

ISSN 1671-1637
CN 61-1369/U
CODEN JYGXAS

交通运输工程学报

JOURNAL OF TRAFFIC AND TRANSPORTATION ENGINEERING

第 23 卷 2023

第 1 期

Vol. 23 No. 1
中国 · 西安

ISSN 1671-1637



9 771671 163233



交通工程学报

2023年2月

Jiaotong Yunshu Gongcheng Xuebao

第23卷 第1期(总第121期)

目 次

• 综 述 •

- 国家自然科学基金委员会交通与运载工程学科2022年度管理工作综述与展望 王之中,皮大伟,刘全民,张代雨,胡 翁 (1)
聚合物改性剂和石油沥青相容性评价方法研究进展 汪海年,郑文华,尤占平,季 节,李 廉,陈 玉 (8)
列车运行引起地铁车辆段与上盖建筑环境振动研究综述 邹 超,冯青松,何 卫 (27)
铁路工务、电务、供电检测装备发展现状综述 杨 飞,涂文靖,魏子龙,柯在田,刘秀波,杨爱红,王石磊 (47)

• 道路与铁道工程 •

- 桥梁缆索钢丝疲劳性能影响因素试验 王春生,吕兴豪,李 熙,段 兰,姚 博 (70)
基于图像处理技术的低噪声微表处纹理与噪声评价 郑木莲,陈 旺,王海阳 (80)
粗粒硫酸盐渍土区高速铁路水泥固化级配碎石变形特性 张莎莎,刘亚超,杨晓华,李安洪,陈伟志,余泽龙,赵彦虎 (93)
采用实测数据实时修正的机场跑道水膜厚度面域分布预估方法 蔡爵威,赵鸿铎,钱 鑫,吴鸣涛,钱劲松 (105)
基于实测数据的穿越软塑黄土层大断面隧道围岩与支护动态作用机制 来弘鹏,赵铭坤,刘禹阳,洪秋阳,黄鹏志,沈鹏翔 (115)
高速铁路钢轨擦伤形成影响因素 侯博文,秦家栋,高 亮,马超智,刘秀波,王 璞 (132)

• 载运工具运用工程 •

- 小半径曲线钢轨波磨激扰下列车车内振动噪声特性 牛道安,魏子龙,孙宪夫,杨 飞,柯在田 (143)
牵引电机悬挂参数对高速列车牵引传动部件振动特性的影响 朱海燕,黎 洁,尹必超,曾 京,肖 乾,周生通,谢锋云 (156)
车辆传动系统变参小波流形融合故障诊断方法 王 俊,王玉琦,轩建平,刘金朝,黄伟国,朱忠奎 (170)
复杂传递路径下轴承滚动体故障特征提取 邓 武,李凌峰,李伟含,赵慧敏 (184)

• 交通运输规划与管理 •

- 多模式复合交通网脆弱性测度 王永岗,王龙健,刘志岗,任 璐 (195)
重大公共卫生灾害主动限流背景下城市轨道交通网络集成韧性 马 飞,赵成勇,孙启鹏,崔睿颖,马壮林,朱玉洁,王作航 (208)
扇区空中交风险态势网络建模与演化特征 张洪海,吕文颖,万俊强,杨 磊 (222)
考虑延误传播的枢纽机场航班时刻优化方法 曾维理,刘丹丹,杨 磊,舒 翔,包 杰 (242)

• 交通信息工程及控制 •

- 前馈多源信息下异构动力学卡车队列协同控制系统 吴超仲,杨鑫炜,贺 宜,LU Xiao-yun (256)
基于深度学习的公路货车车型识别 张 念,张 亮 (267)
基于预测控制的动车组迭代学习控制方法 李中奇,周 靓,杨 辉,叶美瀚 (280)
多尺度特征增强的路面裂缝检测方法 翟军治,孙朝云,裴莉莉,呼延菊,李 伟 (291)

JOURNAL OF TRAFFIC AND TRANSPORTATION ENGINEERING

Vol. 23 No. 1(Sum 121)

Feb. 2023

CONTENTS

• Review •

- Management summary and prospect of transportation and vehicle engineering discipline of NSFC in 2022 WANG Zhi-zhong, PI Da-wei, LIU Quan-min, ZHANG Dai-yu, HU Jia (1)

- Research progress on compatibility evaluation methods of polymer modifiers and petroleum asphalts WANG Hai-nian, ZHENG Wen-hua, YOU Zhan-ping, JI Jie, LI Lian, CHEN Yu (8)

- Research review on environmental vibrations in metro depot and over-track buildings induced by train operation ZOU Chao, FENG Qing-song, HE Wei (27)

- Review on development status of inspection equipment for track maintenance, communication and signaling, and power supply of railway YANG Fei, TU Wen-jing, WEI Zi-long, KE Zai-tian, LIU Xiu-bo, YANG Ai-hong, WANG Shi-lei (47)

• Road and railway engineering •

- Experiments on factors affecting fatigue performance of bridge cable steel wires WANG Chun-sheng, LYU Xing-hao, LI Xi, DUAN Lan, YAO Bo (70)

- Evaluation of texture and noise of low-noise micro-surface based on image processing technology ZHENG Mu-lian, CHEN Wang, WANG Hai-yang (80)

- Deformation characteristics of cement stabilized macadam aggregate of high-speed railway in coarse-grained sulfate soil area ZHANG Sha-sha, LIU Ya-chao, YANG Xiao-hua, LI An-hong, CHEN Wei-zhi, YU Ze-long, ZHAO Yan-hu (93)

- Estimation method for area distribution of water film thickness on airport runway modified by measured data in real time CAI Jue-wei, ZHAO Hong-duo, QIAN Xin, WU Ming-tao, QIAN Jin-song (105)

- Dynamic mechanism of surrounding rock and support of large-section tunnel passing through soft-plastic loess layer based on measured data LAI Hong-peng, ZHAO Ming-kun, LIU Yu-yang, HONG Qiu-yang, HUANG Peng-zhi, SHEN Peng-xiang (115)

- Influencing factors of rail burn formation for high-speed railway HOU Bo-wen, QIN Jia-dong, GAO Liang, MA Chao-zhi, LIU Xiu-bo, WANG Pu (132)

• Transportation vehicle engineering •

- Train interior vibration and noise characteristics induced by rail corrugation with small-radius curves NIU Dao-an, WEI Zi-long, SUN Xian-fu, YANG Fei, KE Zai-tian (143)

- Influence of suspension parameters of traction motor on vibration characteristics of traction drive components of high-speed train ZHU Hai-yan, LI Jie, YIN Bi-chao, ZENG Jing, XIAO Qian, ZHOU Sheng-tong, XIE Feng-yun (156)

- Fault diagnosis method of vehicle transmission system based on manifold fusion of parameter-varying wavelet WANG Jun, WANG Yu-qi, XUAN Jian-ping, LIU Jin-zhao, HUANG Wei-guo, ZHU Zhong-kui (170)

- Fault feature extraction of bearing rolling elements under complex transmission path DENG Wu, LI Ling-feng, LI Wei-han, ZHAO Hui-min (184)

• Transportation planning and management •

- Vulnerability metrics of multimodal composite transportation network WANG Yong-gang, WANG Long-jian, LIU Zhi-gang, REN Lu (195)

- Integrated resilience of urban rail transit network with active passenger flow restriction under major public health disasters MA Fei, ZHAO Cheng-yong, SUN Qi-peng, CUI Rui-ying, MA Zhuang-lin, ZHU Yu-jie, WANG Zuo-hang (208)

- Network modeling and evolution characteristics for air traffic risk situation in sectors ZHANG Hong-hai, LYU Wen-ying, WAN Jun-qiang, YANG Lei (222)

- Flight schedule optimization method for hub airport considering delay propagation ZENG Wei-li, LIU Dan-dan, YANG Lei, SHU Xiang, BAO Jie (242)

• Traffic information engineering and control •

- Cooperative control system of truck platoon with heterogeneous dynamics under feedforward multi-source information WU Chao-zhong, YANG Xin-wei, HE Yi, LU Xiao-yun (256)

- Type recognition of highway trucks based on deep learning ZHANG Nian, ZHANG Liang (267)

- Iterative learning control method for EMUs based on predictive control LI Zhong-qi, ZHOU Liang, YANG Hui, YE Mei-han (280)

- Pavement crack detection method based on multi-scale feature enhancement ZHAI Jun-zhi, SUN Zhao-yun, PEI Li-li, HUYAN Ju, LI Wei (291)