



ISSN1000-3428
CN31-1289/TP
CODEN JISGEV

计算机工程

Computer Engineering

www.ecice06.com

第38卷 - 第24期 - 2012年12月20日

Vol.38 - No.24 - 20 December 2012

2012 24

■ 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

计算机工程(半月刊)

Jisuanji Gongcheng

第38卷

第24期(卷终)

2012年12月20日

目 次

·云计算专题·

- 基于整数多项式环的全同态加密算法.....徐 鹏, 刘 超, 斯雪明(1)
基于云计算的网络创新实验平台.....龚 宇, 李 帅, 李 勇, 等(5)
一种基于任务角色的云计算访问控制模型.....王小威, 赵一鸣(9)
基于 MapReduce 的 JP 算法设计与实现.....曹泽文, 周 姚(14)
基于任务备份的云计算容错调度算法.....廖福蓉, 王成良, 陈蜀宇(17)
云制造环境下协同工作流控制模型研究.....谭 貌, 段 斌, 彭邦伦, 等(21)
基于云计算的并行测试方案设计与实现.....黄晓玲, 陈桂林, 赵生慧(27)
基于云计算的网络教育培训系统研究与实现.....黄剑文(32)

·软件技术与数据库·

- 一种大规模分布式应用性能分析系统.....臧冬松, Vincent Garonne, 孙功星(37)
基于虚拟化技术的 SOA 资源保障模型.....李 东, 谢永强, 范燕芳, 等(42)
基于污点指针的二进制代码缺陷检测.....刘 杰, 王嘉捷, 欧阳永基, 等(46)
基于模糊聚类的协同过滤算法.....王明佳, 韩景倜, 韩松乔(50)
基于序列匹配的作业相似度检测系统.....王晓英, 斯 力, 王晓青, 等(53)
基于 Spirent 的 Web 应用性能评测.....周 鹏, 周海鹰, 左德承, 等(57)

·网络与通信·

- 基于矩母函数的端到端网络统计时延上界研究.....赵一 A, 张中荃(62)
基于最小集合覆盖的网络连通性自动化测试.....张 馨, 薛 质, 范 磊(65)
基于剩余能量和位置的 LEACH 改进算法.....李年琼, 黄宏光, 李 鹏(70)
基于统计不相关矢量集的集中式定位算法.....戴 欢, 何 磊, 顾晓峰(74)
改进 UKF 算法在天波超视距雷达中的应用.....陈百英, 刘以安, 张 强(78)
基于多业务的移动通信系统呼叫接入控制.....王中伟, 夏晓燕, 邓 磊, 等(81)
具有社会网络特性的 P2P 分层搜索机制.....刘 浩(86)
无线传感器网络树形传输模型组建方法.....潘 攀, 陈 岚, 昂志敏, 等(90)
面向 WSN 的单一和多编码方案分析.....戈 军, 周莲英(96)
基于并行冗余协议的网络拓扑快速发现方法.....李 周, 刘 健, 程子敬(100)
基于物理层网络编码的两跳中继改进方案.....刘勤永, 彭 华(105)

·安全技术·

- 一种基于身份的签名方案密码分析与改进.....黄 斌, 史 亮, 邓小鸿(108)
MD5 算法的研究与改进.....毛 煜, 陈 娜(111)
无线传感器网络途中过滤增强方案.....任秀丽, 张 晨(115)
一种面向 DRM 的多媒体社交网络信任模型.....陈书全, 张志勇, 杨丽君, 等(119)
一种基于量化表修改的 F5 隐写方法.....鲁国鹏, 叶学义, 汪云路, 等(123)
差分能量攻击所需样本数量研究.....李志强, 严迎建, 段二朋(128)

• 人工智能及识别技术 •

- 基于压缩感知的人脸识别方法.....邹 伟, 李元祥, 杨俊杰, 等(133)
有数量限制的开放式车辆路径加速算法.....陈忆群, 牟来彦, 陈国明, 等(137)
基于粒子滤波的多特征融合视频行人跟踪算法.....李 锡, 冯 瑞(141)
基于潜在主题的分布式视觉检索模型.....陈宜明, 段凌宇, 黄 艳, 等(146)
基于集合经验模式分解的火灾时间序列预测.....张 烨, 田 霏, 刘盛鹏(152)
纸币序列号的快速识别方法研究.....房爱东, 胡学钢, 盛 庄(156)
基于多模态特征融合的新闻故事单元分割.....刘嘉琦, 封化民, 闫建鹏(161)
融合过滤和封装方式的特征选择算法.....代 旺, 方昱春, 李 杨(166)
基于共性特征选择的短时说话人识别方法.....肖星星, 冯 瑞(171)
基于微结构特征的维吾尔文笔迹鉴别.....沈 洁, 卡米力·木依丁, 张韦煜(175)
一种双重正则化支持向量机的改进算法.....秦传东, 刘三阳(179)
基于服务簇的空间信息服务自动发现.....陈 科, 成 毅, 谢明霞, 等(182)
一种新型量子演化算法及其应用研究.....曹斯彤, 陈贤富(188)
基于 CRFs 和跨事件的事件识别研究.....侯立斌, 李培峰, 朱巧明(191)

• 图形图像处理 •

- 脉冲神经网络图像分割的编码方法.....崔文博, 蔺想红, 徐满意(196)
基于 FCM 和 LBF 模型的医学图像自动分割.....崔文超, 王 毅, 樊养余, 等(200)
基于像素领域信息的自适应图像增强算法.....王启帆, 贾振红, 覃锡忠, 等(205)
自适应多尺度融合遥感图像分割方法.....李 楠, 霍 宏, 方 涛(208)
基于互联网搜索与反馈验证的图像自动标注.....俞建松, 曹冬林, 李绍滋, 等(211)
基于多特征融合的图像检索算法.....余 胜, 曾接贤, 谢 莉(216)
一种基于 PCNN 的多聚焦图像融合改进算法.....童怀水, 吴小俊(220)

• 工程应用技术与实现 •

- 基于编译制导的复数乘法优化设计.....付和萍, 郑启龙, 陈思灵, 等(225)
支持线程级猜测的存储体系结构设计.....赖 鑫, 刘 聪, 王志英(228)
基于图像处理的油脂色泽检测系统研究.....闻家亮, 段中兴(235)
考虑任务可达约束的突击作战任务分配方法.....张 磊, 姚佩阳, 徐雪洁, 等(239)
基于 KPCA 和 CPSO 的故障检测方法.....唐勇波, 桂卫华, 欧阳伟(244)
基于空频域信息的固定单站无源定位技术研究.....黄耀光, 高 博, 李建新, 等(247)

• 开发研究与设计技术 •

- 语音检索子词单元的构建算法.....杨 乐, 吴 及, 吕 萍(251)
基于账户模式的电视支付平台.....李 磊, 周旭顺, 裴 蕾, 等(254)
NRDPT: 下一代测序数据的处理方法.....张 骏, 殷 陶, 陈玲慧(258)
基于核密度估计的可变码率视频流量预测算法.....吴俊琦, 倪 宏, 李 俊(262)
基础数学库中的层次结构寄存器分配策略.....郭正红, 郭绍忠(266)
基于 Solr 的体育视频信息全文搜索研究.....乐嘉锦, 姚 岚(269)
基于 MEMS 传感器的三维鼠标设计与实现.....陈建新, 谷 晶, 杨璐璐(274)
CUDA 程序到 Cell 平台的源代码移植.....岳 峰, 庞建民, 张一弛, 等(279)
基于作战能力估计的通信对抗作战目标决策.....李冯敬, 姚佩阳, 万路军, 等(283)
一种安全的 USB2.0 设备控制器设计.....李爱国, 冯国松(288)
基于自适应时空码书的粒子滤波多目标跟踪.....徐 悅, 肖 刚, 张 冉(291)
《计算机工程》2012 年(第 38 卷)总目次.....(1-30, 封三)

Computer Engineering (Semimonthly)

Vol.38 No.24(End of the Volume)

20 December 2012

Contents

- Fully Homomorphic Encryption Algorithm Based on Integer Polynomial Ring.....XU Peng, LIU Chao, SI Xue-ming(1)
- Network Innovation Experiment Platform Based on Cloud Computing.....GONG Yu, LI Shuai, LI Yong, et al(5)
- A Task-role-based Access Control Model for Cloud Computing.....WANG Xiao-wei, ZHAO Yi-ming(9)
- Design and Implementation of JP Algorithm Based on MapReduce.....CAO Ze-wen, ZHOU Yao(14)
- Fault-tolerant Scheduling Algorithm for Cloud Computing Based on Task Backup.....LIAO Fu-rong, WANG Cheng-liang, CHEN Shu-yu(17)
- Research on Control Model of Collaborative Workflow in Cloud Manufacturing Environment.....TAN Mao, DUAN Bin, PENG Bang-lun, et al(21)
- Design and Implementation of Parallel Testing Schema Based on Cloud Computing.....HUANG Xiao-ling, CHEN Gui-lin, ZHAO Sheng-hui(27)
- Research and Implementation of Network Education and Training System Based on Cloud Computing.....HUANG Jian-wen(32)
- A Performance Analysis System for Large-scale Distributed Application.....ZANG Dong-song, Vincent Garonne, SUN Gong-xing(37)
- SOA Resource Guarantee Model Based on Virtualization Technology.....LI Dong, XIE Yong-qiang, FAN Yan-fang, et al(42)
- Binary Code Defect Detection Based on Taint Pointer.....LIU Jie, WANG Jia-jie, OUYANG Yong-ji, et al(46)
- Collaborative Filtering Algorithm Based on Fuzzy Clustering.....WANG Ming-jia, HAN Jing-ti, HAN Song-qiao(50)
- Homework Similarity Detection System Based on Sequence Matching.....WANG Xiao-ying, JIN Li, WANG Xiao-qing, et al(53)
- Spirent-based Web Application Performance Evaluation.....ZHOU Peng, ZHOU Hai-ying, ZUO De-cheng, et al(57)
- End-to-End Network Statistical Time Delay Bounds Research Based on Moment Generating Function.....ZHAO Yi-A, ZHANG Zhong-quan(62)
- Network Connectivity Automatic Test Based on Minimum Set Cover.....ZHANG Xin, XUE Zhi, FAN Lei(65)
- Improved LEACH Algorithm Based on Remaining Energy and Location.....LI Nian-qiong, HUANG Hong-guang, LI Peng(70)
- Centralized Localization Algorithm Based on Statistical Uncorrelated Vector Set.....DAI Huan, HE Lei, GU Xiao-feng(74)
- Application of Improved UKF Algorithm in Over-the-horizon Radar.....CHEN Bai-ying, LIU Yi-an, ZHANG Qiang(78)
- Call Admission Control in Mobile Communication System Based on Multi-service.....WANG Zhong-wei, XIA Xiao-yan, DENG Lei, et al(81)
- P2P Hierarchical Searching Mechanism with Social Network Feature.....LIU Hao(86)
- Organizing Method of Tree Transmission Model in Wireless Sensor Network.....PAN Pan, CHEN Lan, ANG Zhi-min, et al(90)
- Analysis of Single and Multi-coding Scheme for Wireless Sensor Network.....GE Jun, ZHOU Lian-ying(96)
- Fast Network Topology Discovery Method Based on Parallel Redundancy Protocol.....LI Zhou, LIU Jian, CHENG Zi-jing(100)
- Improved Scheme of Two Hop Relay Based on Physical-layer Network Coding.....LIU Qin-yong, PENG Hua(105)
- Cryptanalysis and Improvement of an Identity-based Signature Scheme.....HUANG Bin, SHI Liang, DENG Xiao-hong(108)
- Research and Improvement of MD5 Algorithm.....MAO Yi, CHEN Na(111)
- En-route Filtering Enhancement Scheme in Wireless Sensor Network.....REN Xiu-li, ZHANG Chen(115)
- A Multimedia Social Network Trust Model for Digital Rights Management.....CHEN Shu-quan, ZHANG Zhi-yong, YANG Li-jun, et al(119)
- An F5 Steganographic Method Based on Quantization Table Modification.....LU Guo-peng, YE Xue-yi, WANG Yun-lu, et al(123)
- Research on Sample Amounts Needed by Differential Power Attack.....LI Zhi-qiang, YAN Ying-jian, DUAN Er-peng(128)
- Face Recognition Method Based on Compressed Sensing.....ZOU Wei, LI Yuan-xiang, YANG Jun-jie, et al(133)
- Open Vehicle Routing Acceleration Algorithm with Limited Number.....CHEN Yi-qun, MOU Lai-yan, CHEN Guo-ming, et al(137)

Pedestrian Tracking Algorithm in Video of Multi-feature Fusion Based on Particle Filter.....	LI Kai, FENG Rui(141)
Distributed Visual Retrieval Model Based on Potential Theme.....	CHEN Yi-ming, DUAN Ling-yu, HUANG Yan, et al(146)
Fire Time Series Forecasting Based on Ensemble Empirical Mode Decomposition.....	ZHANG Ye, TIAN Wen, LIU Sheng-peng(152)
Research on Rapid Recognition Method of Paper Sequence Number.....	FANG Ai-dong, HU Xue-gang, SHENG Zhuang(156)
News Story Unit Segmentation Based on Multi-modal Feature Fusion.....	LIU Jia-qi, FENG Hua-min, YAN Jian-peng(161)
Feature Selection Algorithm Fused with Filtering and Packaging Mode.....	DAI Wang, FANG Yu-chun, LI Yang(166)
Short Time Speaker Recognition Method Based on Common Feature Selection.....	XIAO Xing-xing, FENG Rui(171)
Uighur Handwriting Identification Based on Microstructure Feature.....	SHEN Jie, KAMIL·Moydi, ZHANG Wei-yu(175)
An Improvement Algorithm of Doubly Regularized Support Vector Machine.....	QIN Chuan-dong, LIU San-ying(179)
Spatial Information Service Automatic Discovery Based on Service Cluster.....	CHEN Ke, CHENG Yi, XIE Ming-xia, et al(182)
A Novel Quantum Evolutionary Algorithm and Its Application Research.....	CAO Si-tong, CHEN Xian-fu(188)
Study of Event Recognition Based on CRFs and Cross-event.....	HOU Li-bin, LI Pei-feng, ZHU Qiao-ming(191)
Coding Method of Image Segmentation in Spiking Neural Network.....	CUI Wen-bo, LIN Xiang-hong, XU Man-yi(196)
Automated Medical Image Segmentation Based on FCM and LBF Model.....	CUI Wen-chao, WANG Yi, FAN Yang-yu, et al(200)
Adaptive Image Enhancement Algorithm Based on Pixel Neighborhood Information.....	WANG Qi-fan, JIA Zhen-hong, QIN Xi-zhong, et al(205)
Adaptive Multi-scale Integrated Remote Sensing Image Segmentation Method.....	LJ Nan, HUO Hong, FANG Tao(208)
Automatic Image Annotation Based on Internet Search and Verification of Feedback.....	YU Jian-song, CAO Dong-lin, LI Shao-zi, et al(211)
Image Retrieval Algorithm Based on Multi-feature Fusion.....	YU Sheng, ZENG Jie-xian, XIE Li(216)
An Improved Multi-focus Image Fusion Algorithm Based on PCNN.....	TONG Huai-shui, WU Xiao-jun(220)
Optimization Design of Complex Multiplication Based on Compiling Guidance.....	FU He-ping, ZHENG Qi-long, CHEN Si-ling, et al(225)
Design of Memory Architecture with Thread-level Speculation Support.....	LAI Xin, LIU Cong, WANG Zhi-ying(228)
Study of Oil Color Detection System Based on Image Processing.....	CHUANG Jia-liang, DUAN Zhong-xing(235)
Strike Combat Task Allocation Method Considering Task Executable Restriction.....	ZHANG Lei, YAO Pei-yang, XU Xue-jie, et al(239)
Fault Detection Method Based on KPCA and CPSO.....	TANG Yong-bo, GUI Wei-hua, OUYANG Wei(244)
Research on Fixed Single-observer Passive Location Technology Based on Spatial-frequency Domain Information.....	HUANG Yao-guang, GAO Bo, LI Jian-xin, et al(247)
Construction Algorithm of Sub-word Unit in Speech Retrieval.....	YANG Le, WU Ji, LV Ping(251)
TV Payment Platform Based on Account Mode.....	LI Lei, ZHOU Xu-shun, PEI Lei, et al(254)
NRDPT: Processing Approach for Next Generation Sequencing Data.....	ZHANG Jun, YIN Tao, CHEN Ling-hwei(258)
Prediction Algorithm for VBR Video Traffic Based on Kernel Density Estimation.....	WU Jun-qi, NI Hong, LI Jun(262)
Register Allocation Strategy for Hierarchy Structure in Base Mathematics Library.....	GUO Zhen-hong, GUO Shao-zhong(266)
Research on Full-text Search of Sports Video Information Based on Solr.....	LE Jia-jin, YAO Lan(269)
Design and Implementation of Three Dimension Mouse Based on MEMS Sensor.....	CHEN Jian-xin, ZANG Jing, YANG Lu-lu(274)
Source Code Migration of CUDA Program to Cell Platform.....	YUE Feng, PANG Jian-min, ZHANG Yi-chi, et al(279)
Combat Target Decision of Communication Confrontation Based on Combat Capability Estimation.....	LI Feng-jing, YAO Pei-yang, WAN Lu-jun, et al(283)
A Design of Security USB2.0 Device Controller.....	LI Ai-guo, FENG Guo-song(288)
Particle Filtering Multi-objective Tracking Based on Adaptive Spatio-temporal Codebook.....	XU Yue, XIAO Gang, ZHANG Ran(291)