

铁道建筑

TIEDAO JIANZHU

2025 年 10 月 第 65 卷 第 10 期 (总第 620 期)

目次

线路与养护维修

- 基于千米级桥上静态轨道不平顺均值谱的长波管理限值徐伟昌 时瑾 周丽 等(1)
- 基于CPCIE的搭载式无人化巡检系统研制苟云涛 顾子晨 韩强 等(8)
- 基于非线性最小二乘的轨旁声源参数估计方法周家盛(13)
- 基于车载双目相机的无缝线路钢轨纵向位移检测系统杨燕凯 徐玉坡 谢明峻 等(19)
- 重载铁路小半径曲线钢轨磨耗对列车运行安全性的影响王文刚 汤宇轩 王蒙 等(25)
- 地铁钢轨焊缝不平顺及车轮多边形对振动源强的影响卓文海 雷佳鑫 曾梓恒 等(31)
- 城市轨道交通受流器与接触轨端部弯头动态特性邢彤 李嘉祺 潘利科 等(38)

路基与地基基础

- 基于自适应超启发式算法的路基支挡结构参数优化谢浩 姚洪锡 文一鸣 等(45)
- 季节冻土区铁路涵洞内外温差对涵周路基温度场的影响褚伟利 宋宏芳 王洪亮 等(53)
- 基于振动台试验的滑移式危岩地震损伤演化和失稳机制研究秦志斌 严成俊 王强 等(60)

桥梁与结构工程

- 基于机器学习的桥梁桩基竖向承载力快速评估方法彭方灵 王盈莹 李克冰 等(67)
- 基于动刚度法的桥梁基础状态检测评估技术及应用赖皓(74)
- 钢底板-CSW组合梁受剪试验研究李立峰 蒲东杰 刁勇 等(78)
- 铁路上承式钢管混凝土拱桥静动力性能研究王哲峰 张志国 郭子兴 等(88)

跨海桥桥面系悬臂锚固施工平台荷载响应宋云丕 李奕金 刘健龙 等(94)

智能悬臂造梁机应用研究及发展探索罗生宏(103)

线间立柱雨棚钢结构检测及可靠性鉴定孙浩行 王博 刘威(110)

隧道与地下工程

隧道下穿工程施工多源不确定度控制决策研究谢颖斌(116)

拼装式定位樨在盾构隧道管片中的剪切力学特征林刚 晏启祥 罗世培 等(124)

邻近营业线地基隔离桩防护效果离心模型试验研究秦尚林 杨莹 陈尚勇 等(133)

铁路隧道下穿机场通道受损结构修复方案安全性分析龚伦 孙宇泰 王庆超 等(141)

工程材料

纳米改性超高韧性混凝土力学性能及水化机理龚雪强 庞帅 黄增才 等(148)

纳米SiO₂对C60高强混凝土性能的影响李林香 谭盐宾 杨鲁 等(154)

智能建造及其他

铁路隧道数字孪生地质系统技术架构李新宇 朱建生 王万齐 等(160)

基于SE-ResNet18-KNN的隧道围岩分级方法景建军(166)

山区铁路沿线中小河流洪水致灾机制杜晓燕 李彦军 李健 等(173)

RAILWAY ENGINEERING

October 2025 Vol.65 No.10 (Series No.620)

CONTENTS

Track and Its Maintenance

Long Wave Management Limit Based on the Mean Spectrum of
Static Track Irregularity on Kilometer Level BridgeXU Weichang , et al(1)

Development of Onboard Unmanned Inspection System Based on CPCIEGOU Yuntao , et al(8)

Estimation Method of Trackside Acoustic Source Parameters Based on
Nonlinear Least Squares MethodZHOU Jiasheng(13)

Continuously Welded Rail Longitudinal Displacement Detection System Based on
In-vehicle Binocular CameraYANG Yankai , et al(19)

Impact of Rail Wear on Safety of Train Operation in Small Radius Curved Rails of
Heavy Haul RailwayWANG Wengang , et al(25)

Influence of Welding Irregularity of Metro Rail and Wheel Polygon on
Vibration Source Strength.....ZHUO Wenhai , et al(31)

Dynamic Characteristics of Current Collector and Contact Rail End Elbow in
Urban Rail TransitXING Tong , et al(38)

Subgrade Foundation

Parameter Optimization of Subgrade Retaining Structure Based on
Adaptive Hyperheuristic AlgorithmXIE Hao , et al(45)

Influence of Temperature Difference Between Inside and Outside of Railway Culvert in
Seasonally Frozen Ground Regions on Temperature Field of Subgrade SoilCHU Weili , et al(53)

Study on Seismic Damage Evolution and Instability Mechanism of Sliding Rockfall
Based on Shaking Table TestsQIN Zhibin , et al(60)

Bridge and Structural Engineering

Rapid Evaluation Method of Vertical Bearing Capacity of Bridge Pile-foundation
Based on Machine LearningPENG Fangling , et al(67)

Detection and Evaluation Technology for Bridge Foundation Conditions Based on
Dynamic Stiffness Method and Its ApplicationsLAI Hao(74)

Experimental Study on Shear Behavior of Steel Base Plate-CSW Composite Girder*LI Lifeng, et al*(78)

Research on Static and Dynamic Performance of Upper-loaded CFST Arch
Railway Bridge*WANG Zhefeng, et al*(88)

Load Response of Cantilever-anchored Construction Platforms in
Cross-sea Bridge Deck Systems.....*SONG Yunpi, et al*(94)

Application Research and Development Exploration of Intelligent Cantilever Beam
Building Machine*LUO Shenghong*(103)

Inspection and Reliability Assessment of Steel Structure of Intermediate-Column
Canopy Between Railways*SUN Haoxing, et al*(110)

Tunnel and Underground Works

Research on Control Decision-Making for Multi-Source Uncertainties in
Tunnel Undercrossing Construction.....*XIE Yingbin*(116)

Shear Mechanical Characteristics of Assembled Dowel in Shield Tunnel Segment*LIN Gang, et al*(124)

Centrifugal Model Test Study on Protective Effect of Foundation Isolation Piles
Adjacent to Operational Railway*QIN Shanglin, et al*(133)

Safety Analysis of Repair Solutions for Damaged Structures During the Construction
Period of Railway Tunnels Passing Beneath Airport Passage*GONG Lun, et al*(141)

Engineering Material

Mechanical Properties and Hydration Mechanism of Nano-modified Super
Toughness Concrete*GONG Xueqiang, et al*(148)

Influence of Nano-SiO₂ on the Properties of C60 High-strength Concrete*LI Linxiang, et al*(154)

Intelligent Construction and Others

Technical Framework of a Digital Twin Geological System for Railway Tunnels*LI Xinyu, et al*(160)

Intelligent Classification Method of Tunnel Surrounding Rock Based on
SE-ResNet-KNN*JING Jianjun*(166)

Formation Mechanism of Floods and Mountain Torrents in Small and Medium-sized
Rivers Along Mountainous Railway*DU Xiaoyan, et al*(173)