ISSN1000-3428
CN31-1289/TP
CODEN JISGEV

# 计算机工程
# Computer Engineering

www.ecice06.com | 第38卷 - 第10 期 - 2012年5月20日 Vol.38 - No.10 - 20 May 2012 | 2012 10

■ 全国计算机类中文核心期刊 ■ 工业和信息化部精品期刊 ■ 中国科技核心期刊

华东计算技术研究所 East China Institute of Computer Technology
上海市计算机学会 Shanghai Computer Society

万方数据

# 计 算 机 工 程 (半月刊)

Jisuanji Gongcheng

第 38 卷　第 10 期　2012 年 5 月 20 日


# 目　次


**·专栏·**

基于计算实验的煤矿安全评价方法……薛　霄，李慧琴(1)

D2D 通信中基于信噪比均衡的资源分配算法……郜伟伟，易辉跃，胡艳军，等(5)

基于人类视觉特性的梯度骨架标记提取算法……宋建军，侯志强，余旺盛(9)

基于改进 SIFT 算法的粒子滤波目标跟踪……张　琪，张金林，芮　挺，等(14)

基于 IBAS 的 SAML 路径验证协议……王　曦，张　斌，杨　艳，等(18)

基于 Jaccard 距离与概念聚类的多模型估计……于永彦(22)

基于 FlexRay 的线控转向系统设计……宋雪桦，路　敏，袁银男，等(27)

卫星数传应急任务调度模型……闫　华，武小悦(31)

**·软件技术与数据库·**

带 OCL 的活动图多态性测试用例生成方法……曾　一，丁　娜，邹　明(34)

语义关系相似度计算中的数据标准化方法比较……王正鹏，谢志鹏，邱培超(38)

社会群体角色本体建模及其公理获取……江利萍，张再跃(41)

军事网格工作流调度算法研究……程　相，孙继银，李琳琳，等(45)

虚拟计算系统中资源协同发现模型……李　静，韩起云(48)

预定数据链规模的单纯型连续近邻链查询……张丽平，李　林，李　松，等(51)

基于 Matlab 的复杂控制系统软件开发……王建锋，张天宏，黄向华(54)

基于蜕变关系的多路径覆盖测试数据进化生成……张　岩(57)

一种软件体系结构级基本路径覆盖方法……赵　磊，吕莉媛，赵国生(60)

基于关联规则和粗糙集理论的话题特征提取方法……高　飞，周学广，孙　艳(63)

基于知网的中文短信文本词汇链抽取方法……刘金岭，刘　丹，周　泓(67)

核 DBSCAN 算法在民航客户细分中的应用……潘玲玲，张育平，徐　涛(70)

**·网络与通信·**

改进的加权复杂网络节点重要度评估方法……王甲生，吴晓平，廖　巍，等(74)

基于 WSN 的多目标跟踪及反馈控制平台……叶景志，赵　玲，罗汶锋(77)

单载波 WMN 中跨层拥塞反馈算法研究……殷爱菊，韩文献，陈燕燕(80)

一种改进的时延受限多播路由算法……杨春德，秦宗伟(83)

Xenomai 平台下基于以太网的实时通信方案……陈进朝，杜承烈，黄俊江(86)

基于新适值函数的互调干扰抑制优化算法……杨　栋，杨霄鹏，陈　强(89)

认知无线电中基于 QoS 分级的频谱分配策略……朱冰莲，裴光术，张　磊，等(92)

传感器网络节点选择的分布式在线算法……陈光平(95)

基于节点生存时间的 WSN 节能路由算法……饶　皓，袁　健(99)

**·安全技术·**

Oracle 中矢量数据安全保护方法……李光师，孟祥茹(102)

基于 HIS 原理的复杂异构网络异常检测机制……桂兵祥，丰洪才(105)

基于域名信息的钓鱼 URL 探测……郑礼雄，李青山，李素科，等(108)

ECC 抗功率分析攻击的等功耗编码算法……王正义，赵俊阁(111)

基于多属性机构的密文策略加密机制……马丹丹，陈　勤，党正芹，等(114)

基于签密的认证密钥协商协议分析与改进……舒　剑(117)

一种基于身份和密钥封装机制的加密方案……张　永，史宝明，贺元香(120)

具有指定验证者的无证书代理签名方案……葛荣亮，高德智，梁景玲，等(123)

基于二次数字签名的 SOAP 时间戳协议……李　锋，周　明(125)


万方数据

**·人工智能及识别技术·**
无人驾驶车路径跟踪控制研究……修彩靖，陈　慧(128)
基于物理特性和形态学方法的阴影去除算法……张　超，林　鹏，赵宇明(131)
基于指数函数的归一化变步长 LMS 算法……杨　逸，曹祥玉，杨　群(134)
具有预测能力的 BDI Agent 模型研究……杜　磊，刘庆斌，张贤坤，等(137)
基于模糊判断矩阵的两阶段群决策方法……刘卫锋，何　霞(141)
基于 DFP 校正拟牛顿法的傅里叶神经网络……林　琳，黄南天，高兴泉(144)
基于识别信心决策融合的分块 PCA 方法……许一菲，肖　俊，武和雷(148)
改进的二维典型相关分析及其人脸识别应用……刘艳艳，曹慧荣，王建国，等(151)
融合 LTP 与 Fisherfaces 的分块人脸识别……袁宝华，王　欢，任明武(154)
求解函数优化问题的反向自适应和声搜索算法……何宗耀，郝　伟(157)
数独难度级别划分的权重法研究……吴林波，肖华勇，杨宗泽(161)
基于影响模型的短时交通流预测方法……丁　栋，朱云龙，库　涛，等(164)
基于车辆平均轨迹的车道提取方法……朱　佳，闫东升，张建明(168)
动态多目标免疫算法及其应用……钱淑渠，武慧虹(171)
多尺度最小二乘小波支持向量机的回归建模……张相胜，王　蕾，潘　丰(175)
基于局部结构分割的维吾尔文笔迹鉴别方法……尚赵伟，李建伟，张太平，等(178)
面向 Web 信息检索的虚核文本分类算法……李　静，杨小帆，孙启干(182)
改进 BP 神经网络在软件能耗分析中的应用……邬小龙，郭　兵，沈　艳(185)
**·图形图像处理·**
融合局部图像信息的 SLGS 活动轮廓模型……刘瑞娟，何传江，原　野(188)
基于四元小波与对数极坐标的不变纹理检索……唐　婷(191)
基于图割的 JPEG 图像快速分割算法……刘　毅，孙怀江，夏德深(194)
特征控制下的多样图地形纹理合成算法……赵瑞斌，张燕玲，王继东，等(197)
基于梯度广义近邻图的多模医学图像配准……卜令斌，赵海峰，孙登第，等(200)
基于投影数据主成分分析的图像篡改检测算法……赵俊红，康文雄(203)
基于 MAP 框架的金字塔人脸超分辨率算法……薛翠红，于　明，于　洋，等(206)
基于权重粒子群优化阈值的 NSCT 图像去噪……刘继红，贾振红，覃锡忠，等(209)
**·工程应用技术与实现·**
PLS-LSSVM 模型在锌净化中的应用……伍铁斌，朱红求，孙　备，等(212)
高性能集散控制系统主控制器设计……袁积德，黄文君，陆卫军(215)
大规模工业控制系统网络中间件设计……黄　震，李德文，黄文君，等(218)
基于时间博弈自动机的道岔自动控制系统……余兴超，董荣胜，孙栋栋，等(221)
流量仪表中 SoC 架构及数字模块设计……刘　岑，赵毅强，史亚峰，等(224)
基于云模型的船舶航迹跟踪滑模控制……张良欣，邢道奇，张世云，等(227)
无人机编队飞行视景仿真关键技术研究……郭立普，魏瑞轩，侯海平，等(230)
仿生容错系统演化修复能力研究……巨政权，满梦华，褚　杰，等(234)
**·开发研究与设计技术·**
一种基于 RSSI 的贝叶斯室内定位算法……彭玉旭，杨艳红(237)
FlexRay 网络的动态段时间优化解析方法……王　刚，丁天宝，荣　健，等(241)
基于平均等待时间约束的松弛预留机制……胡志刚，阎朝坤，刘长庚(244)
基于 ARcode 的移动增强现实系统研究……翟亮亮，王涌天，杨　健，等(247)
一种适用于非特定哼唱方式的起音点检测算法……郑玉婷，张文俊，韩　彪(250)
面向机顶盒的数字版权管理模型……蒿　琳，曹宝香，马兆丰，等(253)
分布式存储系统的故障检测自适应算法……马玮骏，冯　径，沈　晔，等(257)
输电线路单组检修计划模型及求解……于宏涛，高立群，李丽霞(260)
话题案例知识库动态模型及优化策略……赵立永，李爱民(263)
一种改进的房产档案特征提取与分类方法……钱俊霖，余建桥(266)
电子商务中 Web 服务社区的动态信任启动模型……刘　彬，张仁津(269)
基于智能预警的自恢复存储系统研究……田俊峰，彭　虎，邓安远(273)
基于 Q 学习算法的情感交互可计算模型研究……于冬梅，韩晓新，李　玎，等(277)
基于 Map-Reduce 的分布式视频处理平台……耿晨曦，姚丹亚，张盈盈，等(280)
大型多人在线网络游戏分布式系统模型研究……吴拥民，周惟迪(284)
基于信息论的时序电路演化设计……张之武，娄建安，常小龙，等(288)
基于硬件队列扩展的网卡虚拟化方案……朱　峪，吴俊敏，朱小东，等(291)

万方数据

# Computer Engineering (Semimonthly)

**Vol.38 No.10 20 May 2012**

## Contents

Security Assessment Method of Coal Mine Based on Computational Experiments……XUE Xiao, LI Hui-qin(1)
Resource Allocation Algorithm Based on SNR Equalization in D2D Communication……GAO Wei-wei, YI Hui-yue, HU Yan-jun, et al(5)
Gradient Skeleton Marker Extraction Algorithm Based on Human Visual Characteristics……SONG Jian-jun, HOU Zhi-qiang, YU Wang-sheng(9)
Particle Filtering Object Tracking Based on Improved SIFT Algorithm……ZHANG Qi, ZHANG Jin-lin, RUI Ting, et al(14)
SAML Path Verification Protocol Based on IBAS……WANG Xi, ZHANG Bin, YANG Yan, et al(18)
Multi-model Estimation Based on Jaccard Distance and Conceptual Clustering……YU Yong-yan(22)
Design of Steering-by-wire System Based on FlexRay ……SONG Xue-hua, LU Min, YUAN Yin-nan, et al(27)
Emergency Task Schedule Model for Satellite Data Transmission……YAN Hua, WU Xiao-yue(31)
Activity Diagram Polymorphism Test Case Generation Method with OCL……ZENG Yi, DING Na, ZOU Ming(34)
Comparison of Data Standardization Method in Semantic Relation Similarity Calculation……WANG Zheng-peng, XIE Zhi-peng, QIU Pei-chao(38)
Social Group Role Ontology Modeling and Its Axioms Acquisition……JIANG Li-ping, ZHANG Zai-yue(41)
Research on Scheduling Algorithm of Military Grid Workflow……CHENG Xiang, SUN Ji-yin, LI Lin-lin, et al(45)
Resource Cooperative Discovery Model in Virtual Computing Systems……LI Jing, HAN Qi-yun(48)
Simple Continues Near Neighbor Chain Query with Predestination Data Chain Size……ZHANG Li-ping, LI Lin, LI Song, et al(51)
Software Development of Complex Control System Based on Matlab……WANG Jian-feng, ZHANG Tian-hong, HUANG Xiang-hua(54)
Evolutionary Generation of Multiple Paths Coverage Test Data Based on Metamorphic Relation……ZHANG Yan(57)
Basic Path Coverage Method for Software Architecture Level……ZHAO Lei, LV Li-yuan, ZHAO Guo-sheng(60)
Topic Feature Extraction Method Based on Association Rule and Rough Set……GAO Fei, ZHOU Xue-guang, SUN Yan(63)
Extraction Method of Chinese Short Message Text Lexical Chain Based on HowNet……LIU Jin-ling, LIU Dan, ZHOU Hong(67)
Application of Kernel DBSCAN Algorithm in Civil Aviation Customer Segmentation……PAN Ling-ling, ZHANG Yu-ping, XU Tao(70)
Improved Method of Node Importance Evaluation in Weighted Complex Networks……WANG Jia-sheng, WU Xiao-ping, LIAO Wei, et al(74)
Multi-target Tracking and Feedback Control Platform Based on WSN……YE Jing-zhi, ZHAO Ling, LUO Wen-feng(77)
Research on Cross Layer Congestion Feedback Algorithm in Single Carrier WMN……YIN Ai-han, HAN Wen-xian, CHEN Yan-yan(80)
Improved Delay-constrained Multicast Routing Algorithm……YANG Chun-de, QIN Zong-wei(83)
Ethernet-based Real Time Communication Solution Under Xenomai Platform……CHEN Jin-chao, DU Cheng-lie, HUANG Jun-jiang(86)
Optimization Algorithm of Intermodulation Interference Suppression Based on New Fitness Function……
……YANG Dong, YANG Xiao-peng, CHEN Qiang(89)
Spectrum Allocation Strategy Based on QoS Grading in Cognitive Radio……ZHU Bing-lian, PEI Guang-shu, ZHANG Lei, et al(92)
Distributed Online Algorithm of Node Selection in Sensor Network……CHEN Guang-ping(95)
Energy Efficient Routing Algorithm in WSN Based on Node Survival Time……RAO Hao, YUAN Jian(99)
Vector Data Safety Protection Method in Oracle……LI Guang-shi, MENG Xiang-ru(102)
Anomaly Detection Mechanism for Complex Heterogeneous Network Based on Principle of Human Immune System……
……GUI Bing-xiang, FENG Hong-cai(105)
Phishing URL Detection Based on Domain Name Information……ZHENG Li-xiong, LI Qing-shan, LI Su-ke, et al(108)
Equivalent Power Consumption Coding Algorithm Against Power Analysis Attacks for Elliptic Curve Cryptogram……
……WANG Zheng-yi, ZHAO Jun-ge(111)
Ciphertext Policy Encryption Mechanism Based on Multi-attribute Authority……MA Dan-dan, CHEN Qin, DANG Zheng-qin, et al(114)
Analysis and Improvement of Authenticated Key Agreement Protocol Based on Signcryption……SHU Jian(117)
Encryption Scheme Based on Identity and Key Encapsulation Mechanism……ZHANG Yong, SHI Bao-ming, HE Yuan-xiang(120)
Certificateless Proxy Signature Scheme with Designated Verifier……GE Rong-liang, GAO De-zhi, LIANG Jing-ling, et al(123)
SOAP Time Stamp Protocol Based on Secondary Digital Signature……LI Feng, ZHOU Ming(125)
Research on Path Tracking Control of Autonomous Vehicle……XIU Cai-jing, CHEN Hui(128)
Shadow Removal Algorithm Based on Physical Features and Morphological Method……ZHANG Chao, LIN Peng, ZHAO Yu-ming(131)
Normalization Variable Step Size LMS Algorithm Based on Exponential Function……YANG Yi, CAO Xiang-yu, YANG Qun(134)
Research on BDI Agent Model with Predictable Capability……DU Lei, LIU Qing-bin, ZHANG Xian-kun, et al(137)

万方数据

Two-step Method of Group Decision Making Based on Fuzzy Judgment Matrix……LIU Wei-feng, HE Xia(141)
Fourier Neural Network Based on DFP Emendatory Quasi-Newton Method……LIN Lin, HUANG Nan-tian, GAO Xing-quan(144)
Block PCA Method Based on Recognition Confidence Decision Fusion……XU Yi-fei, XIAO Jun, WU He-lei(148)
Improved Two-dimensional Canonical Correlation Analysis and Its Application in Face Recognition……
……LIU Yan-yan, CAO Hui-rong, WANG Jian-guo, et al(151)
Block Face Recognition Combined with Local Ternary Pattern and Fisherfaces……YUAN Bao-hua, WANG Huan, REN Ming-wu(154)
Opposition Self-adaptive Harmony Search Algorithm for Solving Function Optimization Problem……HE Zong-yao, HAO Wei(157)
Research of Weight Method with Sudoku Difficulty Level Partition……WU Lin-bo, XIAO Hua-yong, YANG Zong-ze(161)
Short-term Traffic Flow Forecasting Method Based on Influence Model……DING Dong, ZHU Yun-long, KU Tao, et al(164)
Lane Extraction Method Based on Vehicle Average Trajectory……ZHU Jia, YAN Dong-sheng, ZHANG Jian-ming(168)
Dynamic Multi-objective Immune Algorithm and Its Application……QIAN Shu-qu, WU Hui-hong(171)
Regression Modeling of Multi-scale Least Square Wavelet Support Vector Machine……ZHANG Xiang-sheng, WANG Lei, PAN Feng(175)
Identification Method for Uyghur Handwritings Based on Local Structure Segmentation……
……SHANG Zhao-wei, LI Jian-wei, ZHANG Tai-ping, et al(178)
Virtual Kernel Text Categorization Algorithm for Web Information Retrieval……LI Jing, YANG Xiao-fan, SUN Qi-gan(182)
Application of Improved BP Neural Network in Software Energy Consumption Analysis……WU Xiao-long, GUO Bing, SHEN Yan(185)
SLGS Active Contour Model Fused with Local Image Information……LIU Rui-juan, HE Chuan-jiang, YUAN Ye(188)
Invariant Texture Retrieval Based on Quaternion Wavelet and Log-polar……TANG Ting(191)
Fast JPEG Image Segmentation Algorithm Based on Graph Cuts……LIU Yi, SUN Huai-jiang, XIA De-shen(194)
Multi-sample Terrain Texture Synthesis Algorithm Under Feature Control……ZHAO Rui-bin, ZHANG Yan-ling, WANG Ji-dong, et al(197)
Multi-modality Medical Image Registration Based on Gradient Generalized Nearest-neighbor Graph……
……BU Ling-bin, ZHAO Hai-feng, SUN Deng-di, et al(200)
Detection Algorithm of Image Forgery Based on Principal Components Analysis of Projection Data……ZHAO Jun-hong, KANG Wen-xiong(203)
Pyramid Face Supper-resolution Algorithm Based on MAP Frame……XUE Cui-hong, YU Ming, YU Yang, et al(206)
NSCT Image Denoising Based on Weight Particle Swarm Optimization Threshold……LIU Ji-hong, JIA Zhen-hong, QIN Xi-zhong, et al(209)
Application of PLS-LSSVM Model in Zinc Purification……WU Tie-bin, ZHU Hong-qiu, SUN Bei, et al(212)
Design of High-performance Main Controller for Distributed Control System……YUAN Ji-de, HUANG Wen-jun, LU Wei-jun(215)
Design of Network Middleware for Large-scale Industrial Control System……HUANG Zhen, LI De-wen, HUANG Wen-jun, et al(218)
Automatic Turnout Control System Based on Time Game Automata……YU Xing-chao, DONG Rong-sheng, SUN Dong-dong, et al(221)
Design of System on Chip Architecture and Digital Module in Flux Meter ……LIU Cen, ZHAO Yi-qiang, SHI Ya-feng, et al(224)
Sliding-mode Control for Ship Trajectory Tracking Based on Cloud Model……ZHANG Liang-xin, XING Dao-qi, ZHANG Shi-yun, et al(227)
Research on Key Techniques of Unmanned Aerial Vehicle Formation Flying Scene Simulation……
……GUO Li-pu, WEI Rui-xuan, HOU Hai-ping, et al(230)
Research on Evolvable Repairing Ability of Bio-inspired Fault-tolerance System……JU Zheng-quan, MAN Meng-hua, CHU Jie, et al(234)
Bayesian Indoor Location Algorithm Based on RSSI……PENG Yu-xu, YANG Yan-hong(237)
Analytical Method for Dynamic Segment Time Optimization in FlexRay Network……WANG Gang, DING Tian-bao, RONG Jian, et al(241)
Relaxed Reservation Mechanism Based on Mean Waiting Time Constraint……HU Zhi-gang, YAN Chao-kun, LIU Chang-geng(244)
Research on Mobile Augmented Reality System Based on ARcode……ZHAI Liang-liang, WANG Yong-tian, YANG Jian, et al(247)
Onset Detection Algorithm Suited for Non-specific Humming Way……ZHENG Yu-ting, ZHANG Wen-jun, HAN Biao(250)
STB-oriented Digital Rights Management Model……HAO Lin, CAO Bao-xiang, MA Zhao-feng, et al(253)
Fault Detection Adaptive Algorithm in Distributed Storage System……MA Wei-jun, FENG Jing, SHEN Ye, et al(257)
Model and Solution for Single-group Maintenance Scheduling of Transmission Lines……YU Hong-tao, GAO Li-qun, LI Li-xia(260)
Dynamic Model and Optimization Strategy of Topic Case Knowledge Base……ZHAO Li-yong, LI Ai-min(263)
Improved Method of Feature Extraction and Classification for House Property Archives……QIAN Jun-lin, YU Jian-qiao(266)
Dynamic Trust Starting Model of Web Service Community in Electronic Commerce……LIU Bin, ZHANG Ren-jin(269)
Research on Self-recovered Storage System Based on Intelligent Early-warning……TIAN Jun-feng, PENG Hu, DENG An-yuan(273)
Research on Computable Model of Emotional Interaction Based on Q-learning Algorithm……YU Dong-mei, HAN Xiao-xin, LI Ding, et al(277)
Distributed Video Processing Platform Based on Map Reduce……GENG Chen-yao, YAO Dan-ya, ZHANG Ying-ying, et al(280)
Research on Distributed System Model of Massively Multiplayer Online Game……WU Yong-min, ZHOU Wei-di(284)
Design of Time Series Circuit Evolution Based on Information Theory……ZHANG Zhi-wu, LOU Jian-an, CHANG Xiao-long, et al(288)
Netcard Virtualization Scheme Based on Hardware Queue Expansion……ZHU Yu, WU Jun-min, ZHU Xiao-dong, et al(291)

万方数据