

## 目 次

## 路基工程

- 板裂结构岩体边坡弯折变形机制的非连续变形分析 ..... 袁思凡,李同录,Haider Mumtaz,张常亮,李萍(1)
- 基于ANN的路基土回弹模量湿度调整系数和干湿循环折减系数预测  
..... 王绪丰,付伟,彭俊辉,胡健坤,张军辉,李之光(9)
- 引扩孔灌浆后植入预制混凝土桩工程性能试验研究 ..... 赵宇,王伟,江磊,宋振亚,张浩(18)

## 路面结构与材料

- 沥青混合料低温半圆弯曲试验评价指标研究 ..... 吕松涛,陈淇,鲁巍巍,赵需,王金平(25)
- 基于Swin-U的路面裂缝分割研究 ..... 王华,汪良财,熊峰,胡靖(37)
- 自融冰沥青混合料盐分释放规律及其对路用性能的影响研究 ..... 李涛,张修昂(46)
- 宽域空隙率沥青混合料长期渗水性能研究 ..... 陈三喜,关宏信,姚明,莫志炜,姜旺恒(54)
- 粒化高炉矿渣粉-粉煤灰稳定大粒径碎石立方体抗压强度尺寸效应研究 ..... 刘群艳,刘黎萍,贺苗,袁龄卿,张靓(64)
- 基于双模量理论的半柔性路面结构分析 ..... 潘勤学,周殊睿,胡嘉,张龙,宋小金,刘宏富(74)
- 矿物掺合料对喷射混凝土性能的影响 ..... 马凯凯,赵峰,孙荣晓,韩松,胡朋,王琨(83)
- 硅烷偶联剂改性玄武岩纤维沥青胶浆流变性能研究 ..... 刘元德,郑南翔,张翔,高海伟,张博文(89)

## 桥梁工程与隧道工程

- 基于深度置信网络的缆索桥梁结构体系可靠度分析方法 ..... 陈振宇,谢波,鲁乃唯(96)
- 海浪影响区RC-UHPC组合板框架涵技术研究 ..... 邱俊峰(103)
- 基于DE-BP神经网络的混凝土箱梁热学参数反分析 ..... 姚勇,闫宇,孙博文,王岳松,蒋田勇(112)
- 大跨度斜拱曲梁桥施工监控关键技术研究 ..... 徐郁峰,张展涛,谢云飞,李子辉(121)
- 山区II形梁斜拉桥涡振气动优化试验研究 ..... 曾旻,刘汉云,毛娜,陈柏翔,韩艳,李春光(130)
- 拱形斜钢桥塔施工自立状态风振性能气弹模型风洞试验研究 ..... 徐培军,邓飞云,陈诗璇,张吉仁(137)
- 整体顶推提篮拱桥施工过程力学性能分析 ..... 陈涛,邱景奎,王吉(145)
- 在役桥梁桩基水流冲刷侵蚀数值模拟研究 ..... 王上,米江川,陈明涛,宋丹,张乔,张勇,王微笑(153)
- 超大跨径矮塔斜拉桥成桥内力优化及施工线形控制研究 ..... 巴文鹏(163)
- 盾构同步注浆参数对地表变形影响研究 ..... 罗旭,张召峰,傅鹤林,曹桂乾,赵传明(172)
- 基于钻进速度优化光面爆破参数现场试验研究 ..... 王海涛,卢江华,刘杨,黄明利,武暄(183)
- 不同纵坡隧道自然排烟竖井合理参数研究 ..... 杨涛,曾岳凯,李培军,任锐,邓敏,张奥宇(191)

## 智慧公路与智能交通

- 融合道路附着约束的智能车辆路径跟踪控制 ..... 张志国,王普,张兴龙,汪奕(199)
- 高速公路小间距互通立交连接段改造方案研究  
——以中江高速公路新隆枢纽—港口互通为例 ..... 揭强,符铎砂(208)
- 基于数字化交付的公路BIM模型参数化方法研究 ..... 李金龙,王欣南(215)

## 公路养护与路域环保

- 基于三维探地雷达的沥青路面内部病害分布特征与养护决策研究 ..... 李晓华,宋亮,叶伟,谢晓东,仰建岗,高杰(221)
- 基于碳排放分析的桥梁顶升决策研究 ..... 张鑫敏,胡承泽,高洪波,杨运平,孙志宏,曹鸿猷(232)

## 国外公路

- 中国-南部非洲沥青路面设计差异性对比研究 ..... 王卿,林洋洋,闫鸿翔,赵宾,夏墨莹,李宁,司伟(240)
- 加拿大尚普兰大桥设计 ..... 谢亚宁,周彦锋,Marwan Nader 编译(251)

## CONTENTS

### Subgrade Engineering

- Discontinuous Deformation Analysis of Progressive Toppling of Rock Slopes with Fractured Slab Structure  
..... YUAN Sifan, LI Tonglu, Haider Mumtaz, ZHANG Changliang, LI Ping(1)
- Prediction for Humidity Adjustment Factor and Dry-Wet Cycle Reduction Factor of Resilient Modulus of Subgrade Soil  
Based on ANN..... WANG Xufeng, FU Wei, PENG Junhui, HU Jiankun, ZHANG Junhui, LI Zhiguang(9)
- Experimental Study on Engineering Performance of Post-Planted Precast Concrete Pile with Prebored Grouting  
..... ZHAO Yu, WANG Wei, JIANG Lei, SONG Zhenya, ZHANG Hao(18)

### Pavement Structure and Materials

- Research on Evaluation Index of Low-Temperature Semi-Circular Bending Test of Asphalt Mixtures  
..... LYU Songtao, CHEN Qi, LU Weiwei, ZHAO Pei, WANG Jinping(25)
- Research on Pavement Crack Segmentation Based on Swin-U ..... WANG Hua, WANG Liangcai, XIONG Feng, HU Jing(37)
- Study on Salt Release Mechanism of Self-Melting Ice Asphalt Mixture and Its Impact on Road Performance  
..... LI Tao, ZHANG Xiu'ang(46)
- Long-Term Water Permeability Performance of Asphalt Mixtures under Wide-Scope Void Ratio  
..... CHEN Sanxi, GUAN Hongxin, YAO Ming, MO Zhiwei, JIANG Wangheng(54)
- Research on Size Effect on Cubic Compressive Strength of Ground Granulated Blast Furnace Slag-Fly Ash Stabilized  
Large-Size Macadam..... LIU Qunyan, LIU Liping, HE Miao, YUAN Lingqing, ZHANG Liang(64)
- Semi-Flexible Pavement Structure Analysis Based on Double Modulus Theory  
..... PAN Qinxue, ZHOU Shurui, HU Jia, ZHANG Long, SONG Xiaojin, LIU Hongfu(74)
- Effect of Mineral Admixtures on Properties of Shotcrete  
..... MA Kaikai, ZHAO Feng, SUN Rongxiao, HAN Song, HU Peng, WANG Kun(83)
- Study on Rheological Properties of Basalt Fiber Asphalt Mastic Modified with Silane Coupling Agent  
..... LIU Yuande, ZHENG Nanxiang, ZHANG Xiang, GAO Haiwei, ZHANG Bowen(89)

### Bridge Engineering & Tunnel Engineering

- Structural System Reliability Analysis Method for Cable-Supported Bridges Based on Deep Belief Networks  
..... CHEN Zhenyu, XIE Bo, LU Naiwei(96)
- Research on RC-UHPC Composite Slab Frame Culvert Technology in Wave-Affected Areas..... QIU Junfeng(103)
- Inverse Analysis of Thermal Parameters of Concrete Box Girder Based on DE-BP Neural Network  
..... YAO Yong, YAN Yu, SUN Bowen, WANG Yuesong, JIANG Tianyong(112)
- Research on Key Construction Monitoring Technology of Long-Span Skewed Arch and Curved Beam Bridge  
..... XU Yufeng, ZHANG Zhantao, XIE Yunfei, LI Zihui(121)
- Study on Aerodynamic Optimization of II-Shaped Cable-Stayed Bridge with Vortex-Induced Vibration in Mountainous Areas  
..... ZENG Min, LIU Hanyun, MAO Na, CHEN Baixiang, HAN Yan, LI Chunguang(130)
- Wind Tunnel Experiment on Wind-Induced Vibration Performance of Arch-Shaped Inclined Steel Bridge Tower in Construction  
Free-Standing State Using Aeroelastic Model..... XU Peijun, DENG Feiyun, CHEN Shixuan, ZHANG Jiren(137)
- Analysis of Mechanical Properties of Integral Jacking Basket Arch Bridge during Construction .... CHEN Tao, QIU Jinghui, WANG Ji(145)
- Numerical Simulation Study on Scour Erosion of Bridge Pile Foundations in Service  
..... WANG Shang, MI Jiangchuan, CHEN Mingtao, SONG Dan, ZHANG Qiao, ZHANG Yong, WANG Weixiao(153)
- Internal Force Optimization in Completed Stage and Construction Alignment Control of Super Long-Span Extradosed  
Cable-Stayed Bridge..... BA Wenpeng(163)
- Research on Influence of Shield Synchronous Grouting Parameters on Surface Deformation  
..... LUO Xu, ZHANG Shaofeng, FU Helin, CAO Guiqian, ZHAO Chuanming(172)
- Field Test Research on Optimization of Smooth Blasting Parameters Based on Drilling Speed  
..... WANG Haitao, LU Jianghua, LIU Yang, HUANG Mingli, WU Xuan(183)
- Study on Reasonable Parameters of Natural Smoke Exhaust Shafts in Tunnels with Different Longitudinal Slopes  
..... YANG Tao, ZENG Yuekai, LI Peijun, REN Rui, DENG Min, ZHANG Aoyu(191)

### Smart Road and Intelligent Transportation

- Intelligent Vehicle Path Tracking Control Integrating Road Adhesion Constraints  
..... ZHANG Zhiguo, WANG Pu, ZHANG Xinglong, WANG Yan(199)
- Reconstruction Plan of Small-Spacing Interchange Connection Sections on Expressway: A Case Study of Xinlong-Gangkou  
Interchange on Zhongshan-Jiangmen Expressway ..... JIE Qiang, FU Xinsha(208)
- Research on Parametric Method of Highway BIM Based on Digital Delivery ..... LI Jinlong, WANG Xinnan(215)

### Road Maintenance and Environmental Protection

- Distribution Characteristics of Internal Distress and Maintenance Decision-Making for Asphalt Pavement Based on Three-  
Dimensional Ground-Penetrating Radar ..... LI Xiaohua, SONG Liang, YE Wei, XIE Xiaodong, YANG Jiangang, GAO Jie(221)
- Research on Bridge Jacking Decision Based on Carbon Emission Analysis  
..... ZHANG Xinmin, HU Chengze, GAO Hongbo, YANG Yunping, SUN Zhihong, CAO Hongyou(232)

### Foreign Highway

- Comparative Study on Differences in Asphalt Pavement Design between China and Southern Africa  
..... WANG Qing, LIN Yangyang, YAN Hongxiang, ZHAO Bin, XIA Moxuan, LI Ning, SI Wei(240)
- Design of Champlain Bridge in Canada ..... Compiled by: XIE Yaning, ZHOU Yanfeng, Marwan Nader(251)