

目次

· 复杂条件下重大交通基础设施长寿命设计理论与方法专栏 ·

长期循环荷载下公路路基永久变形研究综述 张军辉,张安顺,彭俊辉,李 崛,骆俊晖,谢唐新(1)

基于 Bootstrap-AIC 的隧道围岩参数不确定性表征与最小样本数研究
..... 方砚兵,封 坤,李 博,张景轩,何 川(26)

基于元学习的结构损伤定位与量化..... 王 磊,黄杜康,马亚飞,黄 可(38)

基于孔隙演化的寒区隧道围岩冻融劣化机制与损伤本构模型
..... 孙克国,贾敬龙,潘兵兵,王金金,刘国强(52)

深度强化学习驱动的大跨桥梁吊索维护决策优化..... 马亚飞,晏 鹏,何 羽,王 磊(64)

冷扩止裂孔修复含 I 型裂纹钢板的疲劳性能试验..... 柯 璐,李友林,李传习,陈 正,陈爱龙,冯 鹏(76)

考虑黏弹特性的路基土动态回弹模量试验及预估模型..... 彭俊辉,彭英杰,张军辉,李伟成(89)

· 桥梁工程 ·

双柱墩实桥爆炸试验与动力响应分析 胡志坚,耿 浩,刘 辉,陈昌萍,游勇利,方建桥(102)

粘贴 FRP 剪力键的 FRP-UHPC 组合梁受剪性能研究
..... 葛文杰,张志文,ASHRAF Ashour,曹大富,李胜才(113)

面向隔震曲线梁桥抗震分析的脉冲型地震动强度指标研究
..... 邢晨曦,金 早,陶天友,王 浩,沙 奔(127)

接触爆炸下混凝土连续梁桥倒塌破坏试验 院素静,宗周红,林 津,潘亚豪(139)

考虑车轮接触面效应的车桥耦合振动分析方法研究..... 张龙威,尹诗定,曹君辉,袁帅华,邵旭东(152)

· 隧道工程 ·

基于 FDEM 数值模拟的软岩大变形预测及新分级研究 邓鹏海,刘泉声(164)

浅埋黄土隧道围岩压力调控技术及效果分析..... 来弘鹏,赵铭坤,刘禹阳(181)

基于改进 YOLOv5s 的公路隧道火灾烟雾智能检测算法
..... 邓实强,丁 浩,蒋树屏,杨 孟,刘 帅,陈建忠,李文锋(194)

带高强螺栓预制综合管廊承插接头抗剪性能试验
..... 张 朝,聂绪致,刘 杰,庞跃魁,许有俊,孙晨晨,王建军,胡 飞(210)

· 交通工程 ·

基于车道检测性能的自动驾驶车辆平原地区高速公路适驾性评估..... 叶欣辰,王雪松,田 炜(220)

智能网联环境下基于谱聚类的车辆群体牵制控制策略..... 王 灿,赵 妍,李林恒,曲 栩,冉 斌(235)

智能网联车辆低渗透率下交叉口排队长度估计策略
..... 房 山,杨 澜,赵祥模,王 威,魏 诚,吴国垣(249)

适于不等双周期的区域绿波协调控制模型 卢 凯,林晓鹏,赵一鸣,叶志宏,江书妍,阚 倩(262)

基于卷积自适应平滑网络的高速公路交通状态估计方法 刘 婧,陆 良,郑芳芳,刘晓波(275)

· 汽车与机械工程 ·

基于电机-电磁阀协同补液逻辑的集成式线控制动系统轮缸压力控制策略
..... 朱 冰,郑英龙,赵 健,杜金朋,陈志成,陈志刚,李俊伟,郝文权(289)

相干函数对调制小波重构白噪声的路面不平度模型..... 陈士安,李晓伟,张良城,夏 鹏,王骏骋(301)

冲击压路机路径优化与控制方法 张 星,姚仰平(311)

CONTENTS

• Special Issue on Theories and Methods for Long-life Design of Major Transportation Infrastructure Under Complex Conditions •

Permanent Deformation of Highway Subgrade Under Long-term Cyclic Loading: A Review
 ZHANG Jun-hui, ZHANG An-shun, PENG Jun-hui, LI Jue, LUO Jun-hui, XIE Tang-xin(1)

Uncertainty Characterization of Surrounding Rock Parameters for Tunnels and the Study of Minimum Sample Size Based on Bootstrap-AIC
 FANG Yan-bing, FENG Kun, LI Bo, ZHANG Jing-xuan, HE Chuan(26)

Meta-learning for Structural Damage Localization and Quantification WANG Lei, HUANG Du-kang, MA Ya-fei, HUANG Ke(38)

Freeze-thaw Deterioration Mechanism and Damage Constitutive Model of Tunnel Surrounding Rock in Cold Region Based on Pore Evolution
 SUN Ke-guo, JIA Jing-long, PAN Bing-bing, WANG Jin-jin, LIU Guo-qiang(52)

Maintenance Decision Optimization for Long-span Bridge Suspenders Using Deep Reinforcement Learning
 MA Ya-fei, YAN Peng, HE Yu, WANG Lei(64)

Experimental Investigation on Fatigue Performance of Cold-expanded Crack-stop Hole Repaired Steel Plates with Type I Cracks
 KE Lu, LI You-lin, LI Chuan-xi, CHEN Zheng, CHEN Ai-long, FENG Peng(76)

Experimental Investigation and Predictive Modeling of Resilient Modulus of Subgrade Soil Considering Viscoelastic Properties
 PENG Jun-hui, PENG Ying-jie, ZHANG Jun-hui, LI Wei-cheng(89)

• Bridge Engineering •

Field Test and Dynamic Response Analysis of Double-column Bridge Piers Under Blast Loading
 HU Zhi-jian, GENG Hao, LIU Hui, CHEN Chang-ping, YOU Yong-li, FANG Jian-qiao(102)

Shear Performance of FRP-UHPC Composite Beams with FRP Shear Key
 GE Wen-jie, ZHANG Zhi-wen, ASHRAF Ashour, CAO Da-fu, LI Sheng-cai(113)

Study on Pulse-like Ground Motion Intensity Measures for Seismic Analysis of Isolated Curved Girder Bridges
 XING Chen-xi, JIN Zao, TAO Tian-you, WANG Hao, SHA Ben(127)

Experimental Study on Collapse Failure of Concrete Continuous Girder Bridges Under Contact Explosion
 YUAN Su-jing, ZONG Zhou-hong, LIN Jin, PAN Ya-hao(139)

Research on Vehicle-bridge Interaction Using Tire Patch Contact Loads
 ZHANG Long-wei, YIN Shi-ding, CAO Jun-hui, YUAN Shuai-hua, SHAO Xu-dong(152)

• Tunnel Engineering •

Prediction of Large Deformation and New Classification of Soft Rock Based on FDEM Simulation DENG Peng-hai, LIU Quan-sheng(164)

Control Technology and Effect Analysis of Surrounding Rock Pressure in Shallow-buried Loess Tunnel
 LAI Hong-peng, ZHAO Ming-kun, LIU Yu-yang(181)

Intelligent Detection Algorithm for Fire Smoke in Highway Tunnel Based on Improved YOLOv5s
 DENG Shi-qiang, DING Hao, JIANG Shu-ping, YANG Meng, LIU Shuai, CHEN Jian-zhong, LI Wen-feng(194)

Shear Behavior of Socket Joints of Prefabricated Utility Tunnel with High-strength Bolts
 ZHANG Chao, NIE Xu-zhi, LIU Jie, PANG Yue-kui, XU You-jun, SUN Chen-chen, WANG Jian-jun, HU Fei(210)

• Traffic Engineering •

Readiness Evaluation on Freeways in Plain Regions for Automated Vehicles Based on Lane Detection Performance
 YE Xin-chen, WANG Xue-song, TIAN Wei(220)

Spectral Clustering-based Pinning Control Strategy for Vehicle Platoons in Connected and Automated Environments
 WANG Can, ZHAO Yan, LI Lin-heng, QU Xu, RAN Bin(235)

Queue Estimation Under Low Penetration of Connected and Automated Vehicle
 FANG Shan, YANG Lan, ZHAO Xiang-mo, WANG Wei, WEI Cheng, WU Guo-yuan(249)

Regional Green Wave Coordinated Control Model Suitable for Unequal Double-cycle
 LU Kai, LIN Xiao-peng, ZHAO Yi-ming, YE Zhi-hong, JIANG Shu-yan, KAN Qian(262)

Freeway Traffic State Estimation Based on Convolutional Adaptive Smoothing Network
 LIU Jing, LU Liang, ZHENG Fang-fang, LIU Xiao-bo(275)

• Automotive and Mechanical Engineering •

Wheel Cylinder Pressure Control Strategy for Integrated Brake-by-wire System Based on Motor-solenoid Valve Coordinated Fluid Replenishment Logic ZHU Bing, ZHENG Ying-long, ZHAO Jian, DU Jin-peng, CHEN Zhi-cheng, CHEN Zhi-gang, LI Jun-wei, HAO Wen-quan(289)

Road Irregularity Model via Wavelet-reconstructed White Noise Regulated by Coherent Function Pair
 CHEN Shi-an, LI Xiao-wei, ZHANG Liang-cheng, XIA Peng, WANG Jun-cheng(301)

Compaction-path Optimization and Path Control for an Impact Roller ZHANG Xing, YAO Yang-ping(311)