Session 1. Agent and Intelligent Computing

A GA-Based Feature Extraction and Its Application ................................................................. 3
  Yu Zhefu, Lu Huibiao, and Jia Chuanying

A Service-oriented Component Composition Approach Based on Ant Colony Algorithm ................................................................. 6
  Ling Daoming and Zhou Xiangbing

An Improved Scheduling Algorithm for Grid Tasks ................................................................. 9
  Li Wenzheng and Zhang Wenyue

ESB Infrastructure's Autonomous Mechanism of SOA .............................................................. 13
  Rui Wen, Yaping Ma, and Xiaoqing Chen

A New Methodology for the Exploration of Online Algorithms .............................................. 18
  Yonghong Huang and Jihong Zhan

GA and RBF Based Real-Time FDD for Refrigeration Units ................................................... 22
  Yonghong Huang and Jihong Zhan

ARTMAP-Based Data Mining Approach and Its Application to Library Book Recommendation .................................................................................... 26
  Xuejun Yang, Hongchun Zeng, and Yonghong Huang

Studying Model Checking and Local-Area Networks ............................................................. 30
  Xuejun Yang, Hongchun Zeng, and Yonghong Huang

An Improved Clonal Selection Algorithm for Job Shop Scheduling ....................................... 34
  Hong Lu and Jing Yang

License Plate Recognition Algorithm Based on Radial Basis Function Neural Networks ................................................................. 38
  Weihua Wang
A Perimeter-Based Noise Filter Algorithm for Vehicle Recognition ..................................................42
Weihua Wang

The Approach of Real-time Monitoring Based on Background Subtraction ........................................46
Weihua Wang

The Research and Implementation of the Full Text Endorsement and Traces Reservation Technology on B/S Mode ..................................................................................................................50
Zhu Ai-hong, He Hai-yan, and Lu Guo

Research and Realization of a Centralized Document Management Model Based on ASP.NET ...................................................................................................................................................54
Zhu Ai-hong and He Hai-yan

Application of Support Vector Machine to Capital Flow Risks Prediction ........................................57
Xiping Wang

Classification of Motor Imagery EEG Signals Based on Energy Entropy ...........................................61
Dan Xiao, Zhengdong Mu, and Jianfeng Hu

Research and Application of Interval Number Multiple Attribute Decision Making .................................................................65
Hualong Zhao

Software Engineering and Thought Originality ......................................................................................69
Yu Gao and Xiangzhong Feng

EPMA Image Fusion Scheme Based on Contourlet Transform ................................................................73
Li Xiang and Tang Wei

Rapid Discriminating Algorithm of Fabric Flaw Based on Texture Rule ................................................77
Xiuchen Wang

Algorithm Research for the Noise of Information Extraction Based Vision and DOM Tree ................81
Tieli Sun, Zhiying Li, Yanji Liu, and Zhenghong Liu

Temperature Modeling Study for High Precision Gyroscope Based on Neural Network ..................85
Qian Zhang, Xiao-fang Liu, Jun Zhan, and Gui-ming Chen

The Tracking Dynamical Evolutionary Algorithm for Dynamic Environments ................................88
Suming Liu, Qiang Zhao, and Yumei Zhang

SCQR - A P2P Query Routing Algorithm Based on Semantic Cluster ............................................92
Shiyao Jin and Gui-Ming Zhu

Identifying the Nucleus Residues in Proteins by Network Approach ...................................................97
Haiyan Li

Prediction of Hydrophobic Core Residues Based on Network Analysis ...........................................101
Haiyan Li

The Application of Balanced Scorecard and Neural Network on the Performance Evaluation for Enterprises .....................................................................................................................................105
Yao Gu, Lan Guo, and Qingyu Sun
Fair Security Protocols with Off-line TTP ........................................................................................................... 109

*Xi Wang, Xiangming Wen, Changxin Liang, Ye Liu, and Xinqi Lin*

An Improved Anti-Spam Method TOMO Based on Challenge-Response Technology ............................................................................................................................................................... 113

*Peng Li, Miao Liu, Fan Zhang, and Chunming Tang*

Research on Case Retrieval Model Based on Rough Set Theory and BP Neural Network ..................................................................................................................................................................... 117

*Xiaohui Wang*

New Trend of Protein Secondary Structure Prediction ........................................................................................................ 121

*Yun Zhai, Bingru Yang, Lijun Wang, and Bing An*

An Improved Fuzzy Support Vector Machine .................................................................................................................. 125

*Xiaoling Xiao and Xiang Zhang*

A NAT Traversal Mechanism for Peer-To-Peer Networks .................................................................................................. 129

*Zepeng Zhang, Xiangming Wen, and Wei Zheng*

Wavelet and Cellular Automata Based Image De-noising Method for Wire Bonding .............................................................. 133

*Fanzhi Kong and Wenbin Ma*

Design of Power Transformer Fault Diagnosis Model Based on Support Vector Machine ..................................................... 137

*Tao Liu and Zhijie Wang*

Predictive on the Shearing Property of Fabrics Based on Flexible Neural Network ..................................................................................................................................................................... 141

*Suyi Liu, Qian Wan, and Yin Cui*

Fabric Weave Design Based on Cellular Automata Theory .................................................................................................. 145

*Liu Suyi, Wan Qian, and Zhang Heng*

Design and Implement of Common Network Security Scanning System ................................................................................. 148

*Wentao Liu*

Interactive Intelligent Analysis Method: An Application of Criminal Investigation ........................................................................................................................................................................................................ 152

*Zengtang Qu and Ping He*

An Improved Algorithm of Vector Data Compression ........................................................................................................ 156

*Chen Feixiang, Qi Jiandong, and Zhao Ming*

A Talent Classification Method Based on SVM .................................................................................................................. 160

*Jing Ye, Hua Hu, and ChunLai Chai*

A Framework for the Information Management System of Mandarin Test .............................................................................. 164

*Chunting Yang, Yang Liu, and Zhigang Cheng*

Automatic Pronunciation Scoring for Mandarin Proficiency Test Based on Speech Recognition ..................................................................................................................................................................... 168

*Yang Liu, Chunting Yang, and Weifeng Ma*
Towards Efficient Collaborative Component-Based Software Unit Testing via Extend E-CARGO Model-Based Activity Dependence Identification .......................................................... 172

Bin Xu

Role Clarification in Software Unit Testing for Middle Scale Database Interface Components ................................................................................................................................. 176

Yun Ling and Bin Xu

A Research and Practice of Agile Unified Requirement Modeling .................................................. 180

Huang ShuiYuan, Duan LongZhen, Xie Jun, Tao JunCai, and Chen GuiXiang

Prediction of Protein Coding Regions by Support Vector Machine .................................................. 185

Guo Shuo and Zhu Yi-sheng

A New Beamforming Algorithm Based on Spherical Uncertainty Set ................................................. 189

Jingkai Wang, Cunhai Pan, Dongtao Li, and Peng Zhao

Mechanism Design on Incentives and Constraints for Construction Project Bidding .......................................................... 193

Liu Jianbing, Li Zhiming, and Ren Hong

Analysis on Employment of Graduate with BP Neural Network ......................................................... 198

Xiaotao Wang, Wang Ping, and Xiaobo Wang

On-line Handwritten Signature Verification Based on Two Levels Back Propagation Neural Network ......................................................................................................................... 202

Zhan Enqi, Guo Jinxu, Zheng Jianbin, Ma Chan, and Wang Linjuan

An Improved Image Compression Algorithm for Noise Image .......................................................... 206

Jinxu Guo and Yong Chen

Detection of Fabric Defect Based on Optimal Tree Structure of Wavelet Decomposition .................. 210

HuiYu Jiang, Min Dong, and Wei Li

Multi-hop AODV-2T .......................................................................................................................... 214

Mayuree Lerwatechakul and Harisavan Somnuk

Research on Fault Location of Aircraft Cable Based on Neural Network ............................................. 218

Xudong Shi, Xiaolin Liu, and Heyan Pei

Evolving Bidding Strategies Using Self-Adaptation Genetic Algorithm .............................................. 222

Gan Kim Soon, Patricia Anthony, Jason Teo, and Chin Kim On

Feature Selection for Density-Based Clustering ...................................................................................... 226

Yun Ling and Chongyi Ye

A Quadratically Convergent Algorithm for Generalized Linear Complementarity Problem on Supply Chain Equilibrium Model .......................................................................................... 230

Hongchun Sun

The Collaborative Filtering Recommendation Algorithm Based on BP Neural Networks .................. 234

DanEr Chen
Session 2. Education Technology and Applications

Fuzzy Neural Network Model and its Application in Teaching Quality Evaluation .................................................................................................................................................................................. 239
Changjun Zhu and Lihong Li

Intercollegiate Collaborative Online Learning of Mindmap .................................................................................................................................................................................. 243
Li Cuibai

Application of KM on College Instruction .................................................................................................................................................................................. 247
Li Cuibai

Network Teaching and Learning Modes Based on Internet for Deaf Students .................................................................................................................................................................. 250
Li Qiang and Bao Guodong

An Evaluation Model of Web-Based Distance Education for the Deaf Undergraduate .................................................................................................................................................................. 254
Li Qiang and Ma Ming

The Virtual Laboratory System on Law Education .................................................................................................................................................................................. 258
Lu Ling and Wang Lei

Teaching Innovation and Practice for the Capacity-Training as the Goal to the Digital Image Processing Course .................................................................................................................................................................. 262
Wang Lei, Chen Gongxin, Yang Yong, and Lu Ling

Research and Practice of Visual Teaching for Three Basic Characteristics of Object-Oriented Concepts .................................................................................................................................................................. 265
Xiong Jianying and Yao Leiyue

Design and Implementation of the Subject-Based Learning Website .................................................................................................................................................................. 268
Hua Pang, Shu Yang, and Jianhui Wang

Investigation and Analysis on the Use of Multimedia in the College Physical Education .................................................................................................................................................................. 271
Xu Lei and Zhang Wei

Study on the Relationship of University Innovation Education and College Students Enterprising .................................................................................................................................................................. 275
Guojiang Gao, Guoqing Lu, Wenmei Liu, Yongsheng Li, and Ming Yang

Research on the Experimental Education of Technical Courses in the Information Age .................................................................................................................................................................. 277
Hui-wen Leng, Dong-xing Wang, Yue Li, and Bao-shun Li

Web-Based Education Technology and Application in the Rural Basic Education .................................................................................................................................................................. 281
Minghong Chen, Gang Li, and Zhenhua Feng

Discussion on Computer-Based Teaching Methods ........................................................................................................................................................................... 285
Qun Wang, Yong Yu, and Yan Yu

Exploration in Innovation about Computer Teaching Based on Cultivation Mode for Applied Talents .................................................................................................................................................................. 288
Yunxiang Liu, Gao Jun, Li Shensu, and Yinjie Liu
Session 3. Pervasive Applications and Multimedia

The Effect of Pervasive Algorithms on Artificial Intelligence ................................................................. 307
Yonghong Huang and Jihong Zhan

Research on Spatial Location Unit Distribution Model in Pervasive Computing ........................................... 311
Hai-Cheng Li

A Game-Theoretic Data Assignment Scheme for P2PVoD System ............................................................... 315
Fang Xia, Xingwei Liu, and Huaping Liu

A Novel Multi-Touch Human-Computer-Interface Based on Binocular Stereo Vision ..................................................... 319
Xing Jian-guo, Wang Wen-long, Zhao Wen-min, and Huang Jing

Research of a Class of Security Systems .................................................................................................... 324
Jiemin Zhao

Phenomenons and Methods: Uncertainty in Internal Symmetry Nets with Backpropagation in Image Processing .......................................................... 327
Guanzhong Li

A Novel Wheeze Detection Method for Wearable Monitoring Systems ........................................................... 331
Jianmin Zhang, Wee Ser, Jufeng Yu, and T.T. Zhang

Session 4. Mobile and Wireless Communications

Network Monitoring Based on Community Structure Change ............................................................................ 337
Cai Jun and Yu Shun-zheng

Wang Lina and Wang Yijiang

Similarity Degree-Based Mobility Pattern Aware Routing in DTNs ................................................................... 345
Lei Yin, Yuanda Cao, and Wei He

General-purpose Identity Hiding Schemes for Ad-hoc Networks ....................................................................... 349
Shushan Zhao and Akshai Aggarwal

Multi-agent Coordination Based on Contract Net Protocol ............................................................................. 353
Defu Sun and Juhua Wu

Improved Algorithm of Unstructured P2P Network Topology Structure ........................................................... 358
Zong Hu
A Smart Card Remote Authenticated Key Agreement Protocol for Multi-servers Using Pairings ........................................................... 362
Xi Li, Hanping Hu, Wei Zhu, and Mingxing He

State of the Art in Cross-Layer Design for Cognitive Radio Wireless Networks ............................................................ 366
Yanbing Liu and Qin Zhou

Performance Analysis of Short Message Service ........................................................ 370
Liu Pu

Design of Wireless Communication Protocol for Home LAN ................................................................. 374
Liu Pu

On the Global Asymptotic Stability Problem of a Class of Wireless Communication Systems ....................................................... 378
Jiemin Zhao

Performance Analysis and Evaluation of Handover in Mobile IPv6 ............................................................ 381
Xinyi Wu and Gang Nie

Discuss of User Identification Technology in DSL Network ............................................................... 385
Zeng Xiyang and Cheng Chuangqing

Discuss on VLAN Stacking in Packet Network .................................................................................. 389
Li Xinzhan and Cheng Chuangqing

Session 5. Web and Data Mining

A New Web Service Model Based on QoS .................................................................................... 395
Guo-qi Liu, Zhi-liang Zhu, Yi-qiang Li, Dan-cheng Li, and Jun-chang Cui

Verification of Service Replaceability with Colored Petri Net .......................................................... 400
Ying Liu, Bin Zhang, De-shuai Wang, Ming-wei Zhang, and Zhi-liang Zhu

Learning Causal Semantic Representation from Information Extraction ........................................... 404
Zuo Xin, Wang LiMin, and Zhou Shuang

Semantic Based Resource Retrieval Algorithm for Networked Manufacturing .................................. 408
Wang Zheng-cheng and Li Xiao Peng

A New Web Services Matching Algorithm ...................................................................................... 414
Shaofei Wu

Study on a New Structural Join Algorithm for XML Query ............................................................... 417
Shaofei Wu and Yuan Huang

A New Method of Exception Handling in Workflow ........................................................................ 420
Shaofei Wu

A Semantic-Based Multilayer Flexible Mechanism for Matching Web Services ................................ 423
Shenghui He, Chaoyang Xiang, and Lei Chen

Research on Knowledge Management in Enterprise ....................................................................... 426
Shenghui He, Chaoyang Xiang, and Lei Chen

A New Method of Selecting Target User .......................................................................................... 430
Binggui Huang, Shenghui He, and Lei Chen

A Studying System Based on Web Mining ...................................................................................... 433
Chaoyang Xiang, Shenghui He, and Lei Chen
Study on the Performance Measure of Information Retrieval Models ................................................................. 436

Hua Jiang

Study on Information Retrieval Model Based on Rough Set Theory ........................................................................ 440

Hua Jiang

32 bits Comparator for Multi-number Systems ........................................................................................................ 445

Zheng-wei Hu, Zhi-yuan Xie, and Guang-xiao Luo

Cultural-Based Particle Swarm Optimization for Dynamical Environment ............................................................ 449

Yi Jiang, Wei Huang, and Li Chen

A Novel Data Mining Algorithm for Web-Based Learning Community ................................................................. 453

Yi Jiang, Wei Huang, and Qingling Yue

A Service-oriented Middleware Architecture for Building Context-aware Personalized Information Service ........................................... 457

Pan Xiwei and Zhou Li

A Multiple Secrets Sharing Scheme with General Access Structure ......................................................................... 461

Sai-zhi Ye, Guo-xiang Yao, and Quan-long Guan

An Approach to Construct and Parse the OWL-Based Service Ontology .............................................................. 465

Chen Rui, Ying Shi, Zeng Zhi-Hao, Hu Luo-Kai, Zhao Kai, and Wu Qing

Research of a Class of Multimedia Systems .............................................................................................................. 469

Jiemin Zhao

A Novel Method of the Incomplete Web Data Recovery ............................................................................................ 472

E Xu, Shao Liangshan, Sun Fuming, and Li Sheng

TT-ERCR: A Flexible SNMP Management Method .................................................................................................... 476

Zeng Xiyang and Cheng Chuanqing

Research on CAD System Architecture Based on SOA and Web Service ............................................................... 480

Changqing Zeng and Ying Li

A Personalized Model for Ontology-driven User Profiles Mining ............................................................................ 484

Cuncun Wei, Chongben Huang, and Hengsong Tan

Application of Rough Set Theory in Knowledge Discovery from Multiple Knowledge Base ......................................... 488

Jianping Zhuge

Session 6. Industry Applications

The Application of Wavelet De-noising in the Power System Fault Recording .......................................................... 495

Li Ying-Lang and Na Cai

Designing of VGA Character String Display Module Based on FPGA ........................................................................ 499

Guohui Wang, Yong Guan, and Yan Zhang

Analysis and Comparison of Fault Simulation ........................................................................................................... 503

Yan Zhang, Yong Guan, and Guohui Wang

Humanoid Intelligent Control System of Plastic Corrugated Board

Synchronous Shearing .................................................................................................................................................. 507

Guofa Guo and Kaisheng Zhang
Research and Implementation of QoS in Embedded System ................................................................. 510
  
  Cheng Chuanqing and Wang Li

Study on Parallel Performance of FDTD Under Environment Based on Linux in PC Cluster System ................................................................. 514
  
  Xiaoli Ye, Qinwu Lai, Rongling Chen, Zao Xu, Xiangqun Ye, and Dongxiang Luo

Study and Realization of Coordinate Conversion in Vehicle Navigation ................................................................. 517
  
  Xiaoli Ye, Xiaochun Cao, Danhong Qiu, Jianfeng Cao, and Yanqing Wang

Pre-reading Mechanism for Road Parameters Acquirements in In-vehicle Embedded System ................................................................. 521
  
  Fan Tiehu, Qin Guihe, and Zhao Deyin

Parameters Identification and Dynamic Modification of Household Air Conditioning Compressor ................................................................. 527
  
  Jian Zhao, Juan Du, and Ming Yu

Application of Fault Tolerant Controller Based on RBF Neural Networks for Mobile Robot ................................................................. 531
  
  Zheng Li

Session 7. Intelligent Information Technology Applications

The Application of Cognitive Radio Spectrum Sensing Technology in the Coal Mine Communication ................................................................. 537
  
  Chen Guizhen, Zhang Xiaochun, Ding Enjie, and Qi Hongwei

Research on Domain Ontology Based Information Retrieval Model ................................................................. 541
  
  Guo Chengxia and Huang Dongmei

Complex Network Property Analysis of Knowledge Cooperation Networks ................................................................. 544
  
  Liu Zhiyang and Liu Lu

Solutions of Adaptive Rate Control for VoIP on MANET ................................................................. 548
  
  Shi Yuhe and Xu Jie

A Symplectic Scheme of Gross-Pitaevskii Equation ................................................................. 552
  
  YiMin Tian

Progress on Construction Technology of Uyghur Knowledge Base ................................................................. 554
  
  Yusup Abaidulla, Iskender Osman, and Mamati Tursun

Using Scope-agent to Improve MAODV Protocol ................................................................. 558
  
  Wang Jizeng, Zhong Xiaoxiong, and Zhang Zhongyao

A Multisymplectic Scheme for Gross-Pitaevskii Equation ................................................................. 562
  
  YiMin Tian

Research on Chinese Ontology Instance Extension Based on SVM ................................................................. 564
  
  Jie Liu, Guang Wang, and Zukai Jiang

A Novel Reversible Data Embedding Scheme Using Dissimilar Pairing for Palette-Based Images ................................................................. 569
  
  Chin-Chen Chang, Zhi-Hui Wang, Yi-Hui Chen, and Ming-Chu Li