



中国计算机学会会刊

ISSN 1001-9081

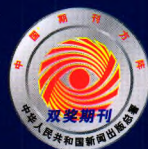
CN 51-1307/TP

CODEN JYIIDU

计算机应用

JOURNAL OF COMPUTER APPLICATIONS

- 中文核心期刊
- 两届国家期刊奖提名奖
- 全国优秀科技期刊一等奖



第33卷
Vol.33

第8期
No.8

2013年8月
Aug. 2013

四川省计算机学会
中国科学院成都分院

主办

2013

第8期

国家期刊奖获奖期刊
中国期刊方阵“双奖”期刊
中文核心期刊
中国科技核心期刊
中国计算机学会会刊
中国科技论文统计源期刊
中国科学引文数据库刊源期刊
中国学术期刊综合评价数据库统计源期刊
中国期刊网、中国学术期刊(光盘版)收录期刊

中文科技期刊数据库收录期刊
英国《科学文摘》收录期刊
俄罗斯《文摘杂志》收录期刊
《日本科学技术振兴机构数据库》收录期刊
美国《剑桥科学文摘》收录期刊
波兰《哥白尼索引》收录期刊
德国《数学文摘》收录期刊
CEPS 中文电子期刊服务全文收录期刊
RCCSE 中国核心学术期刊

计 算 机 应 用

(Jisuanji Yingyong)

第 33 卷 第 8 期 2013 年 8 月

目 次

网络与通信

基于微博网络的影响力最大化算法	吴 凯,季新生,郭进时,刘彩霞(2091)
基于协同过滤的 Web 服务动态社区发现算法	吴 钟,聂规划,陈冬林,章佩璐(2095)
移动通信网络位置群体关联用户挖掘	刘 分,葛国栋,赵 宇,刘冰洋(2100)
高效无线传感器网络强 k - 栅栏覆盖节能算法	郭新明(2104)
基于空间分辨率的无线传感网节点调度策略	任秀丽,王伟勇(2108)
异构移动终端能量感知的 P2P 数据共享机制	杜 鹏,白光伟,沈 航,曹 磊(2112)
基于方向预测的移动自组网概率转发算法	李世宝,姜琳琳,陈瑞祥,洪 利(2117)
多跳协作分集系统的中断性能	唐菁敏,曹金石,龙 华,张春平(2121)
CORBA 分布式系统中网络分割协议可行度分析	陈雅琳,黄宏光,李燕斌(2124)
基于 0-1 分布的 RFID 标签估计算法	钱晓捷,郭洪圆,田阳光(2128)
基于标签分组的 RFID 防碰撞算法	陈荣伶,王玉峰,刘 伟,陈中平(2132)
移位位反序列捕获算法	任国风,吉 江,田竹梅(2136)

先进计算

异构云中面向集群负载均衡的任务调度策略	刘卫宁,高 龙(2140)
基于社会网络特征的云服务副本放置策略	罗浩宇,陈旺虎(2143)
云计算中基于优先级和费用约束的任务调度算法	武小年,邓梦琴,张明玲,曾 兵(2147)
基于改进量子遗传算法的云计算资源调度	刘卫宁,靳洪兵,刘 波(2151)
云计算环境下对资源聚类的工作流任务调度算法	郭凤羽,禹 龙,田生伟,于 炯,孙 华(2154)
Hadoop 任务分配策略的改进	黄承真,王 雷,刘小龙,况亚萍(2158)
面向服务簇的服务体系结构及服务发现	胡 强,杜玉越(2163)
基于服务簇和 QoS 的 Web 服务组合方法	邓式阳,杜玉越(2167)
基于循环分块的流水粒度优化算法	刘晓娟,赵荣彩,丁 锐,李雁冰(2171)
月面地形重构系统中的并行 Delaunay 算法设计	王 喆,高三红,郑慧英,李立春(2177)

数据库技术

基于 lazy 方法的数量型关联分类	李学明,李宾飞,杨 涛,付 萌(2184)
相对行常量差异共表达双聚类挖掘算法	谢华博,尚学群,王 森(2188)
高维数据挖掘中特征选择的稳健方法	李泽安,陈建平,章雅娟,赵为华(2194)
基于概念格的多值属性关联规则可视化	郭晓波,赵书良,赵娇娇,刘军丹(2198)
基于数据集特点的增强聚类集成算法	侯 勇,郑雪峰(2204)
海量数据的相似重复记录检测算法	周典瑞,周莲英(2208)

信息安全

等级 OSPF 网的安全保护方案	孔令晶,曾华桑,李 耀(2212)
------------------	-------------------

移动环境多角色安全互斥风险的模糊评估	王建军,李建平(2218)
基于评价相似度对 WSN 声誉系统合谋攻击的检测机制	王 勇,袁巢燕,唐 靖,胡良梁(2222)
组合公钥体制的线性共谋攻击分析	马安君,李方伟,朱 江(2225)
基于时间序列分析的应用层 DDoS 攻击检测	顾晓清,王洪元,倪彤光,丁 辉(2228)
基于小波域可逆信息隐藏的免疫数字水印算法	肖 迪,祝心悱(2232)
基于 PSNR 小波域量化调制水印嵌入方法的参数定量估算	景 丽,张红军(2236)
基于分层 Arnold 变换的置乱算法	张海涛,姚 雪,陈虹宇,张 晔(2240)
多维进程行为评估模型建立及最优化方法	毛 琨,杜学绘,孙 奕(2244)
无双线性对的无证书签名方案的分析及改进	王 怡,杜伟章(2250)

人工智能

求解高维函数的改进萤火虫群优化算法	彭 硕,欧阳艾嘉,乐光学,贺明华,周 旭(2253)
基于进食粒子群和共轭梯度的混合优化策略	王俭臣,齐晓慧,单甘霖(2257)
求解两级定位一路径问题的粒子群算法	陈久梅,龚 英(2261)
带有权重函数学习因子的粒子群算法	赵远东,方正华(2265)
基于自适应排斥因子的改进粒子群算法	陈 明,刘衍民(2269)
基于共同用户和相似标签的好友推荐方法	张怡文,岳丽华,张义飞,李 青,程家兴(2273)
改进的基于《知网》的词汇语义相似度计算	朱征宇,孙俊华(2276)
新的短文本特征权重计算方法	马雯雯,邓一贵(2280)
进化操作行为学习模型及在移动机器人避障上的应用	郜园园,朱 凡,宋洪军(2283)
改进的 RRT-Connect 双足机器人路径规划算法	莫栋成,刘国栋(2289)

多媒体处理技术

基于异构信息双向传播的网络视频分类方法	李 谦,杜友田,薛 蛟(2293)
均值偏移的多视点视差估计新方法	胡 波,戴万长,肖志坚,吴建平,胡 杰(2297)
改进基本矩阵计算和优化的多摄像机并行标定算法	李 斌,谭光华,高春鸣(2300)
红外模糊图像的无参考质量评价方法	杜少波,章 冲,王 超,梁晓彬,孙士保(2306)
基于潜在狄利克雷分配的图像多层视觉表示方法	李冬睿,李 梅(2310)
使用多弦长曲率多项式的角点检测算法	王俊青,章为川,王富平,陈美荣(2313)
基于梯度域的保纹理图像阴影去除算法	黄 微,傅利琴,王 琛(2317)
采用凹二次正则项的弹性点匹配算法	连 玮,左军毅(2320)
基于并行运算的双层图像锐化方法	张 巍,贺 星,霍颖翔,滕少华,滕 毅,李日贵(2325)
无需设定阈值的图像边缘检测	洪留荣(2330)
基于小波变换与偏微分方程的图像分解及边缘检测	张力娜,李小林(2334)
基于动态参数的函数空间学习最优核映射	谭治英,陈 颖,冯 勇,宋小波(2337)
基于小波子带系数能量的优化权值降噪	王 凯,刘甲甲,袁建英,江晓亮,熊 鹰,李柏林(2341)
彩色结构光系统高低强度条纹的颜色聚类方法	陆 军,高 乐,张 鑫(2346)
基于商空间粒度的极化 SAR 图像分类	何 吟,程 建(2351)
基于局部隶属度和邻域信息的 GIFF-FCM 图像分割算法	王海军,柳 明(2355)
基于单张照片的三维人脸重建优化算法	熊 平,卢 烨(2359)

典型应用

支持向量回归在不确定面向订单装配环境下交货期预测中的应用	孙德厂,史海波,刘 昶(2362)
基于自适应策略的权值修正累积历史 RAIM 算法	黄国荣,常 诚,郝顺义,常雅男,许 刚(2366)
基于多字符 DFA 的高速正则表达式匹配算法	贺 炜,郭云飞,莫 涵,扈红超(2370)
基于 Trie 树的相似字符串查找算法	刘丽霞,张志强(2375)
BM 算法中函数 shift 的研究	韩光辉,曾 诚(2379)
音乐粗情感域中的软切割及分类方法	林景栋,王 唯,廖孝勇(2383)
稀疏补分析模型下迭代硬阈值正交投影	张宗念,李金徽,黄仁泰,闫敬文(2387)
需求依赖库存且有时变短缺拖后率的非立即变质物品库存模型	何 伟,徐福缘(2390)
使用时频盲源分离和小波包去噪的胎儿心电信号提取	韩 亮,蒲秀娟(2394)
基于趋近律方法的 Delta 算子滑模变结构控制系统	刘云龙,韩星海,唐述宏(2397)

关于推荐 2013 年 CCF 优秀博士学位论文的通知	(封二)
2013 年中国计算机大会会议通知	(封二)
中科院成都信息技术有限公司介绍	(封三)

期刊基本参数:CN 51-1307/TP * 1981 * m * A4 * 310 * zh * P * ¥33.00 * 5500 * 75 * 2013-08 * n

本期责任编辑:胡 丹

Journal of Computer Applications

Vol. 33 No. 8 Agu. 2013

Contents

Network and communications

- Influence maximization algorithm for micro-blog network WU Kai, JI Xincheng, GUO Jinshi, LIU Caixia (2091)
- Dynamic community discovery algorithm of Web services based on collaborative filtering
..... WU Zhong, NIE Guihua, CHEN Donglin, ZHANG Peilu (2095)
- Association user mining of location group in mobile communication network
..... LIU Fen, GE Guodong, ZHAO Yu, LIU Bingyang (2100)
- Energy-efficient algorithm of strong k -barrier coverage in wireless sensor network GUO Xinming (2104)
- Node scheduling scheme based on spatial resolution in wireless sensor networks REN Xiuli, WANG Weiyong (2108)
- Energy-aware P2P data sharing mechanism for heterogeneous mobile terminals
..... DU Peng, BAI Guangwei, SHEN Hang, CAO Lei (2112)
- Probabilistic forwarding algorithm of mobile Ad Hoc networks based on directional prediction
..... LI Shibao, LOU Linlin, CHEN Ruixiang, HONG Li (2117)
- Outage performance of multi-hop cooperative diversity system ... TANG Jingmin, CAO Jinshi, LONG Hua, ZHANG Chunpin (2121)
- Analysis on availability of partition-aware CORBA-based distributed system ... CHEN Yalin, HUANG Hongguang, LI Yanbin (2124)
- Estimation of RFID tags based on 0-1 distribution QIAN Xiaojie, GUO Hongyuan, TIAN Yangguang (2128)
- RFID anti-collision algorithm based on tags grouping CHEN Rongling, WANG Yuhao, LIU Yi, CHEN Zhongping (2132)
- Shifted bit inverse sequential acquisition algorithm REN Guofeng, JI Jiang, TIAN Zhumei (2136)

Advanced computing

- Task scheduling strategy based on load balance of cluster in heterogeneous cloud environment LIU Weining, GAO Long (2140)
- Replica allocation policy of cloudy services based on social network properties LUO Haoyu, CHEN Wanghu (2143)
- Task scheduling algorithm based on priority and cost constraint in cloud computing
..... WU Xiaonian, DENG Mengqin, ZHANG Mingling, ZENG Bin (2147)
- Cloud computing resource scheduling based on improved quantum genetic algorithm ... LIU Weining, JIN Hongbing, LIU Bo (2151)
- Workflow task scheduling algorithm based on resource clustering in cloud computing environment
..... GUO Fengyu, YU Long, TIAN Shengwei, YU Jiong, SUN Hua (2154)
- Tasks assignment optimization in Hadoop HUANG Chengzhen, WANG Lei, LIU Xiaolong, KUANG Yaping (2158)
- Service architecture and service discovery oriented to service clusters HU Qiang, DU Yuyue (2163)
- Web service composition approach based on service cluster and QoS DENG Shiyang, DU Yuyue (2167)
- Pipelining granularity optimization algorithm based on loop tiling LIU Xiaoxian, ZHAO Rongcai, DING Rui, LI Yanbing (2171)
- Parallel Delaunay algorithm design in lunar surface terrain reconstruction system
..... WANG Zhe, GAO Sanhong, ZHENG Huiying, LI Lichun (2177)

Database technology

- Quantitative associative classification based on lazy method LI Xueming, LI Binfei, YANG Tao, FU Meng (2184)
- Differential co-expression relative constant row bicluster mining algorithm XIE Huabo, SHANG Xuequn, WANG Miao (2188)
- Robust feature selection method in high-dimensional data mining
..... LI Zean, CHEN Jianping, ZHANG Yajuan, ZHAO Weihua (2194)
- Visualization of multi-valued attribute association rules based on concept lattice
..... GUO Xiaobo, ZHAO Shuliang, ZHAO Jiaojiao, LIU Jundan (2198)
- Enhanced clustering ensemble algorithm based on characteristics of data sets HOU Yong, ZHENG Xuefeng (2204)
- Algorithm for detecting approximate duplicate records in massive data ZHOU Dianrui, ZHOU Lianying (2208)

Information security

- Secure protection scheme for hierarchical OSPF network KONG Lingjing, ZENG Huashen, LI Yao (2212)
- Fuzzy risk evaluation on multi-role security mutual exclusion in mobile environment WANG Jianjun, LI Jianping (2218)
- Colluding clique detector based on evaluation similarity in WSN reputation system mechanism
..... WANG Yong, YUAN Chaoyan, TANG Jing, HU Liangliang (2222)
- Linear collusion attack analysis of combined public key cryptosystem MA Anjun, LI Fangwei, ZHU Jiang (2225)
- Detection of application-layer DDoS attack based on time series analysis
..... GU Xiaoqing, WANG Hongyuan, NI Tongguang, DING Hui (2228)
- Immunity digital watermarking algorithm based on reversible information hiding in wavelet domain XIAO Di, ZHU Xinyi (2232)
- Quantitative estimation of parameters in quantization modulation watermarking method of wavelet domain based on PSNR
..... JING Li, ZHANG Hongjun (2236)
- Scrambling algorithm based on layered Arnold transform ZHANG Haitao, YAO Xue, CHEN Hongyu, ZHANG Ye (2240)

Multiple-dimension process behavior evaluation model and its optimization MAO Kun, DU Xuehui, SUN Yi (2244)
Security analysis and improvement of certificateless signature scheme without bilinear pairing WANG Yi, DU Weizhang (2250)

Artificial intelligence

Improved glowworm swarm optimization algorithm for high-dimensional functions
..... PENG Shuo, OUYANG Aijia, YUE Guangxue, HE Minghua, ZHOU Xu (2253)
Mixed optimization strategy based on eating particle swarm and conjugate gradient
..... WANG Jianchen, QI Xiaohui, SHAN Ganlin (2257)
Particle swarm optimization for two-echelon location-routing problem CHEN Jiumei, GONG Ying (2261)
Particle swarm optimization algorithm with weight function's learning factor ZHAO Yuandong, FANG Zhenghua (2265)
Improved particle swarm optimization based on adaptive rejection factor CHEN Ming, LIU Yanmin (2269)
Friends recommended method based on common users and similar labels
..... ZHANG Yiwen, YUE Lihua, ZHANG Yifei, LI Qing, CHENG Jiaxing (2273)
Improved vocabulary semantic similarity calculation based on HowNet ZHU Zhengyu, SUN Junhua (2276)
New feature weight calculation method for short text MA Wenwen, DEGN Yigui (2280)
Evolutionary operant behavior learning model and its application to mobile robot obstacle avoidance
..... GAO Yuanyuan, ZHU Fan, SONG Hongjun (2283)
Improved RRT-Connect path planning algorithm for biped robot MO Dongcheng, LIU Guodong (2289)

Multimedia processing technology

Web video classification based on bidirectional propagation of heterogeneous attributes LI Qian, DU Youtian, XUE Jiao (2293)
New disparity estimation method for multiview video based on Mean Shift
..... HU Bo, DAI Wanchang, XIAO Zhijian, WU Jianping, HU Jie (2297)
Improved fundamental matrix computation and optimization method in parallel calibration of multi-camera system
..... LI Bin, TAN Guanghua, GAO Chunming (2300)
Method of no-reference quality assessment for blurred infrared image
..... DU Shaobo, ZHANG Chong, WANG Chao, LIANG Xiaobin, SUN Shibao (2306)
Image multilayer visual representation method based on latent dirichlet allocation LI Dongrui, LI Mei (2310)
Corner detection algorithm using multi-chord curvature polynomial
..... WANG Junqing, ZHANG Weichuan, WANG Fuping, CHEN Meirong (2313)
Texture-preserving shadow removal algorithm based on gradient domain HUANG Wei, FU Liqin, WANG Chen (2317)
Non-rigid feature point matching algorithm using concave quadratic regularization term LIAN Wei, ZUO Junyi (2320)
Bi-level image sharpening method based on parallel computing
..... ZHANG Wei, HE Xing, HUO Yingxiang, TENG Shaohua, TENG Yi, LI Rigui (2325)
Image edge detection without threshold HONG Liurong (2330)
Image decomposition and edge detection based on wavelet transform and partial differential equation
..... ZHANG Lina, LI Xiaolin (2334)
Learning optimal kernel mapping based on function space with dynamic parameters
..... TAN Zhiying, CHEN Ying, FENG Yong, SONG Xiaobo (2337)
Noise reduction of optimization weight based on energy of wavelet sub-band coefficients
..... WANG Kai, LIU Jiajia, YUAN Jianying, JIANG Xiaoliang, XIONG Ying, LI Bailin (2341)
Color clustering method for high and low intensity stripes of color structured light system LU Jun, GAO Le, ZHANG Xin (2346)
Classification of polarimetric SAR images based on quotient space granularity composition theory HE Yin, CHENG Jian (2351)
Generalized fuzzy c-means algorithm with improved fuzzy partitions based on local membership and neighbor information
..... WANG Haijun, LIU Ming (2355)
Modified 3D facial reconstruction algorithm based on a single photo XIONG Ping, LU Ye (2359)

Typical applications

Application of support vector regression in prediction of due date under uncertain assemble-to-order environment
..... SUN Dechang, SHI Haiibo, LIU Chang (2362)
Weight modification accumulated epochs RAIM algorithm based on self-adaptive strategy
..... HUANG Guorong, CHANG Cheng, HAO Shunyi, CHANG Yanan, XU Gang (2366)
Multi-character DFA-based high speed regular expression matching algorithm
..... HE Wei, GUO Yunfei, MO Han, HU Hongchao (2370)
Similar string search algorithm based on Trie tree LIU Lixia, ZHANG Zhiqiang (2375)
Research on function shift in Boyer-Moore algorithm HAN Guanghui, ZENG Cheng (2379)
Method for music soft-cutting and classification in rough-emotion area LIN Jingdong, WANG Wei, LIAO Xiaoyong (2383)
Iterative hard thresholding orthogonal projection under cosparsity analytical model
..... ZHANG Zongnian, LI Jinhui, HUANG Rentai, YAN Jingwen (2387)
Inventory model for deteriorating items with time-dependent partial backlogging rate and inventory-level-dependent demand rate
..... HE Wei, XU Fuyuan (2390)
Extraction of fetal electrocardiogram signal utilizing blind source separation based on time-frequency distributions and wavelet packet denoising
..... HAN Liang, PU Xiujuan (2394)
Delta operator sliding mode variable structure control system based on reaching law method
..... LIU Yunlong, HAN Xinghai, TANG Shuhong (2397)