

# **2010 Second International Conference on Computational Intelligence and Natural Computing**

**(CINC 2010)**

**Wuhan, China  
13 - 14 September 2010**

**Volume 1  
Pages 1 - 414**



**IEEE Catalog Number: CFP1095G-PRT**  
**ISBN: 978-1-4244-7705-0**

# 2010 Second International Conference on Computational Intelligence and Natural Computing (CINC 2010)

---

## CINC2010 Table of Contents Volume-1

<b>Message from the Conference Chair-Volume 1</b> .....	iii
<b>Organizing Committee –Volume 1</b> .....	iv
<b>Reviewers–Volume 1</b> .....	v

---

### Second International Conference on Computational Intelligence and Natural Computing (CINC2010) Volume 1

A Terminal Sliding Mode Control Based on Extended Fuzzy Disturbance Observer .....	1
<i>Guoyong Huang</i>	
A Study of Feature Determine-Based Compressed Image Retrieval .....	5
<i>Zikun Liu and Jianfeng Wang</i>	
Iterative Scheme for the System of Generalized Variational Inequalities in Non-compact Subsets of Banach Spaces .....	9
<i>Ni Renxing</i>	
The Central China Technical Innovation Research Based on Diffusion Theory.....	13
<i>Xuetao Sun, Shixiang Huang, Xiaobao Peng and Zhiyuan Wang</i>	
Application of Facies-Controlling Stochastic Modeling Technique in Heterogeneity Reservoir and its Effective Application Analysis .....	17
<i>Deng Meiyin, Ren Weiwei and Zhang Jinliang</i>	
Visible Analysis of Fluorescence Characteristics of Crude Oil .....	21
Based on Chromaticity Inversion <i>Ren Weiwei</i>	
Simulation of Emergency Evacuation in Subway Station .....	25
<i>Liu Yan, Wang Tong and Wu Zongzhi</i>	
A Fast Algorithm of Logarithm-form Fractional Lower-order Spectrums.....	29
<i>Jiang Jinlong, Zha Daifeng and Zhang Qian</i>	
Automatic EDM electrode splitting based on volume decomposition .....	33
<i>Chi Zhou and Saijun Zhang</i>	

Sliding Mode Control of PMSM Based On Robust Differentiator .....	37
<i>Chai Hua-wei</i>	
The Intelligent Logistics Management System Based on Intelligent Computing .....	41
<i>Jie Qian, Jianguo Zheng and Chaoqun Zhang</i>	
Using Revised String Edit Distance to Sign Language Video Retrieval .....	45
<i>Shilin Zhang and Bo Zhang</i>	
Leader and Follower: Agents in an Opinion Dynamics and Bounded Confidence Model on the Stochastic Movement World .....	50
<i>Shusong LI and Shiyong Zhang</i>	
Using HMM to Sign Language Video Retrieval .....	55
<i>Shilin Zhang and Bo Zhang</i>	
Research on RBFNN Sliding Mode Control and Its Application in Ship Course Control .....	60
<i>Yaozhen Han, Hairong Xiao, Weigang Pan, Changshun Wang and Fengyu Zhou</i>	
High Precision Hybrid Technique of Surface and Volume Rendering .....	64
<i>Liu Hong and Min Shuhui</i>	
Materialized view selection algorithm—CSSA_VSP .....	68
<i>Zhang Yuhang , Liu Qi and Yang Wei</i>	
Study of Diagonalization on Skew Self-conjugate Matrix in Quaternion Field .....	72
<i>Lieya Yan and Ling Xu</i>	
Differential Evolution with Neighborhood Search .....	76
<i>Yuzhen Liu and Shoufu Li</i>	
Research of DSP File System based on CF Card .....	80
<i>Juan Zhang, Hai-bing Su, Qin-zhang Wu and Juan Zhang</i>	
Interior-Point Method for Second-order Cone Programming Based on a Simple Kernel Function .....	85
<i>Li Dong and Jingyong Tang</i>	
A New Descent Algorithm with Curve Search Rule for Unconstrained Minimization .....	89
<i>Jingyong Tang and Li Dong</i>	
A New Super-memory Gradient Method for Unconstrained Optimization .....	93
<i>Jingyong Tang and Li Dong</i>	
Neural Network-based Cognitive Diagnostic Method .....	97
<i>Jiayuan Yu</i>	
A Study of College English Homework-Design under CALL .....	100
<i>Hai Quan Huang and Li Na Qian</i>	
An Improved c-k Class Estimation of the Regression Parameters in Aircraft Magnetic Interference Model .....	103
<i>Zhang Jian, Lin Chunsheng and Lin Wei</i>	
A Constraint Multi-Objective Artificial Physics Optimization Algorithm .....	107
<i>Wang Yan and Zeng Jian-chao</i>	
Test Research for Effects of the Cab Suspension System on Heavy Vehicle Ride Comfort .....	113
<i>Pang Hui, Li Hongyan, Fang Zongde, Gu Yufeng and Gao Chen</i>	
Intelligent Control Computation Method for a Class of Networked Control System .....	117
<i>Li Zhang, Tu Xuan-Yi, Feng Zhi-Fei, Zhang Peng and Zhang Ping</i>	
Fault Diagnosis of Power Electronic Based on Multi-resolution Analysis and Support Vector Machine .....	121
<i>Zhao Jian-jun, Gu Xiao-guang, Yu heng and Wangyan</i>	
Reducing vibration with advanced lubricants for refrigeration compressor .....	125
<i>Li Jie</i>	

Analysis on the wheel of abrasive belt polishing mechanism to helix curved surface .....	129
<i>Wei Jiajun, Wang Ke and Sun Xingwei</i>	
Customer Segmentation Based on Ant Clustering Algorithm .....	133
<i>Tian Yuanli and Shao Liangshan</i>	
Study on the Organization Information Security Investment Decision-Making Based on the Limited Strategy Game Theory Perspective.....	137
<i>Liu Zeshuang and Li jing</i>	
Multi-ant Colony Optimization Algorithm for the Route Optimization of Logistic Distribution .....	141
<i>Zhou fang LI and Hao Bai</i>	
The research of Multi-Core Architectures's predictor.....	145
<i>Jin Yu_ping, Sun Hai_jian and Jiao Ping</i>	
Geometrical and Pixel Based Lip Feature Fusion in Speech Synthesis System Driven by Visual-speech .....	149
<i>Wang Mengjun</i>	
Research on optimization algorithm wind quantity distribution in ventilation networks based on generic algorithm.....	154
<i>She Xiangyang and Sun Yizhen</i>	
The Influence of Achievement Goal Orientation, Self-efficacy and Task Difficulty on JOL.....	159
<i>Shuhua Su and Gongxiang Chen</i>	
A New Particle Swarm Optimization Algorithm for Solving Constraint and Mixed Variables Optimization Problem.....	163
<i>Weigang Wang and Hongmei Ni</i>	
The Study of the Rotor Dynamic Balance Technology on the Field for Cooling Fan of the Engine .....	167
<i>Li Jie</i>	
Establish a Formative Evaluation Index System of College English Teachers' Online Teaching Ability Based on AHP.....	170
<i>Niu Guixia</i>	
How to Eliminate the UWP Effect in JOLs .....	174
<i>Gongxiang Chen</i>	
Study on Energy output Characteristics Calculation method of two charges' shock wave from underwater explosion .....	178
<i>Jun-bo Hu, Qing-min Li and Zhi-hua Zhang</i>	
Study of Permeability Function Equation of Unsaturated Soil.....	182
<i>Wang Jun-mei and Liu Hai-ning</i>	
A Kind of Constrained Inferring Model in Siguo .....	186
<i>Hongming Zhang and Zhengyou Xia</i>	
Discussion on Decision-making Processing in Multi-sensor Data Fusion .....	191
<i>Liang Wei, He Jianbin, Li Xiaoming and Jing Yalai</i>	
Analyzing the Core of <i>E. coli</i> Metabolism with Flux Balance .....	195
<i>Ding De-wu and He Xiao-qing</i>	
Application of Multi-Centrality in Human Metabolism.....	198
<i>Ding De-wu and Liu Xu-dong</i>	
Tuning SVM Hyperparameters in the Primal .....	201
<i>Huang Dongyuan and Chen Xiaoyun</i>	
Application of Bi-evolution Programming to Testing Cyclotomic Polynomials .....	205
<i>Ming Zhang and Yongquan Zhou</i>	
Road Pavement Performance Evaluation Model Based on Hybrid	

Genetic Algorithm Neural Network.....	209
<i>Qian Wei-dong</i>	
Design and Implementation of Intelligent Question Answering System Based on Ontology .....	213
<i>Jin Xu and Yunqing Li</i>	
Multi-objective Particle Swarm Optimization for Land Use Structure.....	217
<i>Huang Hai</i>	
Risks Assessment for Land Consolidation Projects Based on Compensative Fuzzy Neural Network .....	221
<i>Huang Hai</i>	
Route Planning for Underwater Terrain Matching Trial based on Particle Swarm Optimization.....	226
<i>Jian Shen, Jingyuan Zhang and Heng Li</i>	
The Research on Evaluation Systems of Convergence of Informatization and Industrialization .....	230
<i>Tong Hai-wei, Lv Ting-jie and Huang Pei</i>	
Optimal Switch Placement in Distribution Networks under Different Conditions Using Improved GA .....	236
<i>Lixin Ma, Xinhui Lv, Shouzheng Wang and Hiromi Miyajima</i>	
Research on the Impact and Trend of Computer-aided for Product Design.....	240
<i>Yongxiang Liu and Jiacheng Chen</i>	
New robust stability criteria for neutral-type neural networks with multiple mixed delays .....	244
<i>Li Jin</i>	
Research on the improvement of slide projector calibration precision .....	248
<i>Zheng Li, Luo Yue jun and Liu Tao</i>	
Flow Shop Scheduling Problem using Hybrid Quantum Particle Swarm Optimization algorithm(HQPSO) .....	252
<i>Qunxian Chen</i>	
Orthogonal Particle Swarm Optimization for Multi-Objective Job Shop Scheduling Problems.....	256
<i>Mingyue Feng, Shaoxun Tang, Hua Li1, Wei Li1, Can Guo, Youchun Xu and Yongjin Zhang</i>	
Research on the Intelligently Early Warning of the Mine Safety Based on the Multi-sensor Data Fusion Technology .....	261
<i>Liu Kainan and Ning Ling</i>	
Speech Enhancement Using Bionic Wavelet Transform and Adaptive Threshold Function .....	265
<i>Yang Xi, Liu Bing-wu and Yan Fang</i>	
Application of the Self-organizing Competition Artificial Neural Network in Distribution Networks.....	269
<i>Xue Wei</i>	
Accurate Prediction of Enthalpies of Formation for C1-C16 Alkanes ; The DFT Calculation and Neural Network Approach with simple Input Descriptors .....	273
<i>Ting Gao, Hong-Zhi Li and Ying-Hua Lu</i>	
Feature Selection Method for Facial Representation Using Parzen-Window Density Estimation .....	277
<i>Heng Fui Liau and Dino Isa</i>	
Cooperative Discrete Differential Evolution Algorithms for Triangulation of Bayesian Networks .....	281
<i>Xuchu Dong, Yonggang Zhang, Dantong Ouyang, Haihong Yu and Yuxin Ye</i>	
On the case of the evolution of three vortices in BEC .....	285
<i>Yimin Tian</i>	

Hybrid Active Power Filter DC Bus Control Based on Double Fuzzy Control.....	287
<i>Dazhi Wang, Shuai Ge, Jun Li, Bo Wang, Kefeng Song, Xiaoli Liu and Yiqi Li</i>	
Wireless Sensor Network Reliability Evaluation Based on Genetic Algorithm and Coarsening Combination Evidence Reasoning .....	291
<i>Bingjie Zhao and Chaojian Shi</i>	
Study on Curriculum Resource Management Based on Ontology.....	295
<i>Juan Wang and Yunqing Li</i>	
Hierarchical Exploration Based Active Learning with Support Vector Machine .....	299
<i>Yanping Yang, Enmin Song and Guangzhi Ma</i>	
Generalized Predictive Control based on Particle Swarm Optimization for Linear/Nonlinear Process with constraints.....	303
<i>Zenghui Wang and Yanxia Sun</i>	
Research on Conversion Method of 2D-GIS to 3D-GIS of Pipeline .....	307
<i>Liu Tao, AiTingHua and ZhengLi</i>	
Applying Particle Swarm Optimization in Multiobjective Optimization and Hybrid Optimization.....	311
<i>Jian Jiao, Xianjia Wang and Liubo Zhang</i>	
Optimized LS-SVR Method applied to Vessel Traffic Flow Prediction .....	315
<i>Jinbiao Chen, Yanhua Tian and Shijun Ying</i>	
Classifying Ear Disorders Using Support Vector Machines.....	323
<i>Mahsa Moein, Mohammad Davarpanah, M. Ali Montazeri and Mehrnaz Ataei</i>	
Visibility Estimated in Foggy Road Traffic Based on Atmospheric Scattering Model .....	325
<i>Chen Xianqiao, Yan Xinping and Chu Xiumin</i>	
Identifying nuclear protein subcellular localization using feature dimension reduction method.....	329
<i>Tong Wang, Qinghua Huang and Lihua Hu</i>	
Modelling and optimization of the firing process for roller kiln using GAP-RBF neural network.....	333
<i>Liang Tang, Mingzhong Yang and Xiaoming Wang</i>	
The Detection of Long Chirp Signal With Small Frequency Rate In Low SNR .....	337
<i>Wei Yu and Liu Ying</i>	
A Multi-Agent Simulation for Intelligence Economy .....	340
<i>Huang Yue</i>	
Research on the Prediction of Reduction Ratio for Pore Closure in Heavy Forging Stock Based on Particle Swarm Optimization and Support Vector Machine .....	345
<i>Mei Yi and Chen Wei</i>	
Feature Extraction Method Based PCA and KICA.....	349
<i>Sheng-jie Liang, Zhi-hua Zhang and Li-lin Cui</i>	
A Burst Change Detection Algorithm for Data Streams .....	353
<i>Yang Xian-fei, Zhang Jian-pei, Yang Jing and Li Xiang</i>	
A Novel Generic Framework of Event Detection in Unmanned Aerial Videos .....	357
<i>Yulong Tian, Jianjiang Lu, Yang Li and Jiabao Wang</i>	
Discover the causes of road hazards in blowing and drifting snow climate and design highway embankment cross section .....	361
<i>He Yang and Zhou Ying</i>	
Case Retrieval Strategies of Tabu-based Artificial Fish Swarm Algorithm.....	365
<i>longqin xu and shuangyin liu</i>	
Existence and Local Behavior of General Cubic Hermite- Pad'e Approximation.....	370
<i>Li Jin</i>	
Improved BP Neural Network-Based Back Analysis of Displacements .....	374
<i>Zhang guihua, Ma xianmin and Chaijing</i>	
A Petri Net-Based Failure Handling Model for Composition transactions .....	378
<i>Xiaoyong Mei, Yiyang Fan, Yonglin Wang and Xia Fang</i>	
Online Querying Relational Data Based on Closure.....	382
<i>Miao Zhuang, Li Jie, Wang Jinpeng and Zhou Bo</i>	
Computing All Longest Common Subsequences on MPI Cluster .....	386

<i>Jinxian Lin</i>	
A New Image Fusion Algorithm Based on Second Generation Wavelet Transform.....	390
<i>Zhang Bin, Zheng Yong-guo, Fang Wei and Cui Li-min</i>	
Performance analysis of spread spectrum communication system in fading environment and Interference.....	394
<i>Xiaoping Tian, Sishijiu Dong and Yu Han</i>	
Statistical analysis of Rician and Nakagami-m fading channel using Multipath Shape Factors .....	398
<i>Hai-ying Shang, Yu Han and Ji-hua Lu</i>	
Wind Turbine Simulation of Offshore Environmental Conditions .....	402
<i>Dazhi Wang, Huaming Wang, Yupeng Shi, Jun Li, Keling Song, Shengli Liu and Yiqi Li</i>	
A New Approach for Calculation of Minimum Miscibility Pressure Based on a Multiple-Mixing-Cell Model.....	406
<i>Li Jungang</i>	
Author index.....	410

# 2010 Second International Conference on Computational Intelligence and Natural Computing (CINC 2010)

## CINC2010 Table of Contents Volume-2

<b>Message from the Conference Chair-Volume 2</b> .....	iii
<b>Organizing Committee –Volume 2</b> .....	iv
<b>Reviewers–Volume 2</b> .....	v

### Second International Conference on Computational Intelligence and Natural Computing (CINC2010) Volume 2

Study on Prediction Method of Minimum Miscibility Pressure in Gas Displacement.....	1
<i>Li Jungang</i>	
A Study on College Students' Capacity for Autonomous Learning in English Based on AHP .....	5
<i>Niu Guixia</i>	
A New Evidence Fusion Approach for Decision of Proactive Service .....	9
<i>De-gan Zhang , Chao Li, Wei-wei Li and Xu-yan Chen</i>	
A seventh-order convergent Newton-type method for solving nonlinear equations .....	13
<i>Yunhong Hu and Liang Fang</i>	
Two new three-step predictor-corrector methods with fifth-order convergence for solving nonlinear equations.....	16
<i>Yunhong Hu, Liang Fang and Guoping He</i>	
Multi-document Relationship Model for a same Subject and Its Application in Automatic Summarization .....	20
<i>Bai Hao and Zhou De-xiang</i>	
A K-CLIMAX NEIGHBORS POLICY BASED VITERBI DECODING FOR LARGE VOCABULARY MANDARIN SPEECH RECOGNITION .....	24
<i>Pei Zhao and Xihong Wu</i>	
Path Planning for Reconnaissance UAV Based on Particle Swarm Optimization .....	28
<i>Yong Bao, Xiaowei Fu and Xiaoguang Gao</i>	
The Hierarchical SVDDBNs Based on Modularization Concept for Air Target Recognition .....	33
<i>Hao Fan, Xiaoguang Gao and Haiyang Chen</i>	
Dynamic Nonlinear Transformation Algorithm in LED Display Panel .....	39
<i>Feng Chang, Xi-feng Zheng, Rui-guang Wang and Tie-fu Ding</i>	
The Application of Hierarchical Clustering Analysis Technique in Reservoir for Flow Unit Study .....	43



<i>Jinliang Zhang and Li Ming</i>	
A new method to confirm the economic and reasonable stripping ratio of surface coal mine .....	47
<i>Song Ziling, TongWei, and Ma Yundong</i>	
Stretching Fund Family and Manager Reputation: Evidence from China .....	53
<i>Xiaomei Li and Zhixin Liu</i>	
Ontology Management in Cloud Computing.....	57
<i>Yu Wei and Chen Junpeng</i>	
Bootstrap Loader Design of Aerospace Payload Controller Based on TSC695F .....	60
<i>Wei Xu and Yongjie Piao</i>	
Research on Semantic Information Resource Catalog.....	65
<i>Zhenxin Qu</i>	
Research on Fuzzy On-ramp Metering and Simulation in Urban Expressway based on Matlab Toolbox .....	69
<i>Xuewen Chen</i>	
Features Extraction in Spatial Hearing Based on Nonlinear Manifold Learning Algorithm .....	73
<i>Guo-wen Ye and Xin-hong Zhang</i>	
Research on Multimedia Teaching Based on AHP.....	77
<i>Yi Jiangang</i>	
Simulation and Analysis of Heavy Rail Residual Stress with Multi-Roller Straightening.....	81
<i>Yi Jiangang, Dan Binbin and He Yiwen</i>	
The Numerical Simulation of Petroleum-Coke Coal Water Slurry Gasification Process in a New-type Coal Water Slurry Gasifier .....	85
<i>Yu Hai-long, Dong Xiang-yuan, Guo Shu-qing, Zhang Gui-fang and Liu Jian-zhong</i>	
FQRR: A Fuzzy Query and Results Ranking System for Relational Databases .....	89
<i>Xiangfu Meng, Yanfei Peng and Wei Yan</i>	
Research on Ecological Security Prediction in Mountain Areas Based on the Artificial Neural Network—Taken western mountain areas in Shijiazhuang District for example .....	93
<i>Liang Yan-qing, Huang Zhi-ying, Ge Jing-feng, Jia Qiang, Chen Jing and Fan Yu-zhong</i>	
Review of Studies on Online Consumer Trust .....	97
<i>Haiping Wang</i>	
Research on Active Learning based Computer Viruses Detection Approaches .....	101
<i>Ou Qingyu and Zhou Dawei</i>	
Spatial Clustering Algorithm with Obstacles Constraints by Quantum Particle Swarm Optimization and K-Medoids .....	105
<i>Yang Teng-Fei and Zhang Xue-Ping</i>	
The Relationship Between Soil Nutrient Properties and Remote Sensing Indices in the Phaeozem region of Northeast China .....	109
<i>Qiang Ma, Wantai Yu and Hua Zhou</i>	
The Realization of DNS Anomaly Detection Based On Combination of Two Methods of Similarity And Entropy.....	113
<i>Zhenqi Wang and Miaojie Zhang</i>	
A Hidden Markov Model of Library Users Classification.....	117
<i>Su Qiong</i>	
Computer-Mediated Communication in Education.....	121
<i>Sun Lin, Huang Hui, Wang Wenbo and Liu Hao</i>	
Based on Improved RBF Neural Network for Chaotic Time Series Prediction.....	124
<i>Li-Xin Yang</i>	
A New K-NN Query Algorithm Based on Grid Clustering of the Neighbor Objects.....	128

<i>Guobin Li and Jine Tang</i>	
L2-L $\infty$ Filter Design for a class of Neutral Systems with Interval Time-Varying Delay.....	132
<i>Zhijin Li, De-an Zhao and Wu Xia</i>	
“Flower Basin Effect” and Autonomous Foreign Language Learning with the Aid of Network and Multimedia. ....	137
<i>Zhang Chun and Fan Xiyong</i>	
Research on Image Content Retrieval with Color Features.....	141
<i>Chen Xianqiao, Yan Xinping and Chu Xiumin</i>	
Performance Research of Synergic Electric System on HEV.....	145
<i>Guo Jun, Wang Qingnian, Yu Yuanbin and Cao Guoqiang</i>	
Implementation of Encrypted Data for Outsourced Database .....	150
<i>Zheng-Fei Wang and Ai-Guo Tang</i>	
The Principle Analysis of Light Ray Optimization Algorithm.....	154
<i>Jihong Shen and Jialian Li</i>	
Analyzing and Designing the Cognitive Architecture for Wireless Ad Hoc Networks .....	158
<i>Jingyi Zhang, Jun Liu and Wei Guo</i>	
An UWB Cognitive Radio System Based on Bridge Function Sequence Matrix and PSWF Pulse Waveform .....	162
<i>Jinshan Di, Sheng Hong, Qishan Zhang, Ying Li and Hongsheng Zhao</i>	
Lattice of fuzzy congruences on completely 0-simple semigroups .....	166
<i>Jian Tang and Xiang-Yun Xie</i>	
A Detection System for Swing Angle of Dynamic Torque Loader Magnetic Yoke.....	170
<i>Xiang-chun Han, Ru-shi Li and Wen-pu Bai</i>	
Computer aided optimum design of friction materials using uniform design .....	174
<i>Hua Fu, Li Fu, Guang-Lei Zhang and Ai-ping Liu</i>	
An Improved PCNN Model and a New Removing Algorithm of Salt and Pepper Noise.....	178
<i>Yan Wu, Bing Xu and Xiao-Yue Bian</i>	
Prediction of the Crystal’s Growth Rate Based on BPNN and Rough Sets.....	183
<i>Xingbo Sun and Xiuhua Tang</i>	
The impact of technological M&As on innovative performance of listed companies.....	187
<i>Chengyu Wen and Zhixin Liu</i>	
Soil Inorganic Phosphorus Fractions under Different Modes of Fertilization.....	191
<i>Hua Zhou, Wan-tai Yu, Qiang Ma and Huai-xiang Ding</i>	
Data Matrix Code reconstruction from the image acquired by the Multilayered Waveguide Optical Card.....	194
<i>Minfen Gu, Zhongcheng Liang and Qingyu Ma</i>	
Application of Keywords Speech Recognition in Agricultural Voice Information System .....	197
<i>Wenhao Ou, Wanlin Gao, Zhen Li, Shuliang Zhang and Qing Wang</i>	
Design and Implementation of MMS System based on GPRS Modem .....	201
<i>Jingping Yi, Wanlin Gao, Shuliang Zhang, Ganghong Zhang and Jinyu Zang</i>	
Design of Hierarchical and Configurable IVR System.....	205
<i>Shanchuan Xu, Wanlin Gao, Zhen Li, Shuliang Zhang and Jianing Zhao</i>	
A New Direct-sequence UWB Transceiver Based on Bridge Function Sequence .....	209
<i>Sheng Hong, Member, IEEE, Kefei Liu, Ying Li**, Hang Zou, Yunping Qi* and Kan Hong</i>	
Technique of Upstream Signal Detection in TWACS.....	213
<i>Wenbing Lu, Xiaowei Bi, Pengfei Li and Bin Hu</i>	
Evolutionary Design of ANN Structure Using Genetic Algorithm.....	219
<i>N. Moharamzade and F. Farokhi</i>	
Production Transportation Scheduling for Process Industry.....	225
<i>Xiaoqiang Zhao and Yan Wan</i>	

Solving Multi-class Traffic Assignment Problem with Genetic Algorithm .....	229
<i>Guoqiang Zhang and Jun Chen</i>	
An Interface Agent Based on Reflective Infrastructure for Workflow System.....	233
<i>Liu Yue hua and Fang Jun</i>	
Research on Aerodynamic Characteristics of Steel wheel .....	237
<i>Guohua Wang, Qing Gao, Yan Liu and Zhehao Xuan</i>	
Infrared Target Detection Based on Fuzzy ART Neural Network .....	240
<i>Bingwen Chen, Wenwei Wang and Qianqing Qin</i>	
Calculation of the Electrical Parameters for Asynchronous Motors Under the Periodically Variable Running Condition .....	244
<i>Yan Ying, Luo YingLi, Lu WenBin and Hu Bin</i>	
Nonlinear Decoding for Precoded Spatial Multiplexing MIMO OFDM Systems with Limited Feedback .....	249
<i>Hongliang Fu, Yong Tao, Tiejun Yang and Yuan Zhang</i>	
MGA-ACO Based Control System for the Large-scale Solid Garage.....	253
<i>Shu-ping Cai, Chuan-shun Dong and Guo-hai Liu</i>	
Color Difference Detection Based on BP Neural Network.....	258
<i>Yinghua Shen, Chaohui Lü, Pin Xu and Yu Yang</i>	
Noisy Speech Recognition Based on Modified RBF Network.....	262
<i>Xia Wang, Jian Tian and Xiaoqun Zhao</i>	
Contour Recognition Based on Associative Memory .....	266
<i>Qian Lin, Feng Zhang and Peng Cai</i>	
An Asect of Computer Theory-Semigroup.....	270
<i>Haijun Cao</i>	
The Research In Public Transit Scheduling Based On The Improved Genetic Simulated Annealing Algorithm.....	273
<i>Zhu Chang-sheng, Huang Hong-yong, Wang Qing-rong and Yuan Yuan</i>	
Computational pricing for a special type of reset option with proportional transaction costs .....	277
<i>Jiangan Shen, Le Ding, Zhe Chen and Shenghong Li</i>	
Comprehensive Evaluation of Forest Industries Based on Rough Sets and Artificial Neural Network .....	281
<i>Xuechun Yang, Xiangnan Zhang and Qixing Wu</i>	
A cognitive learning model in classroom interaction .....	285
<i>Cui Guangzuo</i>	
Strip Thickness Control Based on Optimal Fuzzy-PID Controller.....	289
<i>Ren Shirong, Zhanglei, Liyuan and Sun Yingguang</i>	
A Design of CAN-bus Based Collector for Automatic Meter Reading System.....	293
<i>Jiang Jun, Fan Liangzhong and Zhang Fuan</i>	
Design of Sewage Flow Remote Monitoring System Over GPRS Network .....	296
<i>Yanmin Ning, Dean Zhao, Jiajun Guan and Shichang Gong</i>	
A Practical Technology of Combining Genetic Programming with Artificial Intelligence.....	300
<i>Wang Zhen-chao and Du Pei</i>	
An Extension of SHOIQ(D)+Datalog for Fuzzy Knowledge Representation and Reasoning .....	304
<i>Song Ding and Sheng-Qun Tang</i>	
MVP algorithm based Prediction method for virulent proteins in bacterial pathogens.....	308
<i>Tong Wang, Tian Xia and Qinghua Huang</i>	
Short-term Traffic Flow Prediction with Nearest Trajectory Segments .....	312
<i>Li Zhi-tao, He Zhao-cheng and Zhao Jian-ming</i>	
Electric Field Calculation and Optimization of Ultra-High Voltage Transformer Equipotential Shielding.....	316

<i>Dianli Lv, Youhua Wang, Tingyan Han, Huijuan Zhang, Lingling Pang and Weili Yan</i>	
Comparison of SC-FDMA and NC-OFDM Schemes for Cognitive Radio Networks .....	320
<i>Haizhou Gao</i>	
Study on Hardware-in-the-loop-simulation of Wind Power Based on dSPACE.....	325
<i>Hai-Hui Song and De Tian</i>	
Convergence of Modified Conjugate Gradient Methods Without Line Search.....	328
<i>Bo Zhang</i>	
A trust model based on fuzzy set in peer-to-peer network .....	332
<i>Zhu Chang-sheng, Gao Ying-ying, Wang Qing-rong and Qian Lei</i>	
Acousto-optic modulation communication model and auxiliary measurement systems .....	336
<i>Zhu yifeng and Shi lei</i>	
Low Carbon Economy and Innovative Management .....	340
<i>Liu XiFa</i>	
Study on Government Knowledge Management Level Evaluation based on Comprehensive Index System .....	344
<i>Zhu Xianyou</i>	
Fatigue Life Analysis of a Special Vehicle Frame Based on Random Vibration.....	348
<i>Fan Qin-man, Wu Yong-hai and Luan Kun</i>	
Topology Optimization Design of the Bracket of a Special Vehicle Based on FEA Method.....	352
<i>Wu Yong-hai, Liu Xiao-mei and Wang Feng</i>	
Research on the Data Mining Technology of the E-Commerce Based on the Interest .....	356
<i>Liu Kainan<sup>1</sup>, Zhang Fengyan<sup>2</sup>, Pan wumin<sup>2</sup></i>	
Fuzzy Assessment Method of Professional Skill Based on Feedback Amendment .....	360
<i>Xu Qinghua, Li Tao, Sun Chuan and Ding Wanjing</i>	
Hidden Markov Models in bearing fault diagnosis and prognosis .....	364
<i>Zhang xing-hui and Kang jian-she</i>	
Research on the Digital Coupon of Mobile Two-dimensional Code Based on RSA Digital Signature .....	368
<i>Haoyu Meng and Dejia Zhang</i>	
Author index .....	372