

- ❖ 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
- ❖ 2015、2017 年中国国际影响力优秀学术期刊(自然科学与工程技术)
- ❖ 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《史蒂芬斯全文数据库》(EBSCOhost) 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 35 卷 第 11 期 2018 年 11 月

### 目 次

#### 综述评论

|                      |                     |
|----------------------|---------------------|
| 多模态情感识别研究进展 .....    | 何俊, 刘跃, 何忠文(3201)   |
| 移动群智感知中任务分配的研究 ..... | 方文凤, 周朝荣, 孙三山(3206) |

#### 算法研究探讨

|                                       |                               |
|---------------------------------------|-------------------------------|
| 基于超图的稀疏属性选择算法 .....                   | 雷聪, 钟智, 胡晓依, 方月, 余浩, 郑威(3213) |
| 具有可控与不可控因素系统的可靠性维持方法 .....            | 崔铁军, 李莎莎, 马云东, 王来贵(3217)      |
| 基于文档类密度的特征权重算法 .....                  | 周鹏程, 刘旭敏, 徐维祥(3220)           |
| 一个改进的物质扩散—热传导混合推荐算法 .....             | 周海平, 沈士根, 黄龙军, 周洪波(3224)      |
| 基于多任务学习的多源数据分类研究 .....                | 马建阳, 张宝鹏(3228)                |
| 融合邻域扰动的简化粒子群 K-均值聚类算法 .....           | 王日宏, 崔兴梅, 周炜, 李祥(3232)        |
| 基于最小生成树的多特征融合的脑网络分类研究 .....           | 闫朋朋, 郭浩, 陈俊杰(3237)            |
| 基于改进凸包算法的船舶巡航预警快速监测研究 .....           | 黄冬梅, 杨建, 郑小罗, 杨蒙召(3243)       |
| 基于间歇事件触发控制二阶多智能体网络的一致性 .....          | 赵丹, 胡爱花, 李玲(3246)             |
| 基于 LSTM 模型的单导联脑电癫痫发作预测 .....          | 单绍杰, 李汉军, 王璐璐, 唐晓英(3251)      |
| 基于灰色 EM-SHSM 的缺失数据下设备健康预测研究 .....     | 吴健飞, 刘勤明, 吕文元, 叶春明(3255)      |
| QQ 群超网络特性分析 .....                     | 刘猛, 胡枫(3259)                  |
| 基于柔性策略的变压器智能感知数据采集研究 .....            | 赵妙颖, 许刚(3263)                 |
| 动态调整调度配额的 TCSN 调度算法 .....             | 张华, 谭献海, 赵晋南, 刘力浩(3267)       |
| 含有 AGV 的柔性车间调度优化研究 .....              | 徐云琴, 叶春明, 曹磊(3271)            |
| 基于 elastic net 方法的静息态脑功能超网络构建优化 ..... | 靳研艺, 郭浩, 陈俊杰(3276)            |
| 需求点位置随机的分批配送 VRP 优化 .....             | 石建力, 张锦(3281)                 |
| 一种快速多种群的粒子群多模优化算法 .....               | 陈小玉(3286)                     |
| 一种混合改进的鸡群优化算法 .....                   | 杨菊靖, 张达敏, 张慕雪, 朱陈柔玲(3290)     |
| 永磁同步电机系统混沌状态的主动控制 .....               | 秦晓飞, 曹新凯, 李峰(3294)            |
| MB-HL 模型的微博主题挖掘研究 .....               | 蒋权, 郑山红, 刘凯, 李万龙(3298)        |
| 基于改进 TOPSIS 方法的人体面部皮肤养护决策研究 .....     | 张欣, 王小艺, 张慧妍, 许继平(3302)       |

#### 系统应用开发

|                                      |                                   |
|--------------------------------------|-----------------------------------|
| 基于 SP-LNS-KNN 的半导体生产过程故障检测方法研究 ..... | 冯立伟, 张成, 谢彦红, 李元, 逢玉俊(3307)       |
| 一种面向众核处理器的嵌套循环多维并行识别方法 .....         | 李颖颖, 庞建民, 李雁冰, 翟胜伟(3311)          |
| t-SNE + LDA 算法在仿生嗅觉中的应用研究 .....      | 郑首易, 骆德汉, 温腾腾, 何家峰(3315)          |
| 基于运动观察 EEG 的运动方向解析 .....             | 逯鹏, 谢全威, 李新建, 胡玉霞, 张景景, 刘豪杰(3318) |
| PMC 诊断模型下的网络条件可诊断度研究 .....           | 张小菲, 王丽丹, 刘文军, 韩月娟, 林政宽(3322)     |
| 基于灰色关联熵的煤与瓦斯突出概率神经网络预测模型 .....       | 温廷新, 于凤娥, 邵良杉(3326)               |
| 微博信息可信度评估的数据起源方法 .....               | 张子良, 董红斌, 谭成予, 梁意文(3330)          |
| PHANTOM Omni 机器人的自适应模糊滑模控制 .....     | 韩瑞, 刘霞(3335)                      |

|  |                     |
|--|---------------------|
| 基于自适应积分反步的四旋翼飞行器控制 .....                 | 石川,林 达(3338)        |
| 异构云平台中基于多层架构的动态循环调度方案 .....              | 杨波,刘 立(3343)        |
| 基于 Leap Motion 和 S 曲线的飞行机器人机械臂控制研究 ..... | 包军,仓宇,邓经枢,董明波(3347) |

#### 网络与通信技术

|  |                           |
|--|---------------------------|
| 基于 Memetic 算法的 WSN 分簇协议的研究 .....       | 席志红,李向峰(3351)             |
| 移动云计算中一种虚拟机迁移的预拷贝传输策略研究 .....          | 黄凌飞,王高才,彭 颖(3356)         |
| 基于车辆关联性的车载网络数据转发概率策略路由算法 .....         | 王磊磊,陈志刚,吴 嘉(3361)         |
| 结合距离与队列积压的无线 mesh 网络拥塞感知路由协议 .....     | 董 薇,陶 桦(3365)             |
| 认知无线 mesh 网络中基于协作学习自动机的自适应信道分配算法 ..... | 顾金媛,章国安(3369)             |
| Macro/Femtocell 异构网络基于能效的资源分配 .....    | 王 鸿,宋仁旺,李丽君(3373)         |
| 基于 OpenFlow 的软件定义网络虚拟化方案 .....         | 张衍志,叶小琴,梁 刚(3377)         |
| 基于图着色理论的全双工 D2D 分簇资源分配方案 .....         | 朱国晖,杨晶晶,郭 嘉,苏珂嫒,刘 涛(3382) |
| 基于随机博弈的云代理与私有云联盟的最优收益 .....            | 张锋辉,符茂胜,郁书好,王祥青(3385)     |
| 两层双向加权星型网络的同步能力分析 .....                | 李晓霞,申玉卓,张金浩,孙 娟,李艳雨(3389) |
| 一种基于 SDN 和 MPTCP 的多径并行传输技术 .....       | 卢选民,戴继煌,肖 鹏,魏媛媛(3393)     |
| 一种基于 CSI 的轻量级行为识别方法 .....              | 姚青桦,崔 然(3397)             |
| WSN 中基于可靠性评估和路径自适应配置的多径路由协议 .....      | 张妮妮,陈绥阳(3400)             |

#### 信息安全技术

|                                   |                           |
|-----------------------------------|---------------------------|
| 基于分类和时序的 SDN 流表更新一致性方案 .....      | 齐 婵,刘建伟,毛 剑,王蒙蒙,程昊苏(3405) |
| 代理节点安全检测的 MANET 地址配置算法研究 .....    | 贺蕴彬,代 飞(3409)             |
| 轻量级分组密码 Piccolo 的积分攻击 .....       | 李艳俊,石宇婷(3413)             |
| 支持文件动态更新的基于属性可搜索加密方案 .....        | 许盛伟,王荣荣,李新玉(3418)         |
| 基于斜帐篷混沌映射和 Arnold 变换的图像加密方案 ..... | 李春虎,罗光春,李春豹(3424)         |
| 一种新型的基于 CS-MRI 的图像信息加密方法 .....    | 简献忠,刘 钢(3428)             |
| 基于信息流控制的 HDFS 敏感数据安全增强 .....      | 吴泽智,陈性元,杜学绘,杨 智(3432)     |
| 加权社交网络敏感度的差分隐私保护研究 .....          | 朱勇华,刘爽英(3436)             |
| 基于二次剩余的 RFID 标签所有权动态转移协议 .....    | 李晓东,徐金成(3441)             |
| 云环境下一种隐私文件分类存储与保护方案 .....         | 李 勇,秦 拯,相中启,刘鹤飞(3445)     |

#### 图形图像技术

|   |                              |
|---|------------------------------|
| 基于机器学习的小目标检测与追踪的算法研究 .....              | 林晓林,孙 俊(3450)                |
| 基于边缘检测的卷积核数量确定方法 .....                  | 文元美,余霆嵩,凌永权(3454)            |
| 基于 BING 似物性检测的行人快速检测算法 .....            | 郭晓鹏,杜劲松,白珈郡,王 伟(3458)        |
| 基于对极几何约束的动态背景下运动目标检测 .....              | 詹煜欣,董文永(3462)                |
| 基于自适应遗传 PHD 滤波的多群目标跟踪方法 .....           | 李 波,谷珊珊(3466)                |
| 基于 Hough 变换和 GVF Snake 模型的脑肿瘤分割方法 ..... | 孔媛媛,李军华,王 艳,鲁宇明,Wu Liu(3469) |
| 基于多特征的视频场景分类 .....                      | 贾澎涛,杨丽娜(3472)                |
| 层次聚类结合空间金字塔的图像分类 .....                  | 刘明波,胡朝举(3476)                |
| 基于改进控制标记分水岭的牙体硬组织分割 .....               | 金 茜,汪 伟(3479)                |
| 基于各向异性主动轮廓模型的图像分割方法研究 .....             | 熊晶晶,周亚丽,张奇志(3484)            |
| 基于单应性矩阵和内容保护变形的图像拼接 .....               | 杨晨晓,辛月兰(3488)                |
| 一种鲁棒稀疏表示的单样本人脸识别算法 .....                | 沈 韬,李克清,夏 瑜(3491)            |
| 基于肢体动作序列三维纹理特征的情绪识别 .....               | 邵 洁,汪伟鸣(3497)                |
| 基于自适应分层的文物点云数据压缩算法 .....                | 裴书玉,杜 宁,王 莉,张春亢(3500)        |
| 基于分块和仿射不变性的 SIFT 图像匹配算法 .....           | 涂 婷,陆济湘(3504)                |
| 基于信息熵和深度学习的无参考图像质量评价方法研究 .....          | 卢 鹏,林根巧,邹国良(3508)            |
| 基于机器视觉的打磨工件跟踪方法研究 .....                 | 曾 碧,张 伟(3513)                |
| LASRC-ODP 降维算法在行为识别中的应用 .....           | 简献忠,贺士霖(3517)                |

#### 信息集萃

|            |        |
|------------|--------|
| 下期要目 ..... | (3392) |
|------------|--------|

# Application Research of Computers

Vol. 35 No. 11 Nov. 2018

## Contents

### Survey

- Research progress of multimodal emotion recognition ..... He Jun, Liu Yue, He Zhongwen (3201)  
Research on task assignment for mobile crowd sensing ..... Fang Wenfeng, Zhou Zhaorong, Sun Sanshan (3206)

### Algorithm Research & Explore

- Hypergraph-based sparse feature selection ..... Lei Cong, Zhong Zhi, Hu Xiaoyi, *et al.* (3213)  
System reliability maintain method with controllable and uncontrollable factors ..... Cui Tiejun, Li Shasha, Ma Yundong, *et al.* (3217)  
Feature weighting algorithm based on document class density ..... Zhou Pengcheng, Liu Xumin, Xu Weixiang (3220)  
Enhanced hybrid recommendation algorithm based on mass diffusion and heat conduction processes .....  
..... Zhou Haiping, Shen Shigen, Huang Longjun, *et al.* (3224)  
Research of classification method for multi-source data based on multi-task learning ..... Ma Jianyang, Zhang Baopeng (3228)  
Simplified particle swarm K-means clustering algorithm for merging adjacent disturbances ..... Wang Rihong, Cui Xingmei, Zhou Wei, *et al.* (3232)  
fMRI classification method of multiple features fusion based on minimum spanning tree ..... Yan Pengpeng, Guo Hao, Chen Junjie (3237)  
Improved convex hull algorithm for rapid monitoring of ship cruise warning ..... Huang Dongmei, Yang Jian, Zheng Xiaoluo, *et al.* (3243)  
Consensus of second-order multi-agent networks via intermittent event-triggered control ..... Zhao Dan, Hu Aihua, Li Ling (3246)  
Epileptic seizure prediction from single channel scalp EEG based on LSTM model ..... Shan Shaojie, Li Hanjun, Wang Lulu, *et al.* (3251)  
Equipment health prognosis based on grey EM-SHSM under missing data ..... Wu Jianfei, Liu Qinqing, Lyu Wenyuan, *et al.* (3255)  
Analysis of characteristics of QQ group hypernetwork ..... Liu Meng, Hu Feng (3259)  
Research of intelligent transformer data acquisition based on flexible strategy ..... Zhao Miaoying, Xu Gang (3263)  
TCSN scheduling algorithm for dynamic adjustment scheduling quotas ..... Zhang Hua, Tan Xianhai, Zhao Jinnan, *et al.* (3267)  
Research on flexible Job-Shop scheduling problem with AGV constraints ..... Xu Yunqin, Ye Chunming, Cao Lei (3271)  
Optimization of resting-state brain functional hyper-network construction based on elastic net ..... Jin Yanyi, Guo Hao, Chen Junjie (3276)  
Optimization on split delivery vehicle routing problem with stochastic customers location ..... Shi Jianli, Zhang Jin (3281)  
Fast particle swarm multimodal optimization algorithm based on multi-population ..... Chen Xiaoyu (3286)  
Hybrid improved for chicken swarm optimization algorithm ..... Yang Juqing, Zhang Damin, Zhang Muxue, *et al.* (3290)  
Active control of chaotic state in permanent magnet synchronous motor system ..... Qin Xiaofei, Cao Xinkai, Li Feng (3294)  
Study of topic mining for microblog based on MB-HL model ..... Jiang Quan, Zheng Shan hong, Liu Kai, *et al.* (3298)  
Decision method of human facial skin based on improved TOPSIS ..... Zhang Xin, Wang Xiaoyi, Zhang Huiyan, *et al.* (3302)

### System Development & Application

- SP-LNS-KNN-based fault detection method for multimode batch process ..... Feng Liwei, Zhang Cheng, Xie Yanhong, *et al.* (3307)  
Multi-dimensional parallelism recognition method of nested loop for many-core processors ..... Li Yingying, Pang Jianmin, Li Yanbing, *et al.* (3311)  
Research on bionic olfactory application using t-SNE + LDA ..... Zheng Shouyi, Luo Dehan, Wen Tengting, *et al.* (3315)  
Analysis of motion direction of EEG based on motion observation ..... Lu Peng, Xie Quanwei, Li Xinjian, *et al.* (3318)  
Research on conditional diagnosability of network under PMC model ..... Zhang Xiaofei, Wang Lidan, Liu Wenjun, *et al.* (3322)  
Probabilistic neural network prediction model of coal and gas outburst based on grey relational entropy .....  
..... Wen Tingxin, Yu Feng'e, Shao Liangshan (3326)  
Evaluation of Weibo credibility based on data provenance ..... Zhang Ziliang, Dong Hongbin, Tan Chengyu, *et al.* (3330)  
Adaptive fuzzy sliding mode control of PHANTOM Omni robot ..... Han Rui, Liu Xia (3335)  
Adaptive integral backstepping control of quadrotor ..... Shi Chuan, Lin Da (3338)  
Dynamic loop scheduling scheme in heterogeneous cloud based on multi-layer architecture ..... Yang Bo, Liu Li (3343)  
Control method study for robotic arm of aerial manipulator system based on Leap Motion and S curve ..... Bao Jun, Cang Yu, Deng Jingshu, *et al.* (3347)

## Technology of Network & Communication

|   |   |
|---|---|
| Research on WSN clustering protocol based on Memetic algorithm .....  | Xi Zhihong, Li Xiangfeng(3351)                              |
| Improved pre-copy transmission strategy in mobile cloud computing .....   | Huang Xianfei, Wang Gaocai, Peng Ying(3356)                 |
| Data forwarding probability strategy based on relevance of vehicles in vehicular network .....                      | Wang Leilei, Chen Zhigang, Wu Jia(3361)                     |
| Wireless mesh network congestion-aware routing protocol combining distance and queue backlog .....                  | Dong Wei, Tao Hua(3365)                                     |
| Cooperative learning automata based adaptive channel allocation algorithm in cognitive wireless mesh networks ..... | Gu Jinyuan, Zhang Guoan(3369)                               |
| Energy efficiency resource allocation on Macro/Femtocell heterogeneous network .....                                | Wang Hong, Song Renwang, Li Lijun(3373)                     |
| Software defining network virtualization scheme based on OpenFlow .....   | Zhang Yanzhi, Ye Xiaoqin, Liang Gang(3377)                  |
| Full-duplex D2D clustering resource allocation scheme based on graph coloring theory .....                          | Zhu Guohui, Yang Jingjing, Guo Jia, <i>et al.</i> (3382)    |
| Optimal revenue of cloud broker and private cloud federation based on stochastic games .....                        | Zhang Fenghui, Fu Maosheng, Yu Shuhao, <i>et al.</i> (3385) |
| Research on synchronizability of two-layer bidirectional weighted star network .....                                | Li Xiaoxia, Shen Yuzhuo, Zhang Jinhao, <i>et al.</i> (3389) |
| Multipath parallel transfer technology based on SDN and MPTCP .....   | Lu Xuanmin, Dai Jihuang, Xiao Peng, <i>et al.</i> (3393)    |
| Lightweight behavior recognition method based on CSI .....  | Yao Qinghua, Cui Ran(3397)                                  |
| Multipath routing protocol based on reliability evaluation and path adaptive configuration in WSN .....             | Zhang Weiwei, Chen Suiyang(3400)                            |

## Technology of Information Security

|  |  |
|--|--|
| Classification and sequence based consistent flow update scheme in SDN .....                   | Qi Chan, Liu Jianwei, Mao Jian, <i>et al.</i> (3405)     |
| Address configuration scheme for MANET based on security detection of agent node .....         | He Yunbin, Dai Fei(3409)                                 |
| Integral attack of light weight block cipher Piccolo .....                                     | Li Yanjun, Shi Yuting(3413)                              |
| Searchable encryption scheme based on attribute for supporting file update .....               | Xu Shengwei, Wang Rongrong, Li Xinyu(3418)               |
| Image encryption scheme based on skew tent chaotic map and Arnold transformation .....         | Li Chunhu, Luo Guangchun, Li Chunbao(3424)               |
| Novel method of image encryption based on CS-MRI .....   | Jian Xianzhong, Liu Gang(3428)                           |
| Enhancing sensitive data security with information flow control for HDFS .....                 | Wu Zezhi, Chen Xingyuan, Du Xuehui, <i>et al.</i> (3432) |
| Research on differential privacy protection of sensitive edge of weighted social network ..... | Zhu Yonghua, Liu Shuangying(3436)                        |
| RFID tag ownership dynamic transfer protocol based on quadratic residue .....                  | Li Xiaodong, Xu Jincheng(3441)                           |
| Privacy file classification and preserving scheme in cloud computing .....                     | Li Yong, Qin Zheng, Xiang Zhongqi, <i>et al.</i> (3445)  |

## Technology of Graphic & Image

|   |   |
|---|---|
| Research on small object detection and tracking algorithm based on machine learning .....                     | Lin Xiaolin, Sun Jun(3450)                                  |
| Method for determining number of convolution kernel via edge detection approach .....                         | Wen Yuanmei, Yu Tingsong, Ling Yongquan(3454)               |
| Fast human detection algorithm based on BING objectness .....   | Guo Xiaopeng, Du Jingsong, Bai Jiajun, <i>et al.</i> (3458) |
| Detection of moving objects in dynamic scenes based on epipolar geometry constraint .....                     | Zhan Yuxin, Dong Wenyong(3462)                              |
| Multi-group-target tracking approach based on adaptive genetic PHD filter .....                               | Li Bo, Zan Shanshan(3466)                                   |
| Brain tumor segmentation method based on Hough transform and GVF Snake model .....                            | Kong Yuanyuan, Li Junhua, Wang Yan, <i>et al.</i> (3469)    |
| Video scene classification based on multi-features .....  | Jia Pengtao, Yang Lina(3472)                                |
| Image classification of hierarchical clustering combined with spatial pyramid .....                           | Liu Mingbo, Hu Chaoju(3476)                                 |
| Dental hard tissue segmentation based on modified marker-controlled watershed method .....                    | Jin Xi, Wang Wei(3479)                                      |
| Image segmentation method of active contour model based on anisotropic filtering .....                        | Xiong Jingjing, Zhou Yali, Zhang Qizhi(3484)                |
| Image mosaic based on homography matrix and content-preserving warping .....                                  | Yang Chenxiao, Xin Yuelan(3488)                             |
| Single sample face recognition based on robust sparse representation .....                                    | Shen Tao, Li Keqing, Xia Yu(3491)                           |
| Emotion recognition based on three-dimensional texture feature of body action sequence .....                  | Shao Jie, Wang Weiming(3497)                                |
| Adaptive slicing-based compression algorithm with cultural relics point clouds .....                          | Pei Shuyu, Du Ning, Wang Li, <i>et al.</i> (3500)           |
| SIFT algorithm of image matching based on block and affine invariance .....                                   | Tu Ting, Lu Jixiang(3504)                                   |
| Research on no-reference image quality evaluation method based on information entropy and deep learning ..... | Lu Peng, Lin Genqiao, Zou Guoliang(3508)                    |
| Research on workpiece tracking based on machine vision .....  | Zeng Bi, Zhang wei(3513)                                    |
| Application of LASRC-ODP dimension reduction algorithm in action recognition .....                            | Jian Xianzhong, He Shilin(3517)                             |