



ISSN 1000-3428  
CN 31-1289/TP  
CODEN JISGEV

计算机工程(月刊)

# 计算机工程

## Computer Engineering

www.ecice06.com

第49卷 第1期 2023年1月15日

Vol.49 No.1 15 January 2023

2023 1

■ 北大中文核心期刊 ■ 中科院CSCD来源期刊 ■ 中国科技核心期刊 ■ RCCSE中国核心学术期刊 ■ Scopus数据库收录期刊

第49卷 第1期 2023年1月15日

www.ecice06.com



华东计算技术研究所  
上海市计算机学会 主办

# 计算机工程(月刊)

Jisuanji Gongcheng

第49卷 第1期 2023年1月15日

## 目 次

### • 热点与综述 •

- 进化迁移优化算法综述 ..... 伍 洲,杨寒石,邬俊俊,张海军,宋 晴 ( 1 )  
基于深度神经网络和联邦学习的网络入侵检测 ..... 刘金硕,詹岱依,邓 娟,王丽娜 ( 15 )  
基于超级账本的集群联邦优化模型 ..... 李尤慧子,俞海涛,殷昱煜,高洪皓 ( 22 )  
基于值分解的多目标多智能体深度强化学习方法 ..... 宋 健,王子磊 ( 31 )  
基于改进 YOLOv7 的小目标检测 ..... 戚玲珑,高建瓴 ( 41 )

### • 人工智能与模式识别 •

- 基于分类不确定性的伪标签目标检测算法 ..... 雷 洁,饶文碧,杨焱超,熊盛武 ( 49 )  
基于图对比学习的 MOOC 推荐方法 ..... 王曙燕,郭睿涵,孙家泽 ( 57 )  
面向故障间格兰杰因果发现的霍克斯过程研究 ..... 蔡瑞初,吴思宇,乔 杰 ( 65 )  
基于图结构特征采样数据摘要的联邦知识图谱查询 ..... 高 峰,李 秋,顾进广 ( 73 )  
融合词簇约束的汉越跨语言词嵌入 ..... 武照渊,余正涛,黄于欣 ( 82 )  
基于双向语义的中文实体关系联合抽取方法 ..... 禹克强,黄 芳,吴 琪,欧阳洋 ( 92 )  
基于改进麻雀搜索算法的 B 样条曲线拟合方法 ..... 芦穗豪,韩 勇,齐永阳,宋国贤 ( 100 )  
基于黎曼流形的多视角谱聚类算法 ..... 李林珂,康 昭,龙 波 ( 113 )  
基于混合网络模型的多维时间序列预测 ..... 刘 杭,殷 歆,陈 杰,罗 恒 ( 121 )

### • 网络空间安全 •

- 基于输入通道拆分的对抗攻击迁移性增强算法 ..... 郑德生,陈继鑫,周 静,柯武平,陆 超,周 永,仇 钊 ( 130 )  
基于聚类混合采样与 PSO-Stacking 的车载 CAN 入侵检测方法 ..... 孙扬威,戚 洪 ( 138 )

基于区块链技术架构的隐私泄露风险评估方法 ..... 冉玲琴, 彭长根, 许德权, 吴宁博 (146)

融合一维 Inception 结构与 ViT 的恶意加密流量检测 ..... 孙 懿, 高 见, 顾益军 (154)

基于点对群网络反馈机制的恶意代码传播模型 ..... 李晨曦, 任建国 (163)

#### • 体系结构与软件技术 •

一种加速访存地址计算的编译优化 ..... 高秀武, 姜 军, 白书敬, 黄亮明 (173)

基于有序哈希链的文件数据同步方法 ..... 曾 畅, 蒋文保, 郭阳楠 (181)

面向深度学习图像分类的 GPU 并行方法研究 ..... 韩彦岭, 沈思扬, 徐利军, 王 静, 张 云, 周汝雁 (191)

基于互补电阻开关的忆阻乘法器设计 ..... 李志刚, 陈 辉, 刘 鹏, 武继刚 (201)

基于相似度评分与二级子系统的设计模式识别 ..... 王 雷, 王文发, 宋慧娜, 张 帅 (210)

#### • 图形图像处理 •

基于深度学习的肝脏 CT-MR 图像无监督配准 .....  
..... 王帅坤, 周志勇, 胡冀苏, 钱旭升, 耿 辰, 陈光强, 纪建松, 戴亚康 (223)

面向同步辐射光源图像的可并行智能压缩方法 ..... 符世园, 张敏行, 高 宇, 汪 璐, 程耀东 (234)

基于改进自注意力机制的金字塔场景解析网络 ..... 郑秋梅, 徐林康, 王风华, 林 超 (242)

多专家注释的视杯和视盘不确定性量化 ..... 刘丽霞, 宣士斌, 刘 畅, 李嘉祥 (250)

基于水体衰减系数反演的水下图像复原方法 ..... 庄子杰, 范之国, 金海红, 宫凯强 (258)

#### • 开发研究与工程应用 •

基于时空联合学习的城市交通流短时预测模型 ..... 葛宇然, 付 强 (270)

基于用户行为的社交网络人格特质识别方法 ..... 谢柏林, 黎 琦, 魏 娜, 邝 建 (279)

基于反馈机制与空洞卷积的道路小目标检测网络 ..... 窦允冲, 侯 进, 曾雷鸣, 陈子锐 (287)

一种基于词频-逆文档频率和混合损失的表情识别算法 ..... 蓝峥杰, 王 烈, 聂 雄 (295)

双匹配焦点融合的开放域答案选择模型 ..... 何俊飞, 张会兵, 胡晓丽 (303)

可变脉冲控制下的多智能体系统固定时间一致性研究 ..... 隆 腾, 杨莎莎, 王茜竹 (311)

# Computer Engineering (Monthly)

Vol.49      No.1      15 January 2023

## Contents

### • Research Hotspots and Reviews •

Survey of Evolutionary Transfer Optimization Algorithms ..... WU Zhou, YANG Hanshi, WU Junjun, ZHANG Haijun, SONG Qing ( 1 )

Network Intrusion Detection Based on Deep Neural Network and Federated Learning .....

..... LIU Jinshuo, ZHAN Daiyi, DENG Juan, WANG Lina ( 15 )

Cluster Federated Optimization Model Based on Hyperledger Fabric ..... LI Youhuizi, YU Haitao, YIN Yuyu, GAO Honghao ( 22 )

Multi-Goal Multi-Agent Deep Reinforcement Learning Method Based on Value Decomposition ..... SONG Jian, WANG Zilei ( 31 )

Small Object Detection Based on Improved YOLOv7 ..... QI Linglong, GAO Jianling ( 41 )

### • Artificial Intelligence and Pattern Recognition •

Pseudo-Label Object Detection Algorithm Based on Classification Uncertainty .....

..... LEI Jie, RAO Wenbi, YANG Yanchao, XIONG Shengwu ( 49 )

Recommendation Method for MOOC Based on Graph Contrastive Learning ..... WANG Shuyan, GUO Ruihan, SUN Jiaze ( 57 )

Study of Hawkes Process for Granger Causality Discovery Among Faults ..... CAI Ruichu, WU Siyu, QIAO Jie ( 65 )

Federated Knowledge Graph Query Based on Graph Structure Feature Sampling Data Summary ..... GAO Feng, LI Qiu, GU Jinguang ( 73 )

Chinese-Vietnamese Cross-Lingual Word-Embedding Combined with Word Cluster Constraints .....

..... WU Zhaoyuan, YU Zhengtao, HUANG Yuxin ( 82 )

Joint Extraction Method for Chinese Entity Relationship Based on Bidirectional Semantics .....

..... YU Keqiang, HUANG Fang, WU Qi, OUYANG Yang ( 92 )

Method of B-spline Curve Fitting Based on Improved Sparrow Search Algorithm .....

..... LU Suihao, HAN Yong, QI Yongyang, SONG Guoxian ( 100 )

Riemannian Manifold Based Multi-View Spectral Clustering Algorithm ..... LI Linke, KANG Zhao, LONG Bo ( 113 )

Multi-Dimensional Time-Series Prediction Based on Hybrid Network Models ..... LIU Hang, YIN Xin, CHEN Jie, LUO Heng ( 121 )

### • Cyberspace Security •

Adversarial Attack Transferability Enhancement Algorithm Based on Input Channel Splitting .....

..... ZHENG Desheng, CHEN Jixin, ZHOU Jing, KE Wuping, LU Chao, ZHOU Yong, QIU Qian ( 130 )

Intrusion Detection Method for In-Vehicle CAN Based on Cluster Mixed Sampling and PSO-Stacking ..... SUN Yangwei, QI Yong ( 138 )

Privacy Disclosure Risk Assessment Method Based on Blockchain Technology Architecture .....

..... RAN Lingqin, PENG Changgen, XU Dequan, WU Ningbo ( 146 )

Malicious Encrypted Traffic Detection Integrating One-Dimensional Inception Structure and ViT ..... SUN Yi, GAO Jian, GU Yijun (154)

Malware Propagation Model Based on Feedback Mechanism in Point-to-Group Networks ..... LI Chenxi, REN Jianguo (163)

### • Computer Architecture and Software Technology •

A Compiler Optimization for Accelerating Access Address Calculation ... GAO Xiuwu, JIANG Jun, BAI Shujing, HUANG Liangming (173)

File Data Synchronization Method based on Ordered Hash Chain ..... ZENG Chang, JIANG Wenbao, GUO Yangnan (181)

GPU Parallel Method for Deep Learning Image Classification.....

..... HAN Yanling, SHEN Siyang, XU Lijun, WANG Jing, ZHANG Yun, ZHOU Ruyan (191)

Design of Memristive Multiplier Based on Complementary Resistive Switch ..... LI Zhigang, CHEN Hui, LIU Peng, WU Jigang (201)

Design Pattern Recognition Based on Similarity Scoring and Secondary Subsystem .....

..... WANG Lei, WANG Wenfa, SONG Huina, ZHANG Shuai (210)

### • Graphics and Image Processing •

Unsupervised Registration for Liver CT-MR Images Based on Deep Learning .....

..... WANG Shuaikun, ZHOU Zhiyong, HU Jisu, QIAN Xusheng, GENG Chen, CHEN Guangqiang, JI Jiansong, DAI Yakang (223)

Parallel Intelligent Compression Method for Synchrotron Radiation Light Source Images .....

..... FU Shiyuan, ZHANG Minxing, GAO Yu, WANG Lu, CHENG Yaodong (234)

Pyramid Scene Parsing Network Based on Improved Self-Attention Mechanism .....

..... ZHENG Qiumei, XU Linkang, WANG Fenghua, LIN Chao (242)

Quantification of Optic Cup and Optic Disc Uncertainty with Multi-Expert Annotations .....

..... LIU Lixia, XUAN Shibin, LIU Chang, LI Jiaxiang (250)

Underwater Image Restoration Method Based on Water Attenuation Coefficient Inversion .....

..... ZHUANG Zijie, FAN Zhiguo, JIN Haihong, GONG Kaiqiang (258)

### • Development Research and Engineering Application •

Short-Time Prediction Model for Urban Traffic Flow Based on Joint Spatio-Temporal Learning ..... GE Yuran, FU Qiang (270)

Personality Trait Identification Method Based on User Behavior on Social Network ..... XIE Bailin, LI Qi, WEI Na, KUANG Jian (279)

Road Small Target Detection Network Based on Feedback Mechanism and Dilated Convolution .....

..... DOU Yunchong, HOU Jin, ZENG Leiming, CHEN Zirui (287)

An Expression Recognition Algorithm Based on Term Frequency-Inverse Document Frequency and Hybrid Loss .....

..... LAN Zhengjie, WANG Lie, NIE Xiong (295)

Open Domain Answer Selection Model Fusing Double Matching-Focus ..... HE Junfei, ZHANG Huibing, HU Xiaoli (303)

Research on Fixed-Time Consensus of Multi-Agent Systems via Variable Impulsive Control .....

..... LONG Teng, YANG Shasha, WANG Qianzhu (311)