



ISSN 1008-973X

CODEN ZDXGFS

JOURNAL OF
ZHEJIANG UNIVERSITY
ENGINEERING SCIENCE

浙江大学学报

工学版

2/2022

第 56 卷 第 2 期 Vol.56 No.2

中国·杭州 HANGZHOU CHINA

ZHEJIANG DAXUE XUEBAO (GONGXUE BAN)

ISSN 1008-973X



9 771008 973221

万方数据

浙江大学学报(工学版)

第 56 卷第 2 期

2022 年 2 月

目 次

· 计算机与控制工程 ·

- 基于生成式对抗网络和多级小波包卷积网络的水下图像增强算法 温佩芝, 陈君谋, 肖雁南, 等 (213)
- 结合大气散射模型的生成对抗网络去雾算法 屠杭垚, 王万良, 陈嘉诚, 等 (225)
- 基于注意力机制和编码-解码架构的施工场景图像描述方法 农元君, 王俊杰, 陈红, 等 (236)
- 铝硅合金实体关系抽取数据集的构建方法 刘英莉, 吴瑞刚, 么长慧, 等 (245)
- 基于意图识别的不确定性行为序列预测方法 何飞, 金苍宏, 吴明晖 (254)
- 基于多分类及特征融合的静默活体检测算法 黄新宇, 游帆, 张沛, 等 (263)
- 基于 GPU 的大图数据上的关键字检索算法 林鹤翔, 乔连鹏, 袁野, 等 (271)
- 面向移动对象的松散型传染模式挖掘方法 陈玉, 戴华, 李博涵, 等 (280)
- 数据库外基于多模型的学习式查询优化方法 李广龙, 申德荣, 聂铁铮, 等 (288)
- 面向 Flink 流处理框架的主动备份容错优化 刘广轩, 黄山, 胡佳丽, 等 (297)
- 区块链中可公开验证密钥共享技术 何苗, 柏粉花, 于卓, 等 (306)
- 多区块链环境下的连接查询优化算法 董思含, 信俊昌, 郝琨, 等 (313)
- 基于知识增强的图卷积神经网络的文本分类 王婷, 朱小飞, 唐顾 (322)
- PORP: 面向无人驾驶的路径规划并行优化策略 戴天伦, 李博涵, 臧亚磊, 等 (329)
- 基于时序分解与误差修正的新能源爬坡事件预测 童林, 官铮, 王立威, 等 (338)

· 土木与建筑工程、交通工程 ·

基于 InSAR 与多源数据融合的堆石坝外观变形重构 郭承乾，马刚，梅江洲，等（347）

深基坑地连墙支护体系动态调整方法及应用 闫腾飞，陈保国，张磊，等（356）

社区商业设施空间步行可达性评价及布局优化——以绍兴市三区为例 华晨，周学文，李咏华，等（368）

快速路出口匝道衔接段交通特性与安全分析 陈永恒，吴场建，白乔文，等（379）

· 机械工程 ·

基于单颗磨粒划切试验的 SiCp/Al 复合材料表面去除机理研究 张红哲，张旭，朱晓春，等（388）

大型龙门铺丝机综合误差建模及补偿 吴剑波，李俊，郑成淦，等（398）

考虑系统时变效应与预防性维护的平行机调度 张昕莹，陈璐，杨雯惠（408）

CONTENTS

• Computer and Control Engineering •

Underwater image enhancement algorithm based on GAN and multi-level wavelet CNN	WEN Pei-zhi, CHEN Jun-mou, XIAO Yan-nan, et al (213)
Dehazing algorithm combined with atmospheric scattering model based on generative adversarial network	TU Hang-yao, WANG Wan-liang, CHEN Jia-chen, et al (225)
A image caption method of construction scene based on attention mechanism and encoding-decoding architecture	NONG Yuan-jun, WANG Jun-jie, CHEN Hong, et al (236)
Construction method of extraction dataset of Al-Si alloy entity relationship	LIU Ying-li, WU Rui-gang, YAO Chang-hui, et al (245)
Uncertain behavior sequence prediction method based on intent identification	HE Fei, JIN Cang-hong, WU Ming-hui (254)
Silent liveness detection algorithm based on multi classification and feature fusion network	HUANG Xin-yu, YOU Fan, ZHANG Pei, et al (263)
Keyword search algorithm of large graph based on GPU	LIN He-xiang, QIAO Lian-peng, YUAN Ye, et al (271)
Loose infection pattern mining algorithms over moving objects	CHEN Yu, DAI Hua, LI Bo-han, et al (280)
Learning query optimization method based on multi model outside database	LI Guang-long, SHEN De-rong, NIE Tie-zheng, et al (288)
Fault tolerant optimization of active backup for Flink stream processing framework	LIU Guang-xuan, HUANG Shan, HU Jia-li, et al (297)
Publicly verifiable secret sharing technology in blockchain	HE Miao, BAI Fen-hua, YU Zhuo, et al (306)
A join query optimization algorithm in multi-blockchain environment	DONG Si-han, XIN Jun-chang, HAO Kun, et al (313)
Knowledge-enhanced graph convolutional neural networks for text classification	WANG Ting, ZHU Xiao-fei, TANG Gu (322)
PORP: parallel optimization strategy of route planning for self-driving vehicles	DAI Tian-lun, LI Bo-han, ZANG Ya-lei, et al (329)

New energy ramp event prediction based on time series decomposition and error correction
..... *TONG Lin, GUAN Zheng, WANG Li-wei, et al* (338)

• **Civil and Architecture Engineering, Traffic Engineering** •

Exterior deformation reconstruction of rockfill dam based on InSAR and multi-source data fusion
..... *GUO Cheng-qian, MA Gang, MEI Jiang-zhou, et al* (347)

Dynamic adjustment method of diaphragm wall supporting system in deep foundation pit and its application
..... *YAN Teng-fei, CHEN Bao-guo, ZHANG Lei, et al* (356)

Spatial walking accessibility evaluation and layout optimization of community commercial facilities: the case of Shaoxing
..... *HUA Chen, ZHOU Xue-wen, LI Yong-hua, et al* (368)

Traffic characteristics and safety analysis of expressway off-ramp junction
..... *CHEN Yong-heng, WU Chang-jian, BAI Qiao-wen, et al* (379)

• **Mechanical Engineering** •

Surface removal mechanism study of SiCp/Al composites based on single-point cutting test
..... *ZHANG Hong-zhe, ZHANG Xu, ZHU Xiao-chun, et al* (388)

Comprehensive error modeling and compensation of a large gantry automatic fiber placement machine
..... *WU Jian-bo, LI Jun, ZHENG Cheng-gan, et al* (398)

A parallel-machine scheduling problem with time-changing effect and preventive maintenance
..... *ZHANG Xin-ying, CHEN Lu, YANG Wen-hui* (408)