

2014 Tenth International Conference on Computational Intelligence and Security

(CIS 2014)

**Kunming, China
15-16 November 2014**



**IEEE Catalog Number: CFP1422B-POD
ISBN: 978-1-4799-7435-1**

2014 10th International Conference on Computational Intelligence and Security

CIS 2014

Table of Contents

Preface.....	xvii
Conference Organization.....	xviii
Program Committee.....	xix
Reviewers	xx

Intelligent Computation

A Global-Crowding-Distance Based Multi-objective Particle Swarm Optimization Algorithm	1
<i>Jing Zhang and Huanqin Li</i>	
A New Model for Energy Consumption Optimization under Cloud Computing and its Genetic Algorithm	7
<i>Hai Zhu, Xiaoli Wang, and Hongfeng Wang</i>	
A Two-Stage Approach for Reconstruction of Cross-Cut Shredded Text Documents	12
<i>Ya Wang and Ding-Cheng Ji</i>	
Adaptive Central Force Optimization with Variable Population Size	17
<i>Liu Jie</i>	
An Adaptive Co-evolutionary Algorithm Based on Genotypic Diversity Measure	21
<i>Mingzhao Wang, Xiaoli Wang, Yuping Wang, and Zhen Wei</i>	
An Improved MULTI-ACS Algorithm for the Waste Collection Vehicle Arc Routing Problem with Turn Constraints	25
<i>Jie Liu, Yanfeng He, and Aiping Zhang</i>	
Balance Function Analysis in Variable Weight Decision Making	30
<i>Deqing Li, Wenyi Zeng, Junhong Li, and Ping Guo</i>	
Convergence Analysis of Swarm Intelligence Based on Fuzzy Random Variables	35
<i>Feng Jiqiang, Xu Chen, and Zhang Weiqiang</i>	

Financial Time Series Forecasting Using Support Vector Machine	39
<i>Bin Gui, Xianghe Wei, Qiong Shen, Jingshan Qi, and Liqiang Guo</i>	
Improved Adaptive Median Filter	44
<i>Guo Zhengyang and Zhang Le</i>	
Improved Bacterial Foraging Optimization Algorithm with Information Communication Mechanism	47
<i>Ben Niu, Jing Liu, Ying Bi, Ting Xie, and Lijing Tan</i>	
Improving Metabolic Flux Estimation of Metabolic Networks by QPSO with Penalty Function	52
<i>Haixia Long, Shulei Wu, and Haiyan Fu</i>	
Integrating Preferred Weights with Decomposition Based Multi-objective Evolutionary Algorithm	58
<i>Zhenhua Li and Hai-Lin Liu</i>	
Mathematical Models, GRASP Algorithms and Fitness Landscape Analysis for Aircraft Gate Assignment Problem	64
<i>Yajie Pi, Xueyan Song, and Jizhou Sun</i>	
Multi-user Preferences Based Top-k Query Processing Algorithm	69
<i>Yunlong Wu, Guohua Liu, and Yuanyuan Liu</i>	
Parallel Diversity-Controlled Quantum-Behaved Particle Swarm Optimization Algorithm	74
<i>Haixia Long, Shulei Wu, and Haiyan Fu</i>	
 Learning Algorithms	
A Feedback-Based Self-Organizing Query Structure Optimization Algorithm	80
<i>Ruilin Xu</i>	
Affinity Propagation-Based Probability Neural Network Structure Optimization	85
<i>Yingjuan Xie, Xinnan Fan, and Junfeng Chen</i>	
An Exemplar-Based Hidden Markov Model with Discriminative Visual Features for Lipreading	90
<i>Xin Liu and Yiu-Ming Cheung</i>	
Asymptotical Stability Criteria for Time-Delay Static Neural Networks Subject to Stochastic Perturbations	94
<i>Huasheng Tan and Mingang Hua</i>	
Brain Storm Optimization Model Based on Uncertainty Information	99
<i>Junfeng Chen, Yingjuan Xie, and Jianjun Ni</i>	
Design and Implementation: Adaptive Active Queue Management Algorithm Based on Neural Network	104
<i>Meng Zhenwei, Qiao Junlong, and Zhang Lijun</i>	

Individual Intelligence Based Optimization and Its Application to ITAE Standard Forms	109
<i>Qiwen Yang, Shanshan Fu, Yuncan Xue, Shanna Ruan, and Junfeng Chen</i>	
Modeling Behaviors of Browsing and Buying for Alidata Discovery Using Joint Non-negative Matrix Factorization	114
<i>Bin Ju, Mincao Ye, Yuntao Qian, Rong Ni, and Chenxi Zhu</i>	
Multi-scale Monte Carlo-Based Tracking Method for Abrupt Motion	119
<i>Guanghao Zhang, Yao Lu, and Mukai Chen</i>	
The CT Image Reconstruction Algorithm Based on the Least Absolute Criterion by Alternating Direction Iterative	124
<i>Wenzhang He, Hongjian Xu, Zhengyang Guo, Jie Liang, and Lina Wang</i>	
Wireless Location on CPN Correction Environmental Factors	129
<i>Zhifeng Lin, Jiechang Wen, and Qiling Chen</i>	

Intelligent Systems and Complex Systems

A New Genetic Algorithm for Release-Time Aware Divisible-Load Scheduling	134
<i>Xiaoli Wang, Yuping Wang, and Kun Meng</i>	
Analysis of Energy Saving and Performance Characteristics of Library Computer Room Intelligent High Heat Transfer and Exchanger	139
<i>Chen Juntao, Wu Shulei, Lin Lan, and Zhan Jinmei</i>	
Design & Implementation to an RFID Based Conference Management System	143
<i>Zhihua Jiang, Zhongwei Si, and Chi Luo</i>	
Detecting Driver Use of Mobile Phone Based on In-Car Camera	148
<i>Dan Wang, Mingtao Pei, and Lan Zhu</i>	
Failure-Aware Resource Scheduling Policy for Hybrid Cloud	152
<i>Zhang Hong and Zhu Hai</i>	
Granular Computing Model Based on Quantum Computing Theory	157
<i>Jun Hu and Chun Guan</i>	
Improved Feedback Vertex Sets in Kautz Digraphs $K(d, n)$	161
<i>Xirong Xu, Chun Yin, Sijia Zhang, and Yazhen Huang</i>	
Neuron-MOS-based Dynamic Circuits for Multiple-Valued Logic	166
<i>Guoqiang Hang, Yang Yang, Danyan Zhang, and Xiaohua Li</i>	

Pattern Recognition and Knowledge Discovery

A Fast Image Stitching Algorithm Based on Improved SURF	171
<i>Lin Zhu, Ying Wang, Bo Zhao, and Xiaozheng Zhang</i>	
A Novel Tracking Method Based on Ensemble Metric Learning	176
<i>Qirun Huo and Yao Lu</i>	

A Study of Deep Belief Network Based Chinese Speech Emotion Recognition	180
<i>Bu Chen, Qian Yin, and Ping Guo</i>	
Action Recognition Using Local Joints Structure and Histograms of 3D Joints	185
<i>Yan Liang, Wanxuan Lu, Wei Liang, and Yucheng Wang</i>	
An Improved Bilinear Deep Belief Network Algorithm for Image Classification	189
<i>Niu Jie, Bu Xiongzhu, Li Zhong, and Wang Yao</i>	
An Improved Median Filter Algorithm Based on VC in Image Denoising	193
<i>Shulei Wu, Huandong Chen, Xiangxiang Xu, Haixia Long, Wenjuan Jiang, and Dong Xu</i>	
An Improved Multi-pattern Matching Algorithm for Large-Scale Pattern Sets	197
<i>Peng Zhan, Wang Yuping, and Xue Jinfeng</i>	
An Improved Remote Sensing Image Classification Based on K-Means Using HSV Color Feature	201
<i>Wu Shulei, Chen Huandong, Zhao Zhizhong, Long Haixia, and Song Chunhui</i>	
Bimodal Learning for Multi-concept Image Query	205
<i>Haijiao Xu, Peng Pan, Yansheng Lu, Chunyan Xu, and Deng Chen</i>	
Design of a Flash Digital Watermarking Application Using MATLAB GUI	210
<i>Wen-Juan Jiang, Dong Xu, Shu-Lei Wu, and Bin Meng</i>	
Detecting Circles on Ego Network Based on Structure	213
<i>Qiguang Miao, Xing Tang, Yining Quan, and Kai Deng</i>	
Domain-Specific Product Named Entity Recognition from Chinese Microblog	218
<i>Xianxiang Yang, Heyan Huang, Xin Xin, Quanchao Liu, and Xiaochi Wei</i>	
Experiments with Feature-Prior Hybrid Ensemble Method for Classification	223
<i>Junyang Zhao, Zhili Zhang, Chongzhao Han, and Lijiang Sun</i>	
Image Denoising Using Low-Rank Dictionary and Sparse Representation	228
<i>Tao Li, Weiwei Wang, Long Xu, and Xiangchu Feng</i>	
Image Up-Scaling: Based on Self Similarity and Local Information	233
<i>Xin Zheng, Chenlei Lv, Qingqing Xu, and Ping Guo</i>	
Joint Sequential Shape Classification and Piecewise Elastic Motion Estimation	238
<i>Feng Lv, Huijun Di, and Yao Lu</i>	
Multiview Face Retrieval in Surveillance Video by Active Training Sample Collection	242
<i>Xu Xiao-Ma and Pei Ming-Tao</i>	
Nonlocal Diffusion Tensor for Visual Saliency Detection	247
<i>Xiujun Zhang, Chen Xu, and Min Li</i>	
Rapid Face Detection in Static Video Using Background Subtraction	252
<i>Wencai Zou, Yao Lu, Mukai Chen, and Feng Lv</i>	

Spatio-Temporal Context for More Accurate Dense Point Trajectories Estimation	256
<i>Qingxuan Shi, Yao Lu, and Tianfei Zhou</i>	
Tracking Non-rigid Object Using Discriminative Features	260
<i>Qian Wang, Qingxuan Shi, and Xuedong Tian</i>	
Vehicle Color Recognition Based on License Plate Color	264
<i>Yanmei Dong, Mingtao Pei, and Xiameng Qin</i>	

Data Mining

A New Biclustering Algorithm for Time-Series Gene Expression Data Analysis	268
<i>Yun Xue, Zhengling Liao, Meihang Li, Jie Luo, Xiaohui Hu, Guiyin Luo, and Wen-Sheng Chen</i>	
A Parallel Algorithm for Datacleansing in Incomplete Information Systems Using MapReduce	273
<i>Fei Chen and Lin Jiang</i>	
Application of Investment Plan Selection Based on Variable Weight Synthesis and Mahalanobis Distance	278
<i>Ai Zhenghai and Si Zhongwei</i>	
Extracting Hyponymy of Ontology Concepts from Patent Documents	283
<i>Junfeng Li, Xueqiang Lv, and Kehui Liu</i>	
Identifying Relevant Messages for Social TV	288
<i>Weibo Li, Chunhong Zhang, Xiaofeng Qiu, and Yang Ji</i>	
N-gram Index Structure Study for Semantic Based Mathematical Formula	293
<i>Yuexia Xu, Wei Su, Ming Cheng, Zhiyi Qu, and Hui Li</i>	
On Modeling and Querying of Text Corpora	299
<i>Dingjia Liu, Guohua Liu, and Yuanyuan Liu</i>	
Relative Efficiency of Third-Grade General Public Hospitals in Zhejiang Province, China	304
<i>Lin Kai, Ni Rong, Shao Yan-Hua, Wu Si-Jing, and Ma Xiao-Jiao</i>	
The Automatic Classification Research to Medical Imaging Disease Based on Naïve Natesion Algorithm	308
<i>Niu Luoyong, Hong Jiaming, Huo Hongbo, He Bishi, and Xu Zhe</i>	

Optimization Theory and New Methods

A Minimum-Elimination-Escape Function Method for Multimodal Optimization Problems	312
<i>Lei Fan, Xiyang Liu, and Liping Jia</i>	

An Evolutionary Algorithm Based on a Space-Gridding Scheme for Constrained Multi-objective Optimization Problems	317
<i>Wen Li and Hecheng Li</i>	
Combining TOPSIS and Particle Swarm Optimization for a Class of Nonlinear Bilevel Programming Problems	321
<i>Liping Jia, Guocheng Zou, and Lei Fan</i>	
Dependence System and its Structure	326
<i>Xuejun Huang and Xiaobin Qu</i>	
On the Field Patterns in Elliptic-Shaped Microshield Lines Loaded with Left-Handed Materials by the Edge-Based Finite Element Method	330
<i>Hai Sun</i>	
Optimal Pricing with Yield Management in M/M/c	334
<i>Li Xin and Zhaotong Lian</i>	
Simulation Study on the Keep-Right-Except-to-Pass Rule Model Based on Cellular Automata	338
<i>Xin Yang, Linna Wang, Hongbo Zai, and Yanrong Ren</i>	
The Hilbert Boundary Value Problem for Beltrami Equation in Clifford Analysis	343
<i>Si Zhongwei, Liang Lina, Ai Zhenghai, and Jiang Zhihua</i>	
The Sufficiency of Solution for Multi-objective Semi-infinite Programming	348
<i>Xiangyou Li and Qingxiang Zhang</i>	
Variational Image Decomposition in Shearlet Smoothness Spaces	352
<i>Min Li, Xiaoli Sun, and Chen Xu</i>	

Access Control and Protection

A 6 Dimensional Chaotic Generalized Synchronization System and Design of Pseudorandom Number Generator with Application in Image Encryption	356
<i>Lequan Min, Xu Lan, Longjie Hao, and Xiuping Yang</i>	
A Chosen-Plaintext Method of CPA on SM4 Block Cipher	363
<i>Weijun Shan, Lihui Wang, Qing Li, Limin Guo, Shanshan Liu, and Zhimin Zhang</i>	
A New Sybil Attack Detection for Wireless Body Sensor Network	367
<i>Ruixia Liu and Yinglong Wang</i>	
A Trust-Role Based Context Aware Access Control Model	371
<i>Chen Lu, Zhou Qing, Huang Gao-feng, and Zhang Li-qiang</i>	
A User-Based Document Management Mechanism in Cloud	377
<i>Guozhen Shi, Mang Su, Fenghua Li, Jiapeng Lou, and Qiong Huang</i>	
Attribute-Based Keyword Search and Data Access Control in Cloud	382
<i>Jiazhi Li and Lei Zhang</i>	
Design of a Masked S-Box for SM4 Based on Composite Field	387
<i>Hao Liang, Liji Wu, Xiangmin Zhang, and Jiabin Wang</i>	

Detecting Compromised VM via Application-Aware Anomaly Detection	392
<i>Kai Luo, Shouzhong Tu, Chunhe Xia, and Dan Zhou</i>	
IP Traceback Algorithm Based on Deterministic Linear Network Coding	397
<i>Qiao Yan, Nan Lu, Tu-Wen Ning, Xi-Yan Yao, and Bao-Guang Li</i>	
Study on the Pass Rate of NIST SP800-22 Statistical Test Suite	402
<i>Dong Lihua, Zeng Yong, Ji Ligang, and Han Xucang</i>	
Wavelet-Based Noise Reduction in Power Analysis Attack	405
<i>Wei Liu, Liji Wu, Xiangmin Zhang, and An Wang</i>	

Cryptography and Cryptanalysis

A Countermeasure for DES with Both Rotating Masks and Secured S-Boxes	410
<i>Zeleng Zhuang, Jiachao Chen, and Haosheng Zhang</i>	
A Low-Cost PKC-based RFID Authentication Protocol and its Implementation	415
<i>Lili Wei, Zhaotong Luo, Qiang Qu, Qing He, and Jingwei Xu</i>	
A Method of Multiple Encryption and Sectional Encryption Protocol Reverse Engineering	420
<i>Wei Lin, Jinlong Fei, Yuefei Zhu, and Xiaolong Shi</i>	
A Random Sampling Algorithm for SVP Challenge Based on y-Sparse Representations of Short Lattice Vectors	425
<i>Dan Ding and Guizhen Zhu</i>	
A Statistical Model to Predict Success Rate of Ion Fault Injection Attacks for Cryptographic ICs	430
<i>Liang Dai, Huiyun Li, Guoqing Xu, and Liying Xiong</i>	
Algorithm-Based Countermeasures against Power Analysis Attacks for Public-Key Cryptography SM2	435
<i>Xiaowei Han, Beibei Wang, An Wang, Liji Wu, and Woogeun Rhee</i>	
An Efficient Fuzzy Identity-Based Signature Scheme without Bilinear Pairings	440
<i>Changji Wang</i>	
Application of Grover's Quantum Search Algorithm to Solve the Transcendental Logarithm Problem	445
<i>Yi Tang and Shenghui Su</i>	
Attribute-Based Encryption for Restricted Circuits from Lattices	450
<i>Zhao Jian and Gao Haiying</i>	
Hierarchical Identity-Based Encryption Scheme from Multilinear Maps	455
<i>Hao Wang, Zhihua Zheng, and Lei Wu</i>	
Insecurity of an Dynamic User Revocation and Key Refreshing for Attribute-Based Encryption Scheme	459
<i>Changji Wang, Haitao Lin, Xilei Xu, Kangjia Zheng, and Xiaonan Xia</i>	

Provably Secure Identity-Based Threshold Decryption on Access Structure	464
<i>Huawang Qin, Xiaohua Zhu, and Yuewei Dai</i>	
Quantum Algorithm for Polynomial Root Finding Problem	469
<i>Sun Guodong, Su Shenghui, and Xu Maozhi</i>	
Scalable Lightweight Authentication Protocol with Privacy Preservation	474
<i>Yanfei Liu and Sha Feng</i>	

Data Security and Integrity

A Multiple-Level DCT Based Robust DWT-SVD Watermark Method	479
<i>Xueyi Ye, Xueting Chen, Meng Deng, Shuyun Hui, and Yunlu Wang</i>	
A Reliable Supervision Model and Implementation for the Trading of Digital Works	484
<i>Guozhen Shi, Ying Shen, Fenghua Li, and Mang Su</i>	
A Wav-Audio Steganography Algorithm Based on Amplitude Modifying	489
<i>Zou Mingguang and Li Zhitang</i>	
Adaptive Chosen-Plaintext Correlation Power Analysis	494
<i>Wenjing Hu, Liji Wu, An Wang, Xinjun Xie, Zhihui Zhu, and Shun Luo</i>	
Cryptographic Algorithms Analysis Technology Research Based on Functions Signature Recognition	499
<i>Rui Chang, Liehui Jiang, Hui Shu, and Hongqi He</i>	
Diversifying Results of Top-k Querys over Bounded Regions	505
<i>Yu Zhou, Guohua Liu, and Biying Wang</i>	
Ensuring Reliability and QoS Optimizing for Web Service Composition	510
<i>Liping Chen</i>	
Hardware Design and Implementation of SM3 Hash Algorithm for Financial IC Card	514
<i>Ye Hu, Liji Wu, An Wang, and Beibei Wang</i>	
Method of Non-reference Image Quality Assessment of SSIM Based on Regional Weighted Entropy	519
<i>Zhang Tong, Zhao Shuna, and Li Xue</i>	
Mixed Obfuscation of Overlapping Instruction and Self-Modify Code Based on Hyper-Chaotic Opaque Predicates	524
<i>Xin Xie, Fenlin Liu, Bin Lu, and Fei Xiang</i>	
Stock Index Futures Basis and Liquidity of Correlation Analysis and Application Based on t-GARCH-Copula Model	529
<i>Sulin Pang and Yuanxiong Chen</i>	
Verification of Artifact Lifecycle Model	534
<i>Xiaomei Wan and Guohua Liu</i>	

Visualization of Police Intelligence Data Based on Word Clouds	539
<i>Peng Wei, Tongge Xu, Xi Qin, and Chao Wang</i>	

Information System Safety

A Developing Method for Parallel Program Based on System Generator	544
<i>Wei Han and Jianchun Xie</i>	
A Feasible Control Strategy for LQG Control Problem with Parameter and Structure Uncertainties	548
<i>Guo Xie, Dan Zhang, Xinhong Hei, and Fucai Qian</i>	
A Hybrid Task Schedule Algorithm for Real-Time System Employing Trusted Computing Technology	553
<i>Tingyu Jiang, Yahui Li, and Yuan Dong</i>	
A Modified PSO Algorithm Based on Cache Replacement Algorithm	558
<i>Mingyue Feng and Hua Pan</i>	
A Multi-users Searchable Encryption Scheme with Proxy Re-encryption	563
<i>Zhang Ya-Ling, Liu Kai, Wang Shang-Ping, and Sun Qin-Dong</i>	
A Parking Guidance Method Based on Parallel Particle Swarm Optimization Algorithm	568
<i>Bin Wang, Ying Liu, Xinhong Hei, Lei Wang, and Zhiqiang Zhang</i>	
A Rendering Algorithm for Function Call Diagram in Software Reliability Assurance	573
<i>Zhoukai Wang, Yikun Zhang, Xinhong Hei, Linjing Sun, Rui Zhou, and Ming Zhao</i>	
A Simple and Real-Time Parallel Compression of Time Series Scientific Simulation Data for Interactive and Cooperative Supercomputing	578
<i>Wenjuan Liu, Xinhong Hei, Shinji Fukuma, and Shin-Ichiro Mori</i>	
A UML Model to Simulink Model Transformation Method in the Design of Embedded Software	583
<i>Peng Guo, Yahui Li, Peng Li, Shuai Liu, and Dongya Sun</i>	
An Improved Method of Access Control Based on BLP Model in MILS	588
<i>Kaiqiang Li, Hao Feng, Yahui Li, and Zhiwei Zhang</i>	
Analysis of Distributed Consensus-Based Spectrum Sensing Algorithm in Cognitive Radio Networks	593
<i>Li Hongning, Liu Xianjun, and Xu Leilei</i>	
Information Flow Control Model and Method in Distribute MILS	598
<i>Kaiqiang Li, Hao Feng, Yahui Li, and Zhiwei Zhang</i>	
Secure Networking Protocol with Identity Protection for Cooperation of Unmanned Platforms	603
<i>Yahui Li, Wensheng Niu, Peng Li, Jianfeng Ma, and Yulong Shen</i>	

Network and Wireless Security

A New Packet Filter Schema Based on Multi-level Signature Hash and DFA Grouping	608
<i>Wang Yumeng, Wang Yuping, Xue Xingsi, Zhang Chen, and Huo Yuanliang</i>	
A Novel Key Pre-distribution Scheme in Wireless Sensor Networks	615
<i>Zhongyuan Qin, Yuying Wang, Hengkang Wang, and Jie Huang</i>	
A Wireless Sensor System for the Training of Hammer Throwers	620
<i>Ye Wang, Shaotsung Chang, Gongbing Shan, and Hua Li</i>	
Application Research on Retrospective Analysis System in Network Intrusion Detection	624
<i>Wei Wu, Nan Cheng, and Yubin Wang</i>	
Internet Security Protection in Personal Sensitive Information	628
<i>Yubin Wang, Chao Li, and Nan Cheng</i>	
Multi-sender Broadcast Authentication in Wireless Sensor Networks	633
<i>Ya Gao, Peng Zeng, and Kim-Kwang Raymond Choo</i>	
Packet Faking Attack: A Novel Attack and Detection Mechanism in OppNets	638
<i>Majeed Alajeely, Asma'a Ahmad, Robin Doss, and Vicky Mak-Hau</i>	
Selection of QoS Support on Artificial Immune Network Classifier for Dynamic Web Service Composition	643
<i>Guojun Zhang</i>	

Security Methodologies and Management

A Diploma Anti-forgery System Based on Lightweight Digital Signatures	647
<i>Yue Dai and Shenghui Su</i>	
A Key Pre-distribution Scheme Based on Multiple Key Spaces in Wireless Sensor Networks	652
<i>Yuying Wang, Zhongyuan Qin, Qunfang Zhang, Hengkang Wang, and Jie Huang</i>	
A KVM Virtual Machine Memory Forensics Method Based on VMCS	657
<i>Shuhui Zhang, Lianhai Wang, and Xiaohui Han</i>	
A Novel Identity-Based Security Scheme for Wireless Sensor Networks	662
<i>Zhongyuan Qin, Kerong Feng, Shuaiqi Hu, Lei Tao, Zunli Hu, Xinshuai Zhang, and Jie Huang</i>	
A Novel Subspace Template Attack Based on Symmetric Cross Entropy Criterion	667
<i>Fei Song, Liji Wu, An Wang, and Xinyu Zhao</i>	
A Novel Template Attack on wNAF Algorithm of ECC	671
<i>Zhenbin Zhang, Liji Wu, Zhaoli Mu, and Xiangmin Zhang</i>	

An Improved Side-Channel Attack Based on Support Vector Machine	676
<i>Zhong Zeng, Dawu Gu, Junrong Liu, and Zheng Guo</i>	
Brief Talk about the Existing Problems in Safety Management in Classification Testing and Evaluation	681
<i>Nan Cheng, Wei Wu, and Yubin Wang</i>	
Research on Ground Effect of Shipborne Flying-Wing UAV	685
<i>Jie Li, Gang Lei, Yong Xian, and Xiaoli Wang</i>	
Surveying and Analyzing Security Problems in Cloud Computing Environments	689
<i>Mouna Jouini and Latifa Ben Arfa Rabai</i>	
SymWalker: Symbolic Execution in Routines of Binary Code	694
<i>Jinxin Ma, Guowei Dong, Puhua Zhang, and Tao Guo</i>	

System Analysis and Modeling

A Bayesian Analysis of Zero-Inflated Count Data: An Application to Youth Fitness Survey	699
<i>Liyang Lu, Yingzi Fu, Peixiao Chu, and Xiaolin Zhang</i>	
A Codebook Based Background Subtraction Method for Image Defects Detection	704
<i>Lianjun Zhang, Yao Lu, Mukai Chen, and Wencai Zou</i>	
A Parallel Method for Rough Entropy Computation Using MapReduce	707
<i>Si-Yuan Jing, Jin Yang, and Kun She</i>	
A Preconditioned GMRES Method for Elliptic PDE-constrained Optimization Problems	711
<i>Cong-Yi Zhu and Yu-Mei Huang</i>	
A Study of the Design and Parameters Optimization of BP Neural Network Using Improved GEP	714
<i>Ben-Bo Zha, Ru-Liang Wang, Huan-Long Sun, and Lei Wang</i>	
An Efficient Approximation Scheme for the Multiple QoS Constraints Routing	720
<i>WeiJun Yang, Yan Yang, Xiaodong Wang, and Liang Yang</i>	
An Empirical Study on Determinants of Capital Structure in Chinese Listed Companies	724
<i>Qian Xu and Chuanguo Li</i>	
Analysis and Modeling of Learning Behaviors on Intelligent Tutoring Website	729
<i>Peng Sun, Ziyang Wu, Yunpeng Zhang, and Yang Yang</i>	
Analysis of Hybrid Feature Research Based on Extraction LPCC and MFCC	732
<i>Jianchen Zhu and Zengli Liu</i>	

Choice of Regularization Parameter in Constrained Total Variational Image Restoration Model	736
<i>Zhibin Chen, Man Wang, Youwei Wen, and Zhining Zhu</i>	
Cooperative Advertising Analysis within a Supply Chain Based on Game Theory	741
<i>Hong Zhang</i>	
Design of Detection and Control System for Diesel Injector	746
<i>Weijun Yang, Yan Yang, and Yuanfeng Chen</i>	
Hesitant Fuzzy Information Aggregation Operators under Confidence Levels	750
<i>Jianhui Yang and Chuanyang Ruan</i>	
Linear Input Method of Mathematical Formula	755
<i>Ming Cheng, Wei Su, Yuexia Xu, Zhiyi Qu, and Xuan Wang</i>	
Online Group Purchase Research Based on Commodities Trading	761
<i>Yu-Feng Zhuang and Da-Song Li</i>	
Practice and Development of Cloud Computing-Based Mobile Teaching Management and Evaluation System in Vocational Colleges	765
<i>Jing Nie</i>	
Real-Time Simulation in Dynamic Electromagnetic Scenes Using PipelineThread Pool	770
<i>Mukai Chen, Yao Lu, Guanghao Zhang, and Wencai Zou</i>	
Research and Application of a Stochastic Volatility Model with T-distribution Leveraged	775
<i>Jianhui Yang and Jie Wu</i>	
Statistical Inference of DEA Model of Environmental Efficiency Considering Undesirable Outputs	780
<i>Yukun Jian and Lin Dai</i>	
Study on Effect Evaluation of Enterprise Staff Training Based on Grey Correlation Analysis Method	785
<i>Dongyi He and Fang Luo</i>	
Triangular Factorization of Strongly Row (Column) Full Rank Linear Equations	789
<i>Liu Hongxia and Feng Tianxiang</i>	
Two-Phase SVPWM Modulation Method and Its Application in Stepper Motor	794
<i>Na Dong, Zhengfeng Ming, and Tao Wen</i>	
Ways to Train the Statistical Capacity of Grassroots Statisticians	798
<i>Feng Tianxiang</i>	
Author Index	803