tr>
<tr>
<td>Xiang You Li and Qing Xiang Zhang</td>
<td></td>
</tr>
<tr>
<td>Phylogenetic Tree of DNA Sequences Constructed by a New Method-H Curve</td>
<td>119</td>
</tr>
<tr>
<td>Wu Shulei, Chen Huandong, and Li Dachao</td>
<td></td>
</tr>
</tbody>
</table>
PSO-BP Neural Network in Reservoir Parameter Dynamic Prediction .................................................................123
   Liumei Zhang, Jianfeng Ma, Yichuan Wang, and Shaowei Pan

Research of Blocking Factor Combined with Improved Ant Colony Algorithm in VRP ........................................127
   Liang Zhenqiu

Research on Nonlinear Predictive Control Rolling Optimization Strategy Based
on SAPSO .................................................................................................................................................................131
   Zhou Bi-ying

Researching on the Growth Operator SWFZIRS of Growth Evolution Algorithms ..............................................135
   Sun Shengjie, Zhong Sheng, and Zhang Baihai

Resource Optimization for Uncertain Traffic Demand in Multi-radio Multi-channel Wireless Networks ........................................................139
   Kai Peng, Jing Xu, Wei Liu, Xiaohui Chen, and Jian Wu

Sufficient Optimality Conditions and Duality for a Minmax Fractional Problem ..................................................144
   Jihong Jia

The 0/1 Multi-objective Knapsack Problem Based on Regional Search .................................................................149
   Weiqi Chen, Zhifeng Hao, and Hailin Liu

The Overview of Feature Selection Algorithms Based Swarm Intelligence and Rough Set ..................................................154
   Sun Chengmin and Liu Dayou

Uniform Design Based Hybrid Genetic Algorithm for Multiobjective Bilevel Convex Programming ........................................................159
   Liping Jia, Yuping Wang, and Lei Fan

Intelligent Systems and Complex Systems

3G-based Remote Video Surveillance and Control System for Facility Agriculture .............................................164
   Fengdan Lao and Guanghui Teng

A Cloud Model Approach to the Modification of the Exponential Function Model for Software Reliability ........................................................168
   Ziqiang Luo, Peng Cao, Shengquan Ma, and Lihua Wu

A Comparative Study on Appending Priority Relations of Rules in BDI-Based Agent Model ........................................................171
   You Li, Yuming Lin, and Lingzhong Zhao

A Fuzzy Portfolio Model Considering Transaction Costs ....................................................................................176
   Jianhui Yang and Yuan Wang

A Human-Computer Interaction Method with Multi-Dimensional Information in the Teleoperation Augmented Reality System ........................................................180
   Gao Xin, Jia Qingxuan, Hu Huan, Sun Hanxu, and Song Jingzhou

A Model Driven Approach for Self-Healing Computing System ........................................................................185
   Lu Wei, Zhu Yan, Ma Chunyan, and Zhang Longmei
FBctlr - A Novel Approach for Storage Performance Virtualization .................................................................268
Liu Liu, Zhen Han Liu, Lu Xie, and Jun Wei Zhang

Global Prefetcher Aggressiveness Control for Chip-Multiprocessor ........................................................................273
Limin Han, Deyuan Gao, Xiaoya Fan, Liwen Shi, and Jianfeng An

Iterative Learning Control of Double Servo Valve Controlled Electro Hydraulic Servo System .................................................................278
Yu Shaojuan and Song Junjun

Lifeline: Emergency Ad Hoc Network .................................................................................................283
Se-Hang Cheong, Kai-Ip Lee, Yain-Whar Si, and Leong Hou U

Marshmallow: A Content-Based Publish-Subscribe System over Structured P2P Networks .................................................................................................290
Sheng Gao, Guohui Li, and Pei Zhao

Multi-Agents Model Analysis for the Evolution of Industrial Clusters .................................................................................................295
Yajuan Yang and Lian Ren

On Cluster Synchronization for Linearly Coupled Complex Networks .................................................................................................300
Yi Zhao, Jianwen Feng, and Jingyi Wang

Optimization of Vehicle Routing Problem Based on Max-Min Ant System with Parameter Adaptation .................................................................................................305
Xia Liu, Chao Yang, and Xia Liu

Qualitative Modeling for Parallel Software System Reliability Evaluation .................................................................................................308
Ziqiang Luo, Peng Cao, Shengquan Ma, and Lihua Wu

Real-time LOD Algorithm Based on Triangle Collapse Optimization .................................................................................................312
Jun Chen and Xiong Shi

Research of Rapid Attention-Information Extraction in Human-Robot Interaction .................................................................................................316
Gong Fei, Xie Lun, Li Nan, and Wang Zhi-Liang

Robust Stability for Uncertain Neutral Systems with Time-varying and Distributed Delays .................................................................................................321
Liang Yuan-xin

Simulation of Influence of Desired Velocity Distribution and Herd Effect on Pedestrian Evacuation .................................................................................................325
Yu Yanfei and Min Yonglin

Software Fault Prediction Framework Based on aiNet Algorithm .................................................................................................329
Qian Yin, Ruiyi Luo, and Ping Guo

Study on Friction Coefficient Mechanism Model of Tandem Cold Mill in Unstable Condition .................................................................................................334
Hao Peifeng

The Design of Fuzzy Classifier Based on Sugeno Type Fuzzy Complex-Value Integral .................................................................................................338
Sheng-quan Ma, Fu-chuan Chen, Qiang Wang, and Zhi-qing Zhao
Voice-based Local Search Using a Language Model Look-ahead Structure
for Efficient Pruning ................................................................. 343
Yao Lu, Gang Liu, Wei Chen, and Jesper Olsen

Weak-pseudo-R0 Algebras ................................................................. 348
Yong-lin Liu and Xiao-bo Cai

**Neural Networks and Neural Systems**

A Neural Network for a Class of Horizontal Linear Complementary Problems ........................................ 353
Xingbao Gao and Jing Wang

Adaptive Neural Control for a Class of Perturbed Time-delay Nonlinear Systems ........................................ 358
Ruliang Wang and Jie Li

Application of Evolutionary Neural Networks for Well-logging Recognition in Petroleum Reservoir ................................... 362
Kai Zhu, Huaguang Song, Jinzhu Gao, and Guojian Cheng

Artificial Neural System Method for Solving Nonlinear Programming with Linear Equality Constraints ................................... 367
Quan-ju Zhang

Existence and Global Attractivity of Almost Periodic Solution of Hopfield Neural Networks with Time Delays .............. 371
Yanshuang Meng

Global Synchronization of Hybrid Coupled Neural Networks with Time-varying Delay ........................................ 375
Xuefei Wu and Chen Xu

Minimal Echo State Networks for Visualisation ........................................ 381
Tzai Der Wang, Xiaochuan Wu, and Colin Fyfe

Predictions for Coal Spontaneous Combustion Stage Based on an Artificial Neural Network ............................... 386
Gaochang Zhao

Search Engine Optimization Based on Algorithm of BP Neural Networks ................................................... 390
Shuo Wang, Kaiying Xu, Yong Zhang, and Fei Li

Spares Consumption Prediction Based on BP Neural Network ........................................................................ 395
Guo Feng, Liu Chen-yu, Zhang Su-qin, and Zhou Bin

Spares Consumption Quota Model Based on BP Neural Network ................................................................. 398
Liu Chen-yu, Guo Feng, Li Yuan-lei, and Zhang Su-qin

Spatial Prediction of Dissolved Organic Carbon Using GIS and ANN Modeling in River Networks ....................... 401
Yingchun Fu, Xiantie Zeng, and Xueyu Lu

Stability Analysis of Neutral-type Fuzzy Neural Networks with Distributed Delays ........................................ 407
Shujun Long and Liping Jia

The Application of Neural Network in the Intelligent Fault Diagnosis System ........................................ 412
Ming Chang, Hongwei Chen, Yingying Wang, Yueou Ren, and Hao Kang
Learning Algorithms

A Maximal Clique Partition Method for Network Based on Granularity .................................................................416
Yan-ping Zhang, Xiao-yan Chen, Bo Hua, and Yuan Zhang

A Spam Filtering Method Based on Multi-modal Features Fusion ..........................................................421
Feng Huamin, Yang Xinghua, Liu Biao, and Jiang Chao

A Topic Partition Algorithm Based on Average Sentence Similarity for Interactive Text ..............................................427
Haiping Zhu, Yan Chen, Yang Yang, and Chao Gao

An Embedded Software Fusion Power Model Based on Algorithm and Micro-architectural Level ..............................................431
Bing Guo, Yan Shen, Xiao Bin Liu, Qi Li, Ji He Wang, and Yuan Sheng Wu

An Error Bound for Eigenvalues of Graph Laplacian with Bounded Kernel Function ..........................................436
Yong Liu and Shizhong Liao

An Improved Software Reliability Model Considering Fault Correction Rate ........................................441
Zhao Liu, Rui Zhang, Denghua Mei, and Xi Zheng

Class-Incremental Kernel Discriminative Common Vectors ..................................................................................445
Yunhui He

Dynamic Fuzzy Semisupervised Multitask Learning ...................................................................................450
Meiyin Dai and Fan Zhang Li

Feature Selection Algorithm Based on the Community Discovery ........................................................................455
Xiaoqiang Jia

Improved Word Similarity Computation for Chinese Using Sub-word Information ...............................................459
Peng Jin, John Carroll, Yunfang Wu, and Diana McCarthy

Multi-Side Multi-Instance Algorithm ........................................................................................................463
Shu Zhao, Chao Xu, Yan-ping Zhang, and Jun Ma

Probabilistic Trajectory Modeling of Flight Vehicles Based on Parameter Deviations ............................................468
Changqing Liu and Wencai Luo

Reinforcement Learning for the N-Persons Iterated Prisoners’ Dilemma ..........................................................472
J. Enrique Agudo and Colin Fyfe

Relative Local Mean Classifier with Optimized Decision Rule ........................................................................477
Guihua Wen and Lijun Jiang

Research on the Maximum Flow in Large-scale Network ..................................................................................482
Yan-ping Zhang, Bo Hua, Juan Jiang, Yuan Zhang, and Xiao-yan Chen

The Application of Graph Theory in Old Chinese Phonology Study ..................................................................487
JiaJia Hu and Ning Wang

The Estimation Algorithm of Laplacian Eigenvalues for the Tangent Bundle ..........................................................492
Mengxuan Dong and Fan Zhang Li
Time Series Forecasting Method Based on Huang Transform and BP Neural Network ........................................497
  W.Q. Zhang and C. Xu

Information Security, Computer Security and Integrity

A Digital Watermarking Algorithm Based on Wavelet Packet Transform and BP Neural Network ..........................................................503
  Qiao Baoming, Zhang Pulin, and Kang Qiao

A Markov Chain-based Availability Model of Virtual Cluster Nodes .................................................................507
  Jianhua Che, Tao Zhang, Weimin Lin, and Houwei Xi

A New Scheme for Information Hiding Based on Digital Images ..........................................................512
  Yan-ping Zhang, Juan Jiang, Chao Xu, Bo Hua, and Xiao-yan Chen

A Security Testing Approach for WSN Protocols Based on Object-oriented Attack Model ..................................................517
  Yue Qi, Qingqi Pei, Yong Zeng, Chao Yang, and Shu-po Bu

A Study on IT-security Vocabulary for Domain Document Classification ..................................................521
  Qian Liping and Wang Lidong

Achieving Distributed System Information Security ..................................................................................................................526
  Salvatore Distefano and Antonio Puliafito

An Adaptive Connectivity Data Dissemination Scheme in Vehicular Ad-hoc Networks ..................................................531
  Wang Ke, Yang Wei-dong, Liu Ji-Zhao, and Zhang Dan-tuo

Architecture for Component Library Retrieval on the Cloud ........................................................................................................536
  Ge Junwei, Tao Cong, and Fang Yiqiu

Construction of Overflow Attacks Based on Attack Element and Attack Template ..................................................540
  Ning Zhu, XingYuan Chen, and Yongfu Zhang

Distributed Storage Schemes for Controlling Data Availability in Wireless Sensor Networks ..................................................545
  Shen Yulong, Xi Ning, Pei Qingqi, Ma Jianfeng, Xu Qijian, and Wu Zuoshun

Fingerprint Composition-Feature Extraction Using Directional Filter Banks ..................................................550
  Li Chao Rong, Huang Ming Qing, and Li Jianping

Image Scrambling Based on Chaos Theory and Vigenère Cipher ........................................................................................................555
  Shanshan Li and Yinghai Zhao

Improving Privacy of Property-based Attestation without a Trusted Third Party ..................................................559
  Zhang Xing-lan and Liu Wei-wei

Information Hiding Algorithm Based on Stentiford Visual Attention Model ..................................................564
  Jie Ling, Ju Liu, Jiande Sun, Jianping Qiao, Feng Wang, and Feng Feng

Model Composition and Generating Tests for Web Applications ............................................................................................568
  Bo Song, Shengwen Gong, and Shengbo Chen

Modeling and Simulating the Propagation of Unstructured Peer-to-Peer Worms ..................................................573
  Xiang Fan, William W. Guo, and Mark Looi
Optimizing for ArtiFlow and Transform ArtiFlow to ServiceFlow ..................................................578
He Qi and Li Huifang

Orthogonal Test Algorithm on TD-SCDMA Network Optimization ........................................583
Hua Huang and Yuan Ding

Privacy Preserving Naïve Bayesian Classifier Based on Transition Probability Matrix ........588
Xing Yang, Yubao Liu, Zhan Li, and Jiajie Mo

Researches and Simulations of Information Hiding in Alamouti Transmission System ..........593
Liquan Chen, Miao Lu, and Jingbo Chen

Testing Anti-denial of Service Attacks Based on Mobile Agent .............................................598
Huimei Wang, Ming Xian, and Guoyu Wang

The AES Encryption and Decryption Realization Based on FPGA ..................................603
Luan Lan

The Implementation of Trust Model in the P2P Patch Distribution System ..........................608
Jihai Huang, Yu Su, and Min Cao

Security Methodologies and Management

A Blakley Secret Sharing Scheme without Trusted Share Distributed Center .........................612
Xue Yisheng, Wu Shulei, and Chen Huandong

A Rational Secret Sharing Scheme Based on Repeated Game .............................................615
Jie Wang and Yong-quan Cai

A Security Model for Information Systems with Multi-level Security ...................................620
Chao-Qin Gao and Chuang-Bai Xiao

A Trivariate Polynomial-based Dynamic Key Management Scheme for Wireless
Sensor Networks ..................................................................................................................625
Jianting Ning, Xinchun Yin, and Ting Yang

A Trust-based Dynamic Secure Service Discovery Model for Pervasive Computing ............630
Fang Shen, Qingqi Pei, and Shu-po Bu

AHP-GRAP Based Security Evaluation Method for MILS System within CC
Framework .........................................................................................................................635
Cheng Yameng, Shen Yulong, Ma Jianfeng, Cui Xining, and Li Yahui

Analysis and Measurement on the Electromagnetic Compromising Emanations
of Computer Keyboards ..................................................................................................640
Litao Wang and Bin Yu

Analysis of the Success Rate of the LLL Lattice Basis Reduction .......................................644
Haibo Wu and Shenghui Su

Analysis of Wireless Mesh Network Security Based on Node Function ..............................648
Shuxin Liu, Jianhua Peng, and Caixia Liu

Design and Implementation of an Electromagnetic Analysis System for Smart Cards ........653
Kun Gu, Liji Wu, Xiangyu Li, and Xiang Min Zhang
Modeling the Uncertain Data in the K-anonymity Privacy Protection Model .................................................................657
   Jiawei Wu and Guohua Liu

On the Representation and Querying of Sets of Possible Worlds in the K-anonymity Privacy Protecting Model .................................................................662
   JieYuan Li and Guohua Liu

Security Analysis of Some Recent Authentication Protocols for RFID .................................................................665
   Ben Niu, Hui Li, Xiaoyan Zhu, and Chao Lv

Network & Wireless Security

A Bilinear Pairing-Based Key Management Scheme for Wireless Sensor Networks .................................................................670
   Rongrong Jiang and Tieming Chen

A Configurable IPSec Processor for High Performance In-Line Security Network Processor .................................................................674
   Yun Niu, Liji Wu, Li Wang, Xiangmin Zhang, and Jun Xu

A Fast Handoff Method Based on RSSI and LQI in Wireless Sensor Network .................................................................679
   Zhang Miao and Li Jingying

A Survey on Methods of Automatic Protocol Reverse Engineering .................................................................685
   XiangDong Li and Li Chen

A Sybil-resilient Contribution Transaction Protocol .................................................................690
   Xu Xiang

An Automated Black-box Testing Approach for WSN Security Protocols .................................................................693
   Shirui Ji, Qingqi Pei, Yong Zeng, Chao Yang, and Shu-po Bu

An Efficient Closed-form Solution of Synchronization and Channel Estimation in UWB .................................................................698
   JiongCheng Li, Henghui Xiao, Xibin Lin, and Yanbo Zhao

An Identity-based Secure Routing Protocol in WSNs .................................................................703
   Weichang Li, Hongning Li, Min Xie, and Shupo Bu

An Interactive Charge Scheme with Reward and Non-repudiation for Wireless Mesh Network .................................................................707
   Chunling Wang and Fei Yang

Analysis of Abnormal Events in IMS and Research on the Strategy of Detection .................................................................712
   Xiaolong Xie, Xinsheng Ji, and Caixia Liu

Design of the DS-UWB Communication System Based on Chaotic Variable Spreading Factor .................................................................717
   Dong Li and Jiang Fei Bo

Energy-efficient MAC Protocol Designed for Wireless Sensor Network for IoT .................................................................721
   Jun Hu, Zeng Ma, and Chunsheng Sun

Joint Synchronization and Channel Estimation Algorithm of FH-OFDM Systems in Aviation Mobile Communications .................................................................726
   Cheng Yong-mao, Chen Wang-da, Qu Hui, and Cai Tian-yi
Key Management Protocol Based on Finely Granular Multi-level Security Method in Wireless Networks ................................................................. 731
Ya Hui Li, Wen Sheng Niu, Ya Di Zhang, Jian Feng Ma, and Yu Long Shen

Multi-jammer Localization in Wireless Sensor Networks ................................................................. 736
Tianzhen Cheng, Ping Li, and Sencun Zhu

Query-Aware Anonymization in Location-Based Service ................................................................. 741
Wei Li, Guangye Li, and Chunlei Liu

Recovering Coverage Holes by Using Mobile Sensors in Wireless Sensor Networks .................. 746
Fei Li, Shuming Xiong, and Liangmin Wang

Reliability Analysis of System-in-the-Loop Network Platform Based on Delays ....................... 750
Shen Yafen, Chen Jiaxi, Yuan Jing, and Huang Ning

Secure Data Aggregation Scheme for Clustered Wireless Sensor Networks .......................... 754
Jiang Hong Guo, Jian Feng Ma, and Xiu Qiang Wu

Stochastic Modeling File Population in P2P Network ................................................................. 759
Fang Qun, Wu Xu, and Xu Yong

The Design of Cooperative Intrusion Detection System .............................................................. 764
Zhang Guojun, Chen Liping, and Ha Weitao

The Reliable Transmission Research of the Random Data in WSN Earthen Sites Health Monitoring ................................................................. 767
Hao Chen, Dingyi Fang, Xiaojiang Chen, Feng Chen, Xiaqing Gong, and Lang Qin

Authentication and Authorization

A Design and Implement of IPS Based on Snort ........................................................................... 771
Jianrong Xi

A Novel Hash-based RFID Mutual Authentication Protocol ....................................................... 774
Li Huixian, Yin Ping, Wang Xuan, and Pang Liaojun

An Application of Justification Logic to Protocol Verification .................................................. 779
Thomas Studer

An Image Encryption and Authentication Scheme ....................................................................... 784
Jing Qiu and Ping Wang

Analysis of the Authentication Protocols Based on Game Theory - An Improvement of L.H. Nguyen Scheme ................................................................ 788
Xinghua Li, Lingjuan Deng, Yuan Zhang, Dan Yang, and Jianfeng Ma

Design of a Digital Forensics Evidence Reconstruction System for Complex and Obscure Fragmented File Carving ........................................ 793
Vrizlynn L.L. Thing, Tong-Wei Chua, and Ming-Lee Cheong

Evaluating the Effect of Loading Forensic Tools on the Volatile Memory for Digital Evidences ........................................................................ 798
Zhen Su and Lian Hai Wang
Hierarchical ID-Based Blind Signature from Lattices ................................................................. 803  
Chen Liang, Cui Yongquan, Tang Xueming, Hu Dongping, and Wan Xin

Identity-based SIP Authentication and Key Agreement ................................................................. 808  
Wu Shao Bo and Li Cheng Shu

Obtaining the Resonant Frequency of the Bubble in the Ship Wake by ANSYS ............................... 812  
Zhang Qun and Yingmin Wang

Security Authentication Scheme Based on Certificateless Signature and Fingerprint Recognition ................................................................. 817  
Zhu Yanqiong, Xu Hui, and Gao Zhan

Security Problems and Countermeasures with Commercial Banking Computer Networks .......... 821  
YunCheng Liu, Xingchun Sun, and Xiaoqin Mao

Synthesis Algorithm of Homologous Detection Based on Analytic Hierarchy Process .................. 826  
Baojing Cui, Ce Bian, Tao Guo, Yongle Hao, and Jianxin Wang

Systematical Vulnerability Detection in Browser Validation Mechanism ...................................... 831  
Zeng Chufeng and Wang Qingxian

The Analysis of Influence Factors of the Confidence Level on University Students’ Network Shopping ................................................................. 837  
Junfeng He and Hui Sun

Traitor Tracing and Revocation Mechanisms with Privacy-Preserving ...................................... 842  
Yi Ding and Lei Fan

Cryptography and Cryptanalysis

2-out-of-2 Rational Secret Sharing in Extensive Form ................................................................. 847  
Yilei Wang and Qiuliang Xu

A Construction of Balanced Odd-variable Boolean Function with Optimum Algebraic Immunity ........................................................................................................ 852  
YinDong Chen

A New Cross-realm Group Password-based Authenticated Key Exchange Protocol .................. 856  
Qing Dai, Xiufeng Zhao, Qiuliang Xu, and Han Jiang

A Novel Group Signature Scheme Based on NTRU ................................................................. 861  
Junping Yao, Zefeng Dong, and Xinshe Li

A Protocol of Privacy-Preserving Closest Pair in Two Dimensional Space .................................. 865  
Yong-long Luo, Chao Cheng, Cai-xia Chen, and Hong Zhong

A Watermarking-based Visual Cryptography Scheme with Meaningful Shares ....................... 870  
Han Yan-yan, Cheng Xiao-ni, and He Wen-cai

Accelerating Block Cryptography Algorithms in Procedure Level Speculation ....................... 874  
Yaobin Wang, Hong An, Zhiqin Liu, Kang Xu, and Wanli Dong

An ID-based (k, t, n) Threshold Group Signature Scheme ......................................................... 878  
Wei Fu and Guang-liang Liu
An Image Encryption Algorithm Based on Scrambling and Substitution Using Hybrid Chaotic Systems ................................................................. 882
   Xiang Fei and Guo Xiao-cong

An Improved Signcryption with Proxy Re-encryption and its Application ................................................................. 886
   Caifen Wang and Xiaojun Cao

An Improvement and a New Design of Algorithms for Seeking the Inverse of an NTRU Polynomial ................................................................. 891
   Na Zhao and Shenghui Su

Attack on the Cryptosystem Based on DLP ......................................................................................................................... 896
   Xiaobo Feng and Mingqiang Wang

Attribute-Based Authenticated Key Exchange Protocol with General Relations ................................................................. 900
   Hao Wang, Qiuliang Xu, Han Jiang, and Rui Li

Attribute-based Signcryption with Ciphertext-policy and Claim-predicate Mechanism ................................................................. 905
   Changji Wang and Jiasen Huang

Certificateless Broadcast Signcryption with Forward Secrecy ......................................................................................................................... 910
   Ming Luo, Chun-hua Zou, and Jianfeng Xu

Co-Z Addition Operation of Hessian Curve ......................................................................................................................... 915
   Leibo Li and Tao Zhan

Concurrent Non-malleable Statistically Hiding Commitment ......................................................................................................................... 920
   Rui Li, Qiuliang Xu, and Hao Wang

Cryptoanalysis and Improvement of Verifier-based Key Agreement Protocol in Cross-Realm Setting ......................................................................................................................... 925
   Jing-feng Li, Wei-feng Guo, Lai-shun Zhang, and Yun-peng Li

Differential Energy Watermarking Based on Macro-block Prediction ......................................................................................................................... 930
   Qian Zeng and Guorui Feng

Efficient Password-Based Authenticated Key Exchange from Lattices ......................................................................................................................... 934
   Yi Ding and Lei Fan

Elliptic Curve Isogenies to Resist Differential Side-Channel Analysis Attacks ......................................................................................................................... 939
   Keke Wu, Huiyun Li, XuCheng Yin, and Guoqing Xu

Hierarchical Identity-based Broadcast Encryption Scheme on Lattices ......................................................................................................................... 944
   Zhang Jinman and Chen Qin

K-times Proxy Re-encryption ......................................................................................................................................................... 949
   Xu An Wang, Ziqing Wang, Yi Ding, and Shujun Bai

Multi-Undeniable Signature Schemes ......................................................................................................................................................... 954
   Shen Xunxun, Xu Maozhi, and Zhao Yanhui

Novel Quantization Watermarking Based on Random Angle Modulation ......................................................................................................................... 959
   Xinshan Zhu and Shuoling Peng

Optimized Approach for Computing Multi-base Chains ......................................................................................................................................................... 964
   Xinchun Yin, Ting Yang, and Jianting Ning
Proxy Re-encryption with Keyword Search from Anonymous Conditional Proxy
Re-encryption ................................................................. 969
WeiDong Zhong, Xu An Wang, Ziqing Wang, and Yi Ding

VVCS: Verifiable Visual Cryptography Scheme ................................................................. 974
Han Yanyan, Cheng Xiaoni, Yao Dong, and He Wencai

Access Control and Protection
A Generic Scheme for the Construction of Contextual Signatures with Hash Function in Intrusion Detection ................................................................. 978
Yuxin Meng and Lam-for Kwok

A New Approach for Adaptive Intrusion Detection ................................................................. 983
Hassina Bensefia and Nacira Ghoualmi

A Security API for Multimodal Multi-biometric Continuous Authentication ................................................................. 988
Adriana Esmeraldo de Oliveira and Gustavo Henrique Matos Bezerra Motta

A Wavelet-Based Detection Approach to Traffic Anomalies ................................................................. 993
Dingde Jiang, Peng Zhang, Zhengzheng Xu, Cheng Yao, and Wenda Qin

An Access Control Mode Based on Information Flow Graph ................................................................. 998
Wang Chao, Chen Xing Yuan, and Li Na

An Enhanced Role-Based Access Control Mechanism for Hospital Information Systems ................................................................. 1001
Chen-Guang He, Cun-Zhang Cao, and Shu-Di Bao

Fast Network Traffic Anomaly Detection Based on Iteration ................................................................. 1006
Hua Jiang and Liaojun Pang

Kernel-based Behavior Analysis for Android Malware Detection ................................................................. 1011
Takamasa Isohara, Keisuke Takemori, and Ayumu Kubota

Jozsef Hegedus, Yoan Miche, Alexander Ilin, and Amaury Lendasse

Performance Analysis of the Single Pattern Matching Algorithm Based on Prefix Searching ................................................................. 1024
Wu Xi-hong

Property-Based Remote Attestation Oriented to Cloud Computing ................................................................. 1028
SiYuan Xin, Yong Zhao, and Yu Li

Research and Implementation of DPA-resistant SMS4 Block Cipher ................................................................. 1033
Xiaoyi Duan, Ronglei Hu, and Xiu Ying Li

Research of Access Control in Electronic Medical Record Based on UCON ................................................................. 1037
Ju JianGuo, Chen Weihe, and Zhan YongZhao

Research on Access Control Mechanism for Digital Products Trading ................................................................. 1041
Li Fenghua, Yu Yinyan, Li Dongdong, and Zhang Jinghui
Study on Role-Based Access Control with Time Constraint ..........................................................1046
   Zhenghong Liu, Yuhong Jia, and Tie Li Sun

Using a Dynamic K-means Algorithm to Detect Anomaly Activities ..............................................1049
   Li Han

**Pattern Recognition and Knowledge Discovery**

A New Algorithm for Auto-Exposure Based on the Analogy Histogram ........................................1053
   Zhang Haifeng, Cao Jianzhong, Tang Linao, and Wang Huawei

A Novel Subspace Discriminant Locality Preserving Projections for Face Recognition .....................1057
   Wei He, Wen-Sheng Chen, and Bin Fang

A Saliency Detection Model Based on Multi-feature Fusion .............................................................1062
   Zheng Yang, Liu Chunping, Wang Zhaohui, Ji Yi, and Gong Shengrong

A Secondary Image Denoising Model Based on the Local Energy Operator .......................................1067
   Xu Chen, Sun Xiao-li, and Li Min

Active Contours with Adaptively Normal Biased Gradient Vector Flow External Force .....................1071
   Hengbo Zhao and Li Xiong Liu

Adaptive Filter for Color Impulsive Removal Based on the HSI Color Space ...................................1076
   Shi Yan-xin and Cheng Yong-mei

An Efficient Linear Text Segmentation Algorithm Using Hierarchical Agglomerative Clustering .......1081
   Ji-Wei Wu, Judy C.R. Tseng, and Wen-Nung Tsai

Automatic Detection of Lumina in Mouse Liver Immunohistochemical Color Image
Using Support Vector Machine and Cellular Neural Network .........................................................1086
   Wang Hui, Zhou Zhi Guo, and Jie Long Mei

Automatic Parameter Determination Based on a Modified Discriminant Criterion
for Face Recognition .................................................................................................................................1091
   Taiquan Huang and Wen-Sheng Chen

Cell Nuclei Detection in Histopathological Images by Using Multi-curvature Edge Cue ..................1095
   Baochuan Pang, Long Zhou, Wu Zeng, and Xinge You

Construction of a Bilingual Cognitive Property Knowledgebase .......................................................1100
   Bin Li, Haibo Kuang, Xiaohe Chen, Xuri Tang, and Chen Chen

Contours-Matching in Building Reconstruction from a Single Image ...............................................1104
   Xin Zheng, Xiuhui Zhang, Fuqing Duan, and Wei Liu

Efficient e-Discovery Process Utilizing Combination Method of Machine Learning Algorithms ..........1109
   Tae Rim Lee, Bon Min Goo, Hun Kim, and Sang Uk Shin

Face Recognition with Statistical Local Line Binary Pattern ................................................................1114
   Zheng-Chun Sun and Jian Cheng

Face Reconstruction from Skull Based on Partial Least Squares Regression .......................................1118
   Donghua Huang, Fuqing Duan, Qingqiong Deng, Zhongke Wu, and Mingquan Zhou
Fast and Effectively Identify Pornographic Images ................................................................. 1122
   Yanjun Fu and Weiqiang Wang

Fast Iris Boundary Location Based on Window Mapping Method ................................................ 1127
   Yu Li and Zhou Xue

Image Matching Algorithm Based on Analysis of Reliability in Log-Polar Field ............................... 1131
   Yiping Xu, Jing Tan, Hongping Li, and Yan Tian

Image Quality Assessment Based on Binary Structure Information .............................................. 1136
   Chun-Hsien Chou and Yun-Hsiang Hsu

Improving the Performance of Personalized Recommendation with Ontological User Interest Model .................................................................................................................. 1141
   Su Zhenglian, Yan Jun, Chen Haisong, and Zhang Jiaojiao

Inducing Chinese Selectional Preference Based on HowNet ............................................................ 1146
   Yuxiang Jia, Hongying Zan, and Ming Fan

Knowledge Discovery Method from Abnormal Monitoring Data ................................................... 1150
   ShiSong Zhu, Liang Chen, and Shuhong Cao

Learning Local Binary Patterns with Enhanced Boosting for Face Recognition ............................ 1154
   Fanyi Xiao, YiXiong Liang, and Xiaohui Qu

Level Set Region Based Image Segmentation Using Lattice Boltzmann Method ............................... 1159
   Souleymane Balla-Arabé, Bin Wang, and Xinbo Gao

Local Reconstruction Error of L2 Norm for Discriminant Feature Extraction ................................ 1164
   Yu Hou and Caikou Chen

Multi-Level Kernel Machine for Scene Image Classification .......................................................... 1169
   Junlin Hu and Ping Guo

Multiresolution Streamline Placement for 2D Flow Fields .............................................................. 1174
   Wenyao Zhang, Manrui Zhang, and Bo Sun

Parabolic Adjustment of Image Clearness Algorithm Based on Retinex Theory ............................ 1179
   WenZhang He, Rui Liu, and Ruimin Zhao

Pedestrian Detection Based on HOG-LBP Feature ....................................................................... 1184
   Guolong Gan and Jian Cheng

Pedestrian Recognition Based on Saliency Detection and Kalman Filter Algorithm in Aerial Video .................................................................................................................. 1188
   Wang Xingbao, Liu Chunping, Liu Gong, Liu Long, and Gong Shengrong

Research and Implementation on the Digital Medical Image Enhancement Methods Based on Gradient Smooth and Context Smooth ...................................................................... 1193
   Liu Jing and Xiong Jie

Research on Improved Greedy Algorithm for Train Rescheduling .................................................. 1197
   Zhenhuan He

Saliency-based Adaptive Scaling for Image Retargeting .................................................................... 1201
   Tanchoao Zhu, Weiming Wang, Ping Liu, and Yongming Xie
Schistosoma Cercariae Image Recognition via Sparse Representation ................................................................. Shenhai Yan, Yang Liu, and Xiantong Huang 1206
Soft-Voting Classification Using Locally Linear Reconstruction ................................................................. Xiaohui Tian and Rong Wang 1211
Sparse Representation for Multi-Label Image Annotation ........................................................................... Bingxin Xu and Ping Guo 1215
Speech Feature Analysis Using Temporal Linear Embedding ...................................................................... Lifang Xue and XiusHuang Yi 1220
Streamline-based Visualization of 3D Explosion Fields ................................................................................ Yi Wang, Wenyao Zhang, and JianGuo Ning 1224
The Application of Binary Particle Swarm Algorithm in Face Recognition ............................................. Guojian Cheng, Caiyun Shi, Kai Zhu, and Kevin Gong 1229
The Iterative Regularization Method Based on Image Decomposition Model ........................................ Li Min, Xu Chen, Sun Xiaoli, and Zhang Weiqiang 1234
The Multispectral Image Edge Detection Based on Clifford Gradient ...................................................... Hui Liu, Chen Xu, and Wenming Cao 1238
Using the Callback Function Realization Touch Screen Gestures Recognition of Computer .................. Ma ShuangCheng 1243

Data Mining
A Boundary Detection Algorithm of Clusters Based on Dual Threshold Segmentation ......................... Baozhi Qiu and Shuang Wang 1246
A Combined Music Label Propagation Model ............................................................................................ Jing Cai, Heng Li, and Bo Lang 1251
A Method for New Word Extraction on Chinese Large-scale Query Logs ............................................... Rui Sun, Peng Jin, and Juan Lai 1256
A New Community Structure Detection Method Based on Structural Similarity .................................... Qi Luo 1260
A Real Time Multi-Scale Correlation Analysis Method and its Application on the Data Mining in Thermodynamic Process ................................................................. Wang Qi and Liu Xin-Ping 1263
A Simple But Effective Stream Maximal Frequent Itemset Mining Algorithm ......................................... Haifeng Li and Ning Zhang 1268
A Weighted K-hyperline Clustering Algorithm for Mixing Matrix Estimation on Bernoulli-Gaussian Sources ........................................................................................................... Jun-jie Yang and Hai-lin Liu 1273
An Empirical Study on Credit Scoring Model for Credit Card by Using Data Mining Technology ............................................................................................................. Wei Li and Jibiao Liao 1279
An Improved ID3 Based on Weighted Modified Information Gain .......................................................... 1283
   Chun Guan and Xiaoqin Zeng

Analysis on Cloud Computing-based Logistics Information Network Mode ............................................. 1286
   Xing Wang

Another View of the Features in Supervised Chinese Word Sense Disambiguation ................................. 1290
   PengYuan Liu

Application of Cloud Storage in Traffic Video Detection ....................................................................... 1294
   Ru Xue, Zong-Sheng Wu, and A-Ning Bai

Approximation Kernel 2DPCA by Mixture of Vector and Matrix Representation ................................ 1298
   Lin Wang and Xiuling Zhou

Clustering Based Image Denoising Using SURE-LET ............................................................................. 1303
   Wu Zeng, Long Zhou, Xiubao Jiang, Xinge You, and Mingming Gong

Data Mining Technique in the Internal Auditing of Enterprise Groups ............................................... 1308
   Aijun Yang and Ping Song

Data Sources of Webometrics ................................................................................................................. 1312
   Shi Longqing and Zhao Qingfeng

Measuring Semantic Relatedness between Words Using Lexical Context ............................................ 1316
   Wei He, Xiaoping Yang, and Dupei Huang

Methodology for Statistical Distribution Determination of Various Data Sources .............................. 1321
   Changqin Liu and Wencai Luo

Neural Network in the Application of EEG Signal Classification Method ........................................... 1325
   Huaping Jia

Normalizing Modularity Matrices for Data Clustering ........................................................................... 1328
   Rong Wang

Pattern Recognition with Spatial Data Mining in Web: An Infrastructure to Engineering of the Urban Cadaster ................................................................. 1331
   André Fabiano de Moraes and Lia Caetano Bastos

Promotion Analysis Based on Fitting in Multi-Level Space ................................................................... 1336
   Li Sun, Ming Zhu, and Jiyan Li

Research on Characteristics of Plates on Chinese Stock Market ......................................................... 1341
   Peng Lin and Jianhui Yang

Research on Industrial Building’s Reliability Assessment Based on Projection Pursuit Model ................ 1345
   Zhang Lei and Jie Liu

Research on Privacy-preserving in Distributed Mining Based on the Attribute Similarity .................... 1350
   Qiu Lu and Xiao-hui Cheng

Sequential Bayesian Method for Formulating Uncertainty in Sparse Data .......................................... 1354
   Changqing Liu and Wencai Luo
Similarity Matching over Uncertain Time Series .................................................................1357
Yanfei Zuo, Guohua Liu, Xiaoli Yue, Wei Wang, and Honghua Wu

Simplified Business Process Model Mining Based on Structuredness Metric .........................1362
WeiDong Zhao, Xi Liu, and Anhua Wang

Spectral Clustering and its Research Progress ....................................................................1367
Fu Chuanyi, Chen Huandong, and Xing Jieqing

SVM Combined with FCM and PSO for Fuzzy Clustering .....................................................1370
Yifang Yang, Guoqiang Chen, and Yanchun Guo

The Classification of k-anonymity Data .............................................................................1374
Lin Bingchun and Liu Guohua

The Estimation of Mixing Matrix Based on Bernoulli-Gaussian Model .................................1379
Jiechang Wen and Taowen Wang

The Finite Element Analysis of the Electromagnetic Levitation System Based on the Large Air Gap ..........................................................................................................................1384
Zhengfeng Ming and Rui Wen

The Problem about Grey Incidence Cluster Analysis ...........................................................1387
Yanping Cao and Chunmei Gong

TKNN: An Improved KNN Algorithm Based on Tree Structure ...........................................1390
Li Juan

System Analysis and Modeling

A Data Distribution Platform Based on Event-Driven Mechanism .........................................1395
Wang Wei, Tan Enmin, and Feng Bing

A General Edge Detection Method Based on the Shear Transform ........................................1400
Qiguang Miao, Pengfei Xu, Weisheng Li, and Hai Zhu

A Lower Bound for the Smarandache Function Value ........................................................1405
Guo Yanchun, Ren Ganglian, and Yang Yifang

A New Method for Interval Multiple Attribute Decision Making Based on Minimum Variance and Approach Degree .................................................................1408
Zhenhai Ai

A Novel Two-stage Analysis Method for Customer’s Requirement .......................................1413
Hai Zhu, Zengfa Dou, and Wengang Zhou

A Safety Framework and Alarming Model for Train Operation Environment Based on CPS .................................................................................................................................1418
Xinhong Hei, Lining Chang, Weigang Ma, and Guo Xie

Achievement of Proxy Cache System for Streaming Media Based on Patch Algorithm .................1422
Weitao Ha

An Implementation Method for Converting the Erhu Music from Wav to Mid .........................1425
Ziqing Nie and Shiying Yang
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis of the Impact of Polarization Mode Dispersion on Optical Fiber</td>
<td>1430</td>
</tr>
<tr>
<td>Wei Zhao</td>
<td></td>
</tr>
<tr>
<td>Analytical Models for Data Dependence Violation Checking in TLS</td>
<td>1433</td>
</tr>
<tr>
<td>Xin Lai, Cong Liu, Zhiying Wang, and Quanyou Feng</td>
<td></td>
</tr>
<tr>
<td>CFD Numerical Simulation of Exhaust Muffler</td>
<td>1438</td>
</tr>
<tr>
<td>Jun Chen and Xiong Shi</td>
<td></td>
</tr>
<tr>
<td>Closed-loop Supply Chain Network Horizontal Integration Problem</td>
<td>1442</td>
</tr>
<tr>
<td>Yang Yu-xiang and Zhou Gen-gui</td>
<td></td>
</tr>
<tr>
<td>Computer Realization of Quadratic Spline Interpolation</td>
<td>1447</td>
</tr>
<tr>
<td>Feng Tianxiang and Liu Hongxia</td>
<td></td>
</tr>
<tr>
<td>Constructing the Expandability Web Service Based Linux</td>
<td>1451</td>
</tr>
<tr>
<td>Rong Shan</td>
<td></td>
</tr>
<tr>
<td>Co-op Advertising Analysis within a Supply Chain Based on the Product Life Cycle</td>
<td>1456</td>
</tr>
<tr>
<td>Hong Zhang and Sheng Zhong</td>
<td></td>
</tr>
<tr>
<td>Correlation Factor Analysis of FEA Model Simplification Methods of Printed Circuit Board</td>
<td>1461</td>
</tr>
<tr>
<td>Zou Su, Li Chuanri, Xu Fei, and Qiao Liang</td>
<td></td>
</tr>
<tr>
<td>DBS Application to Chinese Adjectives</td>
<td>1466</td>
</tr>
<tr>
<td>Qixiang Feng, Degen Huang, Xiuying Li, and Rongpei Wang</td>
<td></td>
</tr>
<tr>
<td>Design and Implement of SerialPort Class on Upper Machine System</td>
<td>1471</td>
</tr>
<tr>
<td>Fu Chuanyi, Zhan Jinmei, and Chen Juntao</td>
<td></td>
</tr>
<tr>
<td>Design and Implementation of Bus Net Routing Algorithm</td>
<td>1474</td>
</tr>
<tr>
<td>Min Luo, Haiquan Wang, Chunhe Xia, Lihua Wang, and Ya Wang</td>
<td></td>
</tr>
<tr>
<td>Design of Instrument Control System Based on LabView</td>
<td>1479</td>
</tr>
<tr>
<td>Kang Jianhua, She Fangyi, Yang FangZheng, and Wang Tao</td>
<td></td>
</tr>
<tr>
<td>Dynamic Risk Measurement of Futures Based on Wavelet Theory</td>
<td>1484</td>
</tr>
<tr>
<td>Jianhui Yang and Peng Lin</td>
<td></td>
</tr>
<tr>
<td>Existence of Almost Periodic and Almost Automorphic Solutions for Second Order Differential Equations</td>
<td>1488</td>
</tr>
<tr>
<td>Lan Li</td>
<td></td>
</tr>
<tr>
<td>Experimental Study the Measurement of Acoustic Wave Flight Time under Strong Noise in the Boiler</td>
<td>1493</td>
</tr>
<tr>
<td>Feng Tian and Chenghui Zhang</td>
<td></td>
</tr>
<tr>
<td>Fast Verification of Memory Consistency for Chip Multi-Processor</td>
<td>1497</td>
</tr>
<tr>
<td>Zheng Lv, Hao Chen, Feng Chen, and Yi Lv</td>
<td></td>
</tr>
<tr>
<td>Finite Volume Methods for the Second Order Singular Perturbation Problems</td>
<td>1503</td>
</tr>
<tr>
<td>Chongnan He</td>
<td></td>
</tr>
</tbody>
</table>
FTA Based Runtime Evaluation of System Reliability for Autonomous Unmanned Vehicle .............................................................. 1507

Guoqi Li

Geometric Recognitions Models of Fault Characteristics in Mobile Core Network ................................................................. 1510

Sulin Pang and ShouYang Wang

Multiobjective Interaction Programming for Two-Persons ................................................................................................. 1515

Min Jiang, Zhiqing Meng, Xinseng Xu, Rui Shen, and Gengui Zhou

Multi-user Detection Method for MIMO-OFDM Uplink Transmission ........................................................................ 1520

Wang Yanli

Off-line Text-independent Writer Identification Using a Mixture of Global and Local Features ........................................... 1524

Yiu-ming Cheung and Junping Deng

Optimization Plan of Using the Arrival and Departure Track in District Station Based on Hybrid Algorithm ........................ 1528

Feng Tian, HaiYang Wang, Xiaoping Sun, Jia Liu, and Chuanyun Wang

Qualitative Analysis for a Kind of Predator-Prey Model of Holling III-Function Response with Nonlinear Density Dependent .................................................................................................................. 1532

Wei-wei Zheng, Li-gui Luo, and Lei Zhao

Relative Stability of Solution for Hua’s Macroeconomic Model .................................................................................... 1536

Jing Zhang and Jinjie Zhang

Robust Adaptive Sliding Mode Control Design for a Class of Uncertain Neutral Systems with Distributed Delays ........................................ 1539

Ruliang Wang, Dongmei Gao, and Yanbo Li

Stock Selection Based on Data Clustering Method .................................................................................................................. 1542

Ruizhong Wang

Structural Health Monitoring via Dynamic Visualization ........................................................................................................... 1546

Peng Sun and Xin Guo

The Application of the Internet of Things in Hainan Tourism Scenic Spot ........................................................................... 1549

Yuanguai Lin

The Application Study about Lucene in Document Retrieval for Office ..................................................................................... 1554

Daiwen Wu

The BSC Alarm Management System Based on Rough Set Theory in Mobile Communication ...................................................... 1557

Chao Deng and Sulin Pang

The Construction and Application of Distance and Open Experimental Platform ....................................................................... 1562

Yu Jiangfeng and Qi Youju

The Guidance and Control of Small Net-recovery UAV .................................................................................................................. 1566

Jiatong Chen and Yong Wang
The Simulation of Trajectory for Homing Depth Charge Attacking the Submarine with Different Guide Orderliness .................................................................1571
   Li Zong-ji, Cheng Shan-Zheng, and Ren Lei

The Study of Improved Marker-Controlled Watershed Crown Segmentation Algorithm ........................................1576
   Guang Deng and Zeng Yuan Li

Using Organizational Evolutionary Particle Swarm Techniques to Generate Test Cases for Combinatorial Testing .............................................................1580
   Xiaoying Pan and Hao Chen

VAR Model Analysis on Japan’s OFDI and Industrial Structural Upgrading .........................................................1584
   Ren Liang

Author Index ..................................................................................................................................................................1589