

Volume 16

Number 6

铁



June 2019 Volume 16 Number 6



中 南 大 学 主 办

## 铁道科学与工程学报

2019年6月

第16卷第6期

总第 111 期

目 次

### 高速铁路技术

超高速磁浮车-轨道梁竖向耦合振动分析	
基于 NSGA-II 算法的高速铁路声屏障高度多目标优化	…吴小萍,段贤伟,杜鹏程,戴圣兰,章智勇(1369)
基于空耦超声导波的无砟轨道 CA 砂浆脱空检测方法······	吴刚,李再帏,朱文发,张海燕,柴晓冬(1375)
高速列车碰撞缓冲吸能平台力设计研究	姜士鸿,闫凯波,陆思思,张芳瑶,许平(1384)
基于云模型的高速列车黏着控制	魏银花,田广科,董海鹰(1391)

## 轨道与基础

基于坐标测量的既有曲线整正算法设计与实现
均质地基基质吸力演化及影响参数显著性分析胡惠仁,秦卫星,吴卫东,周作霖(1405)
朔黄重载铁路某路桥过渡段沉降监测及预测涂仁盼,冷伍明,聂如松,范瑞祥(1412)
戈壁铁路沿线防风沙栅栏设计参数优化分析王海龙,张治,孙婧,刘畅,李玉龙(1420)
纤维水泥砂浆桩三轴压缩试验研究俞琛(1427)
真空作用下软土固结机制及实例分析雷鸣,徐汉勇,匡希龙,夏力农(1433)
川藏铁路季节性粗颗粒冻土边坡水热过程模拟梁树,谢强,赵文,叶唐进,蒋良文(1440)
基于双屈服条件准则的横观各向同性本构模型研究及其数值模拟曲广琇,任鹏(1448)
面向结构部位的铁路混凝土结构耐久性研究····································

## 桥梁隧道与结构

考虑主梁损伤的装配式梁桥荷载横向分布系数计算李院军, 邬晓光, 黄成, 肖凯龙, 般悦(1459)
多跨连续刚构桥梁地震易损性损伤指标计算方法梁岩,闫佳磊,班亚云,陈淮(1466)
车队作用下曲线连续梁桥动力响应分析王贵春,孙瑜祥,张杰,吉喆,王亚欣(1476)
钢箱梁顶推参数影响及稳定性分析谢福君,张家生(1484)
既有长沙磁浮线路桥梁结构提速适用性研究梁潇,戴小冬,谭超,龙海滨,梁玉,陈峰(1493)
考虑地表荷载和孔压效应的浅埋软岩隧道稳定性上限分析张佳华,张标,王卫军,张道兵(1499)
竖向非轴对称位移边界条件下柱孔收缩问题弹性解析
基于小波变换模极大值法识别 OCTEM 异常边界
基于计算流体力学数值模拟的绿地空间布局热环境效应研究

## 机车车辆与设备

基于混合系统建模预测控制的列车自动驾驶优化运行汤旻安,王攀琦(152)
基于改进证据理论的轨道电路故障诊断方法董煜,董昱(1535
基于动态故障树的计算机联锁系统安全性及性能分析研究李军丽,张友鹏(1543
基于模态实验的轨道牵引电机整机有限元模型的建立龙吟,任晓辉,张珂,罗东,杜小渊,江俊(155
一种具有故障处理能力的电容箝位子模块拓扑分析

## 运输・物流・工程管理

考虑线网可达性的城市轨道交通末班车时刻表优化温芳, 柏赟, 李宁海, 陈垚, 陈绍宽, 辛俊鹏(1569)
基于极大值原理的地铁列车节能驾驶简化算法曲健伟, 王青元, 孙鹏飞(1577)
长沙地铁网络复杂特性与级联失效鲁棒性分析
基于 SEM 的工程施工班组长岗位胜任力影响因素研究李文华,彭立敏,肖文贵(1597)

责任编辑:涂 鹏 英文编审:肖源杰 封面设计:刘 谊

期刊基本参数: CN43-1423/U\*2004\*m\*A4\*244\*zh\*P\*¥50.00\*1500\*32\*2019-06

# 万方数据

## Journal of Railway Science and Engineering

Volume 16 Number 6

(Sum 111)

#### June 2019

## CONTENTS

#### **High-speed Rail Technology**

Vertical coupling vibration analysis of ultra high-speed maglev vehicle guideway

······································
Multi-objective optimization of noise barrier height for high-speed railway based on NSGA-II algorithm
WU Xiaoping, DUAN Xianwei, DU Pengcheng, DAI Shenglan, ZHANG Zhiyong(1369)
Ballastless track CA mortar void detection method based on air-coupled ultrasonic guided wave
WU Gang, LI Zaiwei, ZHU Wenfa, ZHANG Haiyan, CHAI Xiaodong(1375)
Research on energy absorption elements platform force design of high speed train collision
JIANG Shihong, YAN Kaibo, LU Sisi, ZHANG Fangyao, XU Ping(1384)
Adhesion control of the high speed train based on cloud modelWEI Yinhua, TIAN Guangke, DONG Haiying(1391)

#### **Track and Foundation**

Design and practice of existing railway curve realignment algorithm based on coordinate measurement
WANG Bo, HAN Feng(1398)
Evolution of matrix suction for homogeneous foundation and significance analysis of the influencing parameters
HU Huiren, QIN Weixing, WU Weidong, ZHOU Zuolin(1405)
Monitoring and prediction for a bridge-subgrade transition zone settlement of Shuo-huang heavy haul railway
TU Renpan, LENG Wuming, NIE Rusong, FAN Ruixiang(1412)
Optimization analysis of design parameters of prevent wind-sand fence along gobi railway
WANG Hailong, ZHANG Zhi, SUN Jing, LIU Chang, LI Yulong(1420)
Experimental study on triaxial compression of fiber reinforced cement mortar pileYU Chen(1427)
Analysis of consolidation mechanism and example of treating soft foundation in vacuum preloading
LEI Ming, XU Hanyong, KUANG Xilong, XIA Linong(1433)
Hydrothermal process simulation of seasonal coarse-grain frozen soil slope on Sichuan-Tibet railway
LIANG Shu, XIE Qiang, ZHAO Wen, YE Tangjin, JIANG Liangwen(1440)
A study of transverse isotropy model based on double yield conditions and its numerical simulation
QU Guangxiu, REN Peng(1448)
Study on the durability of different members of railway concrete structuresLIAN Xinqi(1454)

#### Bridge, Tunnel and Structure

Calculation of transverse load distribution coefficient of assembled girder bridge considering main girder damage
LI Yuanjun, WU Xiaoguang, HUANG Cheng, XIAO Kailong, YING Yue(1459)
Analysis of calculation method for seismic fragility index of multi span continuous rigid frame bridge
LIANG Yan, YAN Jialei, BAN Yayun, CHEN Huai(1466)
The analysis on dynamic responses of curved continuous bridge due to vehicle flow
WANG Guichun, SUN Yuxiang, ZHANG Jie, JI Zhe, WANG Yaxin(1476)
Influence analysis and stability analysis for incremental launching of steel box girder
······XIE Fujun, ZHANG Jiasheng(1484)
Study on the speed-increasing adaptation of the bridge structures in the existing maglev lines in Changsha
LIANG Xiao, DAI Xiaodong, TAN Chao, LONG Haibin, LIANG Yu, CHEN Feng(1493)
Upper bound analysis of the stability of shallow tunnels in the soft rock mass considering surface load and pore water pressure
······································
Elastic solutions for cylindrical cavity contraction problem under non-axisymmetric displacement boundary conditions on a
vertical surfaceJIANG Wujun(1507)
Identification of OCTEM abnormal boundary based on wavelet transform modulus maxima method······CAI Shaofeng(1513)
Study on thermal environment effect of green space layout based on numerical simulation of computational fluid dynamics
WANG Guiqin, ZHENG Bohong, YU Hanwu(1519)

#### **Vehicles and Equipment**

Automatic train optimization operation based on hybrid system modeling predictive controlTANG Minan, WANG Panqi(1527)
Fault diagnosis method of track circuit based on improved evidence theoryDONG Yu, DONG Yu(1535)
Research on safety and performance analysis of computer based interlocking system based on dynamic fault tree analysis
LI Junli, ZHANG Youpeng(1543)
Finite element modeling of rail traction motor based on modal experiments
LONG Yin, REN Xiaohui, ZHANG Ke, LUO Dong, DU Xiaoyuan, JIANG Jun(1553)
Analysis of a novel capacitance-clamped MMC with dc fault current limiting capability

## WANG Qiantao, WANG Guo, WU Qiong, JIANG Xingyu(1560)

#### **Transportation** · **Logistics** · **Engineering Management**

Timetable synchronization of last trains in urban rail systems to maximize network accessibility

WEN Fang, BAI Yun, LI Ninghai, CHEN Yao, CHEN Shaokuan, XIN Junpeng(1569)
A simplified algorithm of energy-efficient driving for metro trains based on the Maximum Principle
QU Jianwei, WANG Qingyuan, SUN Pengfei(1577)
Complex characteristics of Changsha metro network and robustness analysis of cascading failures
CAI Jianming, DENG Wei(1587)
Research on influencing factors of competency of team leaders in engineering construction based on structural equation model
LI Wenhua, PENG Limin, XIAO Wengui(1597)