



ISSN 1001-3695
CODEN JYYIC7

计算机应用研究

Application Research of Computers

第37卷第11期 2020年11月
Vol.37 No.11 Nov. 2020



2020

四川省计算机研究院主办
中国成都 Chengdu, China

❖ 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《艾博思科学学术数据库》(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 11 期 2020 年 11 月

目次

综述评论

对抗样本生成及攻防技术研究	刘小全, 罗宇恒, 邵林, 张小松, 朱清新(3201)
视觉—语言—行为: 视觉语言融合研究综述	李睿, 郑顺义, 王西旗(3206)
基于视频的人体动作识别算法综述	黄晴晴, 周风余, 刘美珍(3213)
基于深度学习的行人重识别研究综述	冯霞, 杜佳浩, 段仪浓, 刘才华(3220)

算法研究探讨

基于自注意力机制的方面情感分类	王拂林, 刘丹, 昌茜(3227)
基于强化学习的电动车路径优化研究	胡尚民, 沈惠璋(3232)
具有通信时延的二阶多智能体系统有限时间一致性跟踪控制	崔艳, 李庆华(3236)
基于改进模糊神经推理的武器装备系统组合决策	李瑞阳, 何明, 王智学, 邓巧雨(3241)
工业机器人遥操作系统的空间映射与控制策略	贺文人, 刘霞, 任磊(3246)
注意力协同辅助变分推荐算法	康雁, 王沛尧, 李浩, 李晋源, 杨其越, 崔国荣(3250)
轨迹图谱: 一种基于知识图谱结构的轨迹信息抽取方法	吴瑕, 赵小明, 余建坤(3255)
基于状态空间模型和概率矩阵分解的推荐算法	曹玉琳, 李文立(3263)
基于多权重相似度的随机漫步推荐算法	邹洋, 吴和成, 赵应丁, 姜允志(3267)
基于高斯映射和小孔成像学习策略的鲸鱼优化算法	徐航, 张达敏, 王依柔, 宋婷婷, 王栋桥(3271)
基于自适应扰动的疯狂蝴蝶算法	王依柔, 张达敏, 徐航, 宋婷婷, 樊英(3276)
基于加权模糊隶属度的二叉树多分类算法	沈洋, 戴月明(3281)
改进的 CK-means 优化及并行策略	赵鑫, 汪丽娟, 行艳妮, 赵焱, 赵京霞, 钱育蓉(3287)
融合 MHS 与 AIM-RT 的谱聚类优化推荐算法	邱宁佳, 王宪勇, 王鹏, 杨华民(3292)
融合句子结构的抽象式文本摘要方法	宋长平, 李婧(3297)
MapReduce 平台上面向大规模 Web 服务组合问题的并行引导变异进化算法	谷南南, 姚佩阳, 焦志强(3302)
节点加权的 Steiner 树问题的降阶回溯算法	胡沁, 宁爱兵, 苟海雯, 张惠珍(3307)
面向决策可托管应用的行为提取与分析方法	高铭, 李淑琴, 孟坤, 丁濛, 郑蓝舟(3312)
基于回跳层数的 SAT 求解器学习子句删除策略	沈雪, 陈树伟, 徐扬, 吴贯锋(3316)
基于实体排序和联合事实选择的知识库问答	刘月峰, 张丽娜, 杨宇慧, 张公, 张晨荣(3321)
基于生成模型的 Q-learning 二分类算法	尚志刚, 徐若灏, 乔康加, 杨莉芳, 李蒙蒙(3326)
划时区分段的动态时间规整算法	康军, 许卫强, 段宗涛, 黄山(3330)
求解最长循环公共子序列问题的两个算法	郑子君, 王洪, 余成(3334)
一种基于图像特征的移动流量分类方法	张丽华, 刘秉楠, 王俊峰(3338)

加入目标指导的强化对抗文本生成方法研究	张志远,李媛媛(3343)
基于高阶差分 and 网格划分算法的 DBSCAN 参数自动选取算法	兰红,朱合隆(3347)
移动互联网流量分类的多特征集合和多类别标签研究	黄焱,刘珍,王若愚,陈洁桐(3353)

系统应用开发

基于 BiLSTM-CRF 的中医文言文文献分词模型研究	王莉军,周越,桂婕,翟云(3359)
基于深度强化学习的固体放射性废物抓取方法研究	周祺杰,刘满禄,李新茂,张华(3363)
面向解决民航虚占座位的改进 PoA 共识机制区块链系统研究	李国,张洁慧,臧金梅(3368)

信息安全技术

支持撤销的外包加解密 CP-ABE 方案	欧毓毅,汪倩倩,顾国生(3373)
基于一次性环签名的区块链电子投票方案	郑剑,赖恒财(3378)
可应用于联盟链的拜占庭容错共识算法	王日宏,张立锋,徐泉清,周航(3382)
云环境下基于混合密码体系的跨域控制方案	江泽涛,时晨,张少钦,徐娟娟(3387)
路网环境下基于双锚点的位置隐私保护方法	周宇航,柳毅(3392)
基于集成降噪自编码的在线网络入侵检测模型	吴德鹏,柳毅(3396)
基于双区块链及物联网技术的防伪溯源系统	李宣,柳毅(3401)
基于可信期望的跨域访问安全性研究	郁宁,王高才(3406)
基于冗余代码的控制流混淆算法	乐德广,赵杰,钱振江(3411)
基于改进双跳无线体域网的身份认证方案	罗峰,陈云(3417)
一种可证安全无对运算的签密方案分析与改进	方光伟(3422)
基于 Pregel 的分布式保护节点影响力匿名算法	李健,张晓琳,刘娇,高鹭,张焕香(3428)
四维混沌系统及其在图像加密中的应用	杨可心,吴昭辉,郝瑞斌,司云公,臧鸿雁(3433)
基于 RLWE 的生物特征认证密钥交换协议	赵宗渠,黄鹂娟,汤永利(3437)
单向链路无线传感器网络的强连通多跳控制集	李艳艳,梁家荣(3441)

网络与通信技术

基于信号相位搜索的 WSN 节点定位算法	蒋锐,徐加轩,徐友云(3446)
无线传感器网络的 3 连通多跳控制集	李艳艳,梁家荣(3451)
基于深度强化学习的服务功能链映射算法	金明,李琳琳,张文瑾,刘文(3456)
一种基于车联网的车辆定位方法	杨阳,林菲,俞定国,杨晨,林强(3461)
无线传感器网络中移动节点辅助的数据采集效率优化研究	陈琪,陈宏滨(3467)
基于改进加权空间平滑的凸优化协方差估计	邸敬,李煜,马黎文,申东,李翠然(3472)

图形图像技术

基于 Legendre 多项式展开的双基 SAR 二维频域成像算法	李梦慧,谭鹤伟,孟亭亭,杨晶晶(3476)
一种基于卷积神经网络的疲劳驾驶检测方法	史瑞鹏,钱屹,蒋丹妮(3481)
基于多尺度 CNN-RNN 的单图三维重建网络	张冀,郑传哲(3487)
基于卷积特征融合的通用目标检测方法	王伟,潘秋羽,王明明,王道顺(3492)
基于图像风格迁移的人脸识别域适应方法	王通平,傅可人,程鹏(3496)
利用多特征混沌粒子滤波的视觉目标跟踪方法	马圆媛,党正阳,张恒汝(3500)
结合引导解码和视觉注意力的图像语义描述模型	马坤阳,林金朝,庞宇(3504)
基于多频稀疏噪声的流场运动方向可视化算法	徐庆,张军(3507)
一种融合多级特征信息的图像语义分割方法	冯兴杰,孙少杰(3512)
基于代价敏感卷积神经网络的人脸年龄识别方法	徐东明,任娅琼,马宣(3516)

信息集萃

下期要目	(3471)
------------	--------

期刊基本参数:CN51-1196/TP * 1984 * m * A4 * 320 * zh * P * ¥50.00 * 3840 * 65 * 2020-11 * n

本期责任编辑 黄莉,何俐

Application Research of Computers

Vol. 37 No. 11 Nov. 2020

Contents

Survey

Survey of generation, attack and defense of adversarial examples	Liu Xiaolei, Luo Yuheng, Shao Lin, <i>et al.</i> (3201)
Vision-language-action; survey of integration of vision and language	Li Rui, Zheng Shunyi, Wang Xiqi (3206)
Survey of human action recognition algorithms based on video	Huang Qingqing, Zhou Fengyu, Liu Meizhen (3213)
Research on person re-identification based on deep learning	Feng Xia, Du Jiahao, Duan Yinong, <i>et al.</i> (3220)

Algorithm Research & Explore

Aspect-level sentiment classification based on self-attention mechanism	Wang Fulin, Liu Dan, Chang Xi (3227)
Research on electric vehicle routing problem based on reinforcement learning	Hu Shangmin, Shen Huizhang (3232)
Finite-time consensus control for second-order multi-agent systems with communication delays	Cui Yan, Li Qinghua (3236)
Portfolio decision of weapon system based on improved fuzzy neural inference	Li Ruiyang, He Ming, Wang Zhixue, <i>et al.</i> (3241)
Workspace mapping and control strategy for industrial robot teleoperation system	He Wenren, Liu Xia, Ren Lei (3246)
Attentive collaborative side variational recommender algorithm	Kang Yan, Wang Peiyao, Li Hao, <i>et al.</i> (3250)
Trajectory graph; method of trajectory information identifying based on knowledge graph	Wu Xia, Zhao Xiaoming, Yu Jiankun (3255)
Recommendation algorithm based on state space model and probabilistic matrix factorization	Cao Yulin, Li Wenli (3263)
Research on random walk recommendation algorithm based on multi-weight similarity	Zou Yang, Wu Hecheng, Zhao Yingding, <i>et al.</i> (3267)
Whale optimization algorithm based on Gauss map and small hole imaging learning strategy	Xu Hang, Zhang Damin, Wang Yirou, <i>et al.</i> (3271)
Crazy butterfly algorithm based on adaptive perturbation	Wang Yirou, Zhang Damin, Xu Hang, <i>et al.</i> (3276)
Binary tree multi-classification algorithm based on weighted fuzzy membership	Shen Yang, Dai Yueming (3281)
Optimization and parallel strategy of improved CK-means	Zhao Xin, Wang Lijuan, Xing Yanni, <i>et al.</i> (3287)
Spectral clustering optimization recommendation algorithm combining MHS and AIM-RT	Qiu Ningjia, Wang Xianrong, Wang Peng, <i>et al.</i> (3292)
Abstractive text summary method based on sentence structure	Song Changping, Li Jing (3297)
Parallel guided mutation evolutionary algorithm for large-scale Web service composition problem on MapReduce platform	Gu Nannan, Yao Peiyang, Jiao Zhiqiang (3302)
Backtracking algorithm with reduction for node-weighted Steiner tree problem	Hu Qin, Ning Aibing, Gou Haiwen, <i>et al.</i> (3307)
Behavior extraction and analysis methods for decision-oriented hosting applications	Gao Ming, Li Shuqin, Meng Kun, <i>et al.</i> (3312)
Back-jump levels based learnt clauses deletion strategy for SAT solver	Shen Xue, Chen Shuwei, Xu Yang, <i>et al.</i> (3316)
Simple question answering with entity ranking and joint fact selection	Liu Yuefeng, Zhang Lina, Yang Yuhui, <i>et al.</i> (3321)
Q-learning algorithm based on generative model for binary classification	Shang Zhigang, Xu Ruohao, Qiao Kangjia, <i>et al.</i> (3326)
Dynamic time warping algorithm for time zone segmentation	Kang Jun, Xu Weiqiang, Duan Zongtao, <i>et al.</i> (3330)
Two algorithms to solve longest circular common subsequence problems	Zheng Zijun, Wang Hong, Yu Cheng (3334)
Classification method of mobile traffic based on image features	Zhang Lihua, Liu Bingnan, Wang Junfeng (3338)
Text generation via reinforced adversarial training with goal guidance	Zhang Zhiyuan, Li Yuanyuan (3343)
DBSCAN parameter setting based on higher-order difference and grid partition algorithm	Lan Hong, Zhu Helong (3347)
Comprehensive research on multiple feature sets and multiple label sets for mobile network traffic classification	Huang Yi, Liu Zhen, Wang Ruoyu, <i>et al.</i> (3353)

System Development & Application

- Chinese medicine literature word segmentation based on BiLSTM-CRF Wang Lijun, Zhou Yue, Gui Jie, *et al.* (3359)
- Research on solid radioactive waste grasping method based on deep reinforcement learning Zhou Qijie, Liu Manlu, Li Xinmao, *et al.* (3363)
- Research on blockchain system of improved PoA consensus mechanism for solving issue of phonily occupying seats of civil aviation
..... Li Guo, Zhang Jiehui, Zang Jinmei (3368)

Technology of Information Security

- Outsourcing encryption and decryption CP-ABE scheme with revocation Ou Yuyi, Wang Qianqian, Gu Guosheng (3373)
- Blockchain e-voting scheme based on one-time ring signature Zheng Jian, Lai Hengcai (3378)
- Byzantine fault tolerance algorithm for consortium blockchain Wang Rihong, Zhang Lifeng, Xu Quanzheng, *et al.* (3382)
- Cross-domain control scheme based on hybrid cryptosystem in cloud environment Jiang Zetao, Shi Chen, Zhang Shaoqin, *et al.* (3387)
- Location privacy protection method based on double anchor point in road network environment Zhou Yuhang, Liu Yi (3392)
- Online network intrusion detection model based on ensemble of denoising AutoEncoder Wu Depeng, Liu Yi (3396)
- Traceability system based on double blockchain and Internet of Things technology Li Xuan, Liu Yi (3401)
- Study on cross-domain access security based on trusted expectations Yu Ning, Wang Gaocai (3406)
- Control flow obfuscation algorithm based on redundant code Le Deguang, Zhao Jie, Qian Zhenjiang (3411)
- Identity authentication scheme var improved dual-hop wireless body area network Luo Feng, Chen Yun (3417)
- Security analysis and improvement of provable security certificateless signcryption scheme Fang Guangwei (3422)
- Distributed protection node influence anonymity algorithm based on Pregel Li Jian, Zhang Xiaolin, Liu Jiao, *et al.* (3428)
- Four-dimensional chaotic system and its application in image encryption Yang Kexin, Wu Zhaohui, Hao Ruibin, *et al.* (3433)
- Biometric authenticated key exchange protocol based on RLWE Zhao Zongqu, Huang Lijuan, Tang Yongli (3437)
- Strongly connected d -hop dominating set in wireless sensor network with unidirectional links Li Yanyan, Liang Jiarong (3441)

Technology of Network & Communication

- Localization algorithm by using signal phase searching method for wireless sensor network Jiang Rui, Xu Jiaxuan, Xu Youyun (3446)
- 3-connected r -hop dominating sets in wireless sensor network Li Yanyan, Liang Jiarong (3451)
- SFC mapping algorithm based on deep reinforcement learning Jin Ming, Li Linlin, Zhang Wenjin, *et al.* (3456)
- Vehicle location method based on vehicle network Yang Yang, Lin Fei, Yu Dingguo, *et al.* (3461)
- Research on optimization of data collection efficiency assisted by mobile collector in wireless sensor network Chen Qi, Chen Hongbin (3467)
- Convex optimization covariance matrix based on modified weighted spatial smoothing algorithm Di Jing, Li Yu, Ma Liwen, *et al.* (3472)

Technology of Graphic & Image

- 2D frequency domain imaging of bistatic SAR based on Legendre polynomial expansion Li Menghui, Tan Gewei, Meng Tingting, *et al.* (3476)
- Fatigue driving detection method based on CNN Shi Ruipeng, Qian Yi, Jiang Danni (3481)
- 3D reconstruction network based on multi-scale CNN-RNN Zhang Ji, Zheng Chuanzhe (3487)
- Object detection based on convolutional feature fusion Wang Wei, Pan Qiuyu, Wang Mingming, *et al.* (3492)
- Domain adaption for face recognition based on image style transfer Wang Tongping, Fu Keren, Cheng Peng (3496)
- Visual target tracking method using multi feature chaotic particle filter Ma Yuanyuan, Dang Zhengyang, Zhang Hengru (3500)
- Image semantic description model based on guided decoding and visual attention Ma Kunyang, Lin Jinzhao, Pang Yu (3504)
- Visualization of flow field motion direction based on multi-frequency sparse noise Xu Qing, Zhang Jun (3507)
- Semantic segmentation method integrating multilevel features Feng Xingjie, Sun Shaojie (3512)
- Facial age recognition based on cost sensitive convolutional neural network Xu Dongming, Ren Yaqiong, Ma Xuan (3516)

Responsible Editor Huang Li, He Li