

- ❖ 英国《科学文摘》(INSPEC) 来源期刊
- ❖ 俄罗斯《文摘杂志》(AJ) 来源期刊
- ❖ 美国《乌利希期刊指南(网络版)》(Ulrichsweb) 收录期刊
- ❖ 2017—2019 年中国国际影响力优秀学术期刊(自然科学与工程)
- ❖ 第二届国家期刊奖百种重点科技期刊
- ❖ 中国科技核心期刊 ❖ 全国中文核心期刊
- ❖ 中国科技论文统计源期刊
- ❖ 中国学术期刊综合评价数据库来源期刊
- ❖ RCCSE 核心学术期刊 ❖ 中国期刊方阵双效期刊

- ❖ 《日本科学技术振兴机构数据库》(JST) 来源期刊
- ❖ 美国《艾博思科学数据库》(EBSCO) 全文来源期刊
- ❖ 美国《剑桥科学文摘(自然科学)》(CSA(NS)) 核心期刊
- ❖ 波兰《哥白尼索引》(IC) 来源期刊
- ❖ 中国科学引文数据库(CSCD) 来源期刊
- ❖ 《中文科技期刊数据库》来源期刊
- ❖ 《中国期刊网》《中国学术期刊(光盘版)》来源期刊
- ❖ 中国精品科技期刊顶尖学术论文(F5000)项目来源期刊
- ❖ 《电子科技文献数据库》来源期刊
- ❖ 《中国工程技术电子信息网》来源期刊

计算机应用研究

Jisuanji Yingyong Yanjiu

第 37 卷 第 3 期 2020 年 3 月

目 次

综述评论

Spark 环境下 K-means 初始中心点优化研究综述	行艳妮, 钱育蓉, 南方哲, 赵京霞(641)
移动界程演算理论及应用研究综述	林荣德, 江 华, 黄建新(648)

算法研究探讨

基于双通道特征融合的 WPOS-GRU 专利分类方法	余本功, 张培行(655)
基于递归投影的结构性网络嵌入	孟亚文, 傅洛伊, 王新兵(659)
基于 DMD-LSTM 模型的股票价格时间序列预测研究	史建楠, 邹俊忠, 张 见, 汪春梅, 卫作臣(662)
基于加权 K 近邻的改进密度峰值聚类算法	杨 震, 王红军(667)
基于药物和疾病特征关联的药物重定位混合推荐算法	刘 杰, 金柳顺, 景 波(672)
结合项目流行度加权的协同过滤推荐算法	魏甜甜, 陈 莉, 范婷婷, 吴小华(676)
结合评分比例因子及项目属性的协同过滤算法	李淑芝, 李志军, 邓小鸿(680)
受限玻尔兹曼机与加权 Slope One 的混合推荐算法研究	沈学利, 赫辰皓, 孟祥福(684)
基于密度聚类算法的校园人群聚集和移动规律分析	郭玉彬, 吴宇航, 周哲帆, 李西明(688)
基于蒙特卡罗仿真的湖库水质预测及富营养化风险评估方法	王小艺, 周宇琴, 赵峙尧, 王 立, 许继平, 于家斌(693)
基于循环卷积神经网络的实体关系抽取方法研究	万 静, 李浩铭, 严欢春, 张雪超(699)
基于时间分数阶非线性扩散模型的平滑方法	李远禄, 赵伟静, 蒋 民(704)
基于条件随机场与信息熵的特定领域概念发现	付 瑶, 万 静, 邢立栋(708)
基于二部图多权重投影的大数据推荐算法	高 薇, 何可期(712)
情景感知的物联网服务推荐方法研究	刘志中, 郭思慧, 张振兴(717)
旅游高峰期交通流量的多时间尺度预测方法及应用	李凌雁, 赵 欣, 翁钢民(721)
面向汉维机器翻译的双语关联度优化模型	潘一荣, 李 晓, 杨雅婷, 董 瑞(726)
基于句子跨度的哈萨克语句法分析研究	柴 伟, 古丽拉·阿东别克(731)
一种针对机器阅读理解中答案获取的序列生成模型	霍 欢, 邹依婷, 金轩城, 黄君扬, 薛瑶环(734)
基于神经网络与领域知识的外交国际合作元素抽取	张子靖, 万常选, 刘德喜, 刘 玉, 刘喜平, 江腾蛟(739)
动态环境下改进人工势场法的仓储机器人自主导航系统研究	罗 强, 王海宝, 崔小劲, 徐洪泽(745)
面向耗材节省的三维打印路径规划算法研究	江志伟, 李耀棠(750)
云—边缘系统中跨域大数据作业调度技术研究	徐 超, 吴 波, 姜丽丽, 金熠波, 张 胜(754)
基于改进匈牙利算法的航路网络延误优化	王莉莉, 王航臣(759)
基于调度历史数据在线预测作业执行时间	许伦凡, 熊 敏, 肖永浩(763)
基于混合布谷鸟算法的不确定手术调度模型求解	杨 枫, 叶春明, 汪顶玉(768)
易腐品多周期闭环物流网络鲁棒优化模型	郭健全, 杨晓华(774)
基于 ARM + FPGA 平台的二值神经网络加速方法研究	孙孝辉, 宋庆增, 金光浩, 姜文超(779)

融合模拟退火的随机森林房价评估算法	丁畅钧天,曹怀虎(784)
考虑制造商公平关切的强势零售商自有品牌导入策略研究	黄宗盛,冯 婷(789)
多通道三维视觉指导运动想象脑电信号特征选择算法	胡 敏,王志强,黄宏程,李 冲(794)
基于交叉迁移和共享调整的改进蝴蝶优化算法	孙 林,陈岁岁,徐久成,王振华(799)
基于用户兴趣的跨网络用户身份识别算法	邓诗琦,李 雷,施化吉(805)
具有学习机制的正弦余弦算法	方旭阳,武相军,游大涛(809)

信息安全技术

基于 XGBoost 方法的社交网络异常用户检测技术	袁丽欣,顾益军,赵大鹏(814)
在小波域中实现的奇异谱分析音频隐藏算法	陆诗依,高 勇(818)
基于条件变分自编码的密码攻击算法	段大高,赵振东,梁少虎,韩忠明(821)
基于 HBase 的细粒度访问控制方法研究	黄良强,朱 焱,陶 霄(824)
基于深度序列加权核极限学习的入侵检测算法	汪 洋,伍忠东,朱 婧(829)
面向企业私有云的数据安全保护方法研究	陈 庄,齐 锋(833)
4 bit S 盒输入及输出低次代数关系分析	程月单,韦永壮,叶 涛(838)
基于核函数的软件定义网络 DDoS 实时安全系统	刘 敏,滕 华,何先波(843)
攻防博弈驱动下的无线传感器网络病毒传播模型	周海平,沈士根,黄龙军,刘 妮(847)
融合标签相似度的差分隐私矩阵分解推荐算法	郑 剑,王啸乾(851)

网络与通信技术

边缘计算网络中面向负载均衡的调度机制	董 谦,马宇翔,李 俊(856)
基于改进慢启动算法的大文件快速传输	邓 彬,成卫青(860)
基于增量最短路径优先算法的高效 LFA 实现方法	耿海军,郭小英,尹 霞(864)
移动群智感知中的空间任务分配机制	邢 倩,孙学梅,苑春苗(868)
基于深度置信网络的高分辨率雷达距离像识别	王泓霖,李 伟,许 强,徐建业,张 军(872)
面向 EPC Gen2 标准的 RFID 标签分组多位隙并行识别协议	杨新爱,段 富(876)
大规模 MIMO 下联合用户位置和空间距离的导频分配方案	周小海,黄俊伟(880)
频率捷变的全双工数字自干扰抑制方法	皇甫雅帆,杨 春,秋勇涛,刘友江(884)

图形图像技术

基于 3D 卷积神经网络的视频哈希算法	刘玉莹,刘宏哲,袁家政,李 兵(887)
基于深度时空卷积神经网络的人群异常行为检测和定位	胡学敏,陈 钦,杨 丽,余 进,童秀迟(891)
融合背景估计与 U-Net 的文档图像二值化算法	熊 炜,王鑫睿,王 娟,刘 敏,曾春艳(896)
基于改进 Faster RCNN 的安全帽佩戴检测研究	徐守坤,王雅如,顾玉宛,李 宁,庄丽华,石 林(901)
静态图像中采用混合卷积结构进行人群密度估计	范绿源,仝明磊,李 敏,南 昊(906)
基于自适应权重的遮挡信息立体匹配算法	张雅妮,刁勤晴,朱凌云(910)
基于区域分割的表情鲁棒三维人脸识别方法	桑高丽,郑增国,闫 超(914)
基于轻量级深度网络的目标识别方法	李亚辉,刘 俊(919)
基于新轮廓特征的离线签名鉴别	黄 威,詹恩奇,郑建彬,汪 阳(924)
基于降维 Gabor 特征和决策融合的高光谱图像分类	杨秀杰,高 丽(928)
基于特征重标定生成对抗网络的图像分类算法	姜代红,张三友,刘其开(932)
多尺度自适应阈值局部三值模式编码算法	张 雨,王 强,李柏林,高 攀(936)
基于机器学习的心律失常信号分类算法研究	刘 腾,唐 虹,张士兵(940)
自适应滤波结合改进 T-snake 模型的甲状腺超声图自动分割方法	周春瑜,程显毅(944)
基于改进卷积神经网络的图像超分辨率算法研究	胡晓辉,张建国(947)
面向图文匹配任务的多层次图像特征融合算法	郝志峰,李俊峰,蔡瑞初,温 雯,王丽娟,黎伊婷(951)
面向骨骼受损类型判别的体素模板构建	陆丰威,何坤金,陈义仁(957)

信息集萃

下期要目	(804)
------------	-------

期刊基本参数:CN51-1196/TP * 1984 * m * A4 * 320 * zh * P * ¥50.00 * 3840 * 71 * 2020-03 * n

本期责任编辑 何 俐,黄 莉

Application Research of Computers

Vol. 37 No. 3 Mar. 2020

Contents

Survey

- Survey of optimization on K-means algorithm in Spark Xing Yanni, Qian Yurong, Nan Fangzhe, *et al.* (641)
Overview on theory and applications of ambients calculus Lin Rongde, Jiang Hua, Huang Jianxin (648)

Algorithm Research & Explore

- WPOS-GRU patent classification method based on two-channel feature fusion Yu Bengong, Zhang Peihang (655)
Structural network embedding based on recurrent projection Meng Yawen, Fu Luoyi, Wang Xinbing (659)
Research of stock price prediction based on DMD-LSTM model Shi Jiannan, Zou Junzhong, Zhang Jian, *et al.* (662)
Improved density peak clustering algorithm based on weighted K-nearest neighbor Yang Zhen, Wang Hongjun (667)
Hybrid recommendation algorithm for drug repositioning based on association of drug and disease characteristics Liu Jie, Jin Liuqi, Jing Bo (672)
Collaborative filtering recommendation algorithm combined with item popularity weighting Wei Tiantian, Chen Li, Fan Tingting, *et al.* (676)
Collaborative filtering algorithm combined with score scale factor and item attribute Li Shuzhi, Li Zhijun, Deng Xiaohong (680)
Research on hybrid recommendation algorithm of restricted Boltzmann machine and weighted Slope One Shen Xueli, He Chenhao, Meng Xiangfu (684)
Analysis of crowd aggregation and movement on campus based on density clustering algorithm Guo Yubin, Wu Yuhang, Zhou Zhefan, *et al.* (688)
Monte-Carlo simulation based water quality prediction and eutrophication risk assessment method of lakes
..... Wang Xiaoyi, Zhou Yuqin, Zhao Zhiyao, *et al.* (693)
Relation extraction based on recurrent convolutional neural network Wan Jing, Li Haoming, Yan Huanchun, *et al.* (699)
Smoothing method based on time-fractional nonlinear diffusion model Li Yuanlu, Zhao Weijing, Jiang Min (704)
New words discovery method based on CRF and information entropy in specific domain Fu Yao, Wan Jing, Xing Lidong (708)
Recommendation system of big data based on multi-weight projection of bipartite network Gao Wei, He Keqi (712)
Research on context-aware IoT services recommendation Liu Zhizhong, Guo Sihui, Zhang Zhenxing (717)
Multi-time scale prediction method and application on tourism fastigium traffic flow Li Lingyan, Zhao Xin, Weng Gangmin (721)
Bilingual relatedness optimization model for Chinese-Uyghur machine translation Pan Yirong, Li Xiao, Yang Yating, *et al.* (726)
Research of Kazakh parsing based on span Chai Wei, Gulila Altenbek (731)
Sequence generation model for answer acquisition to machine reading comprehension Huo Huan, Zou Yiting, Jin Xuancheng, *et al.* (734)
Extraction of diplomatic international cooperation elements based on neural network and domain knowledge
..... Zhang Zijing, Wan Changxuan, Liu Dexi, *et al.* (739)
Research on autonomous navigation system of warehousing mobile robot based on improved artificial potential field method in dynamic environment
..... Luo Qiang, Wang Haibao, Cui Xiaojing, *et al.* (745)
Research on 3D printing path planning for material cost saving Jiang Zhiwei, Li Yaotang (750)
Task scheduling for geo-distributed data analytics in cloud-edge system Xu Chao, Wu Bo, Jiang Lili, *et al.* (754)
Optimization of en-route network delay based on improved Hungarian algorithm Wang Lili, Wang Hangchen (759)
On-line prediction of application runtime using schedule historical data Xu Lunfan, Xiong Min, Xiao Yonghao (763)
Solution of uncertain operation scheduling model based on hybrid cuckoo algorithm Yang Feng, Ye Chunming, Wang Dingyu (768)
Robust optimization model of multi-period closed-loop logistics network for perishable products Guo Jianquan, Yang Xiaohua (774)
Research of binary neural network acceleration method based on ARM + FPGA platform Sun Xiaohui, Song Qingzeng, Jin Guanghao, *et al.* (779)
Housing prices evaluation using random forest algorithm combing with simulated annealing Ding Yangjuntian, Cao Huaihu (784)
Impact of fairness concern on store brand strategy of powerful retailer Huang Zongsheng, Feng Ting (789)

Feature selection algorithm for 3D visual guidance multi-channel motor imagery	Hu Min, Wang Zhiqiang, Huang Hongcheng, <i>et al.</i> (794)
Improved monarch butterfly optimization algorithm based on cross migration and sharing adjustment	Sun Lin, Chen Suisui, Xu Jiucheng, <i>et al.</i> (799)
User identification across social network based on user interests	Deng Shiqi, Li Lei, Shi Huaji (805)
Sine-cosine algorithm with learning mechanism	Fang Xuyang, Wu Xiangjun, You Datao (809)

Technology of Information Security

Research on abnormal user detection technology in social network based on XGBoost method	Yuan Lixin, Gu Yijun, Zhao Dapeng (814)
Singular spectrum analysis audio hidden algorithm implemented in wavelet domain	Lu Shiyi, Gao Yong (818)
Password cracking algorithm using conditional variational auto-encoders	Duan Dagao, Zhao Zhendong, Liang Shaohu, <i>et al.</i> (821)
Research on fine-grained access control method based on HBase	Huang Liangqiang, Zhu Yan, Tao Xiao (824)
Intrusion detection algorithm based on depth sequence weighted kernel extreme learning	Wang Yang, Wu Zhongdong, Zhu Jing (829)
Research on data security protection method for enterprise private cloud	Chen Zhuang, Qi Feng (833)
New analysis of low degree algebraic relation between input and output of 4 bit S-box	Cheng Yuedan, Wei Yongzhuang, Ye Tao (838)
Real-time DDoS security system of software definition network based on kernel functions	Liu Min, Teng Hua, He Xianbo (843)
Virus propagation model for wireless sensor network driven by attack-defense game	Zhou Haiping, Shen Shigen, Huang Longjun, <i>et al.</i> (847)
Differential privacy matrix factorization recommendation algorithm fusing tag similarity	Zheng Jian, Wang Xiaoqian (851)

Technology of Network & Communication

Load balancing oriented scheduling scheme in edge computing network	Dong Qian, Ma Yuxiang, Li Jun (856)
Large file transfer based on improved slow start algorithm	Deng Bin, Cheng Weiqing (860)
Efficient LFA implementation method based on incremental shortest path first algorithm	Geng Haijun, Guo Xiaoying, Yin Xia (864)
Assignment mechanism for spatial tasks in mobile crowd sensing	Xing Qian, Sun Xuemei, Yuan Chunmiao (868)
High resolution range profile recognition based on deep belief network	Wang Honglin, Li Wei, Xu Qiang, <i>et al.</i> (872)
RFID tag group multiple bit-slot parallel identification protocol for EPC Gen2 standard	Yang Xin'ai, Duan Fu (876)
Pilot allocation scheme for joint user location and spatial distance in massive MIMO	Zhou Xiaohai, Huang Junwei (880)
Digital self-interference cancellation method for frequency agility full duplex system	Huangfu Yafan, Yang Chun, Qiu Yongtao, <i>et al.</i> (884)

Technology of Graphic & Image

Video hash algorithm based on 3D convolutional neural network	Liu Yuying, Liu Hongzhe, Yuan Jiazheng, <i>et al.</i> (887)
Abnormal crowd behavior detection and localization based on deep spatial-temporal convolutional neural network Hu Xuemin, Chen Qin, Yang Li, <i>et al.</i> (891)
Document image binarization algorithm based on background estimation and U-Net	Xiong Wei, Wang Xinrui, Wang Juan, <i>et al.</i> (896)
Safety helmet wearing detection study based on improved Faster RCNN	Xu Shoukun, Wang Yaru, Gu Yuwan, <i>et al.</i> (901)
Crowd density estimation using hybrid convolution structure in static images	Fan Lyuyuan, Tong Minglei, Li Min, <i>et al.</i> (906)
Occlusion information stereo matching approach based on adaptive weight	Zhang Yani, Diao Qinqing, Zhu Lingyun (910)
Region-based expression invariant 3D face recognition	Sang Gaoli, Zheng Zengguo, Yan Chao (914)
Object recognition method based on lightweight depth network	Li Yahui, Liu Jun (919)
Off-line signature verification system based on novel contour features	Huang Wei, Zhan Enqi, Zheng Jianbin, <i>et al.</i> (924)
Hyperspectral image classification based on dimensionality reduction Gabor feature and decision Fusion	Yang Xiujie, Gao Li (928)
Image classification algorithm based on feature recalibration GAN	Jiang Daihong, Zhang Sanyou, Liu Qikai (932)
Coding algorithm of multi-scaled adaptive threshold local ternary pattern	Zhang Yu, Wang Qiang, Li Bailin, <i>et al.</i> (936)
Study on classification algorithm of arrhythmia signals based on machine learning	Liu Teng, Tang Hong, Zhang Shibing (940)
Automatic segmentation of thyroid ultrasound images based on adaptive filtering combined with T-snake model	Zhou Chunyu, Cheng Xianyi (944)
Research on image super-resolution algorithm based on improved convolutional neural network	Hu Xiaohui, Zhang Jianguo (947)
Fusion of multi-level image features for image-text matching	Hao Zhifeng, Li Junfeng, Cai Ruichu, <i>et al.</i> (951)
Voxel template construction for skeletal damage type discrimination	Lu Fengwei, He Kunjin, Chen Yiren (957)