



中国科技期刊卓越
行动计划梯队项目
EI COMPENDEX
核心期刊

ISSN 1000-4750

CN 11-2595/O3

工程力学

Engineering

Mechanics

第 38 卷 增刊

Vol. 38 Supplement

2021

(2021) 京新出刊增准字第 (47) 号



万方数据

中国力学学会 主办
《工程力学》杂志社 出版

目 次

基本方法

- 二维有限元单元角结点位移精度修正之初探 黄泽敏, 袁 驹 (001)
- 岩体多裂纹扩展演化过程数值流形方法研究 韩智铭, 刘庆宽, 王 雪, 谭 超, 高一帆 (007)
- 运动方程一阶方程组格式的线性时域有限元及其 EEP 超收敛计算 袁 全, 袁 驹 (014)

土木工程学科

- 坡度及防雪栅对路堤周边流场影响的数值研究 李海飞, 何书勇, 刘庆宽 (021)
- 某超高层建筑表面风压分布研究 邵远航, 崔会敏, 刘庆宽, 郑云飞 (026)
- 钢框架肋板加强型弱轴连接节点的有限元分析 徐莹璐, 苏耀烜, 尚永芳 (031)
- 短边距混凝土平板支座的试验研究 许肖卓, 刘洪滔, 高晓玉, 崔 瑶 (039)
- 预制 UHPC-灌注 RC 组合桩基方案设计及试验研究 张永涛, 李 刚, 郑和晖 (045)
- 非标准圆斜拉索风致振动时频特征研究 孙一飞, 刘庆宽, 李 震, 郑云飞, 贾娅娅, 张卓杰 (052)
- 长周期地震动-脉动风耦合作用下风电塔架动力响应分析与混合试验初步验证
..... 梅 竹, 胡 皓, 戴靠山, 刘 洋 (058)
- 大跨度煤棚内混合对流传热特性的数值模拟研究 王文玥, 陈琳琳, 崔会敏, 刘庆宽 (066)
- 考虑周边建筑影响的大跨煤棚风荷载体型系数研究 郑怡彤, 吴倩云, 贾娅娅, 刘小兵 (072)
- 地铁上盖结构隔震效果研究 范 重, 崔俊伟, 薛浩淳, 杨 开, 高 嵩, 王金金, 吴 徽 (077)
- 旋转圆柱气动力特性风洞试验研究 刘剑寒, 马文勇 (089)
- 斜拉桥变宽度主梁的剪力滞效应分析 朱绪江, 郭 健, 方明山, 谭 昱 (093)
- 循环荷载下混凝土疲劳损伤累积分析的颗粒流黏结退化模型 张 培, 任青文 (100)
- 低剪跨比的榫卯连接装配整体式剪力墙受力性能数值分析 曹春利, 孙志娟, 刘继良, 初明进 (110)
- 考虑面外变形的装配式塑性铰支剪力墙抗震性能试验研究 田瑞鑫, 崔 瑶, 王啸霆, 王 涛 (119)
- 土-结构相互作用对储液结构动力反应的影响研究 宝 鑫, 刘晶波, 李述涛, 王 菲 (125)
- 长宽比对长方体周边风致积雪分布影响 崔子晗, 马文勇, 李飞强, 李江龙, 柴晓兵 (133)

目 次

火灾下钢筋混凝土梁非线性分析与寿命预测	温清清, 陈梦成, 刘 超 (138)
布置压杆的弧形钢闸门静动力特性分析	张中昊, 兰佳欣, 汪可欣 (144)
高强度不锈钢短尾环槽铆钉力学性能试验研究	
..... 张天雄, 王元清, 陈志华, 卜宜都, 董 帅, 何 伟 (151)	
钢-木组合柱轴心受压性能试验研究	刘 朋, 钱 哲, 王浩然, 王元清 (159)
不同耗能特征的黏弹性阻尼器性能对比试验研究	周 颖, 刘晓芳, 汪 盟 (167)
边坡坡度对路堤周围积雪分布影响规律的数值模拟研究	
..... 何书勇, 冯耀恒, 周一航, 王 熙, 李海飞, 刘庆宽 (178)	
准流线型桥梁表面压力分布研究	任若松, 孙一飞, 郑云飞, 李 震, 刘庆宽 (184)
基于两方程模型的路堤风吹雪数值模拟	李飞强, 马文勇, 崔子晗, 李江龙, 郑 熙 (189)
深度神经网络在 EMD 虚假分量识别中的应用	何定桥, 王鹏军, 杨 军 (195)
具有耗能减震层的连体结构减震分析	刘良坤, 潘兆东, 谭 平 (202)
埋深对地下结构振动台模型试验结果的影响	江志伟, 刘晶波 (209)
女儿墙对平屋面阵列光伏板风荷载的影响	王彩玉, 马文勇, 韩晓乐, 高 飞 (216)
超高层建筑表面风压及行人风环境研究	郑肖楠, 崔会敏, 刘庆宽 (223)
软土地基超高层结构条件均值谱应用研究	许柳韵, 周志光 (228)
生土结构预应力加固抗震试验研究	高 幸, 王维玉 (237)
焊接方式对负载下加固工形截面钢梁残余变形影响的试验研究	
..... 黄健鸣, 王元清, 宗 亮, 张亚伟 (243)	
饱和砂土地中地铁车站结构地震易损性分析	
..... 许民泽, 崔春义, 李静波, 王广兵, 苏 健, 高凌霞 (251)	
其他工程学科	
应力加载历史对铁磁性材料压磁磁场演变规律的影响	包 胜, 赵政烨, 罗 强 (259)
基于 BEM 的风力机叶片气动性能计算分析	陈安杰, 王 策, 贾娅娅, 刘庆宽 (264)

CONTENTS

METHODOLOGIES

- A preliminary study on accuracy improvement of nodal displacements in 2D finite element method HUANG Ze-min , YUAN Si (001)
- Study on numerical manifold method for evolution process of multi-crack propagation in rock mass HAN Zhi-ming , LIU Qing-kuan , WANG Xue , TAN Chao , GAO Yi-fan (007)
- A linear finite element and its EEP super-convergent solution for first order odes converted from motion equations YUAN Quan , YUAN Si (014)

CIVIL ENGINEERING

- Numerical study on the influence of slope and snow-fence on the flow field around embankment LI Hai-fei , HE Shu-yong , LIU Qing-kuan (021)
- Experimental research on wind tunnel pressure measurement of a super high-rise building SHAO Yuan-hang , CUI Hui-min , LIU Qing-kuan , ZHENG Yun-fei (026)
- Finite element analysis of rib reinforced weak-axis connection in steel frame XU Ying-lu , SU Yao-xuan , SHANG Yong-fang (031)
- Experimental research on short-edge roof joints XU Xiao-zhuo , LIU Hong-tao , GAO Xiao-yu , CUI Yao (039)
- Scheme design and experimental study of prefabricated UHPC-perfusion RC composite piles ZHANG Yong-tao , LI Gang , ZHENG He-hui (045)
- Study on time-frequency characteristics of wind-induced vibration of non-standard circular stayed cables SUN Yi-fei , LIU Qing-kuan , LI Zhen , ZHENG Yun-fei , JIA Ya-ya , ZHANG Zhuo-jie (052)
- Dynamic response analysis and preliminary verification of hybrid test of wind power tower under the coupling of long period ground motion and fluctuating wind MEI Zhu , HU Hao , DAI Kao-shan , LIU Yang (058)
- Numerical simulation of mixed convective heat transfer characteristics in long span coal sheds WANG Wen-yue , CHEN Lin-lin , CUI Hui-min , LIU Qing-kuan (066)
- Study on shape factor of wind load of large-span coal shed considering the influence of surrounding buildings ZHENG Yi-tong , WU Qian-yun , JIA Ya-ya , LIU Xiao-bing (072)
- Study on the isolation effect of subway cover structures FAN Zhong , CUI Jun-wei , XUE Hao-chun , YANG Kai , GAO Song , WANG Jin-jin , WU Hui (077)
- Wind tunnel test on aerodynamic characteristics of a rotating cylinder LIU Jian-han , MA Wen-yong (089)
- Analysis of the shear lag effect in width-variant girders of cable-stayed bridges ZHU Xu-jiang , GUO Jian , FANG Ming-shan , TAN Yu (093)
- Particle bond-degradation model for cumulative damage analysis of concrete under cyclic loading ZHANG Pei , REN Qing-wen (100)
- Numerical analysis on mechanical behaviors of assembled monolithic concrete shear walls with mortise-tenon joints and low shear span ratio CAO Chun-li , SUN Zhi-juan , LIU Ji-liang , CHU Ming-jin (110)
- Experimental study on the seismic behavior of prefabricated plastic-hinge-supported walls considering out-of-plane deformation TIAN Rui-xin , CUI Yao , WANG Xiao-ting , WANG Tao (119)
- Influence analysis of soil-structure interaction on the dynamic response of storage tanks BAO Xin , LIU Jing-bo , LI Shu-tao , WANG Fei (125)
- The influence of aspect ratio on snow distribution around a cuboid model CUI Zi-han , MA Wen-yong , LI Fei-qiang , LI Jiang-long , CHAI Xiao-bing (133)

CONTENTS

Nonlinear analysis and life prediction of reinforced concrete beam under fire.....	
..... WEN Qing-qing , CHEN Meng-cheng , LIU Chao (138)	
Analysis of static and dynamic characteristics of radial steel gate with compression bars.....	
..... ZHANG Zhong-hao , LAN Jia-xin , WANG Ke-xin (144)	
Experimental study on the mechanical properties of high strength stainless steel short tail swage-locking pins	
..... ZHANG Tian-xiong , WANG Yuan-qing , CHEN Zhi-hua , BU Yi-du , DONG Shuai , HE Wei (151)	
Experimental study on behavior of steel timber columns under axial load.....	
..... LIU Peng , QIAN Zhe , WANG Hao-ran , WANG Yuan-qing (159)	
Experimental study on mechanical properties of two types of viscoelastic dampers.....	
..... ZHOU Ying , LIU Xiao-fang , WANG Meng (167)	
Numerical simulation for influence of slope rate on snow distribution around the embankment.....	
..... HE Shu-yong , FENG Yao-heng , ZHOU Yi-hang , WANG Xi , LI Hai-fei , LIU Qing-kuan (178)	
Surface pressure distribution of quasi-streamline bridges.....	
..... REN Ruo-song , SUN Yi-fei , ZHENG Yun-fei , LI Zhen , LIU Qing-kuan (184)	
Numerical simulation of snowdrift on embankment based on two equation model.....	
..... LI Fei-qiang , MA Wen-yong , CUI Zi-han , LI Jiang-long , ZHENG Xi (189)	
Application of deep neural networks in EMD false component identification	
..... HE Ding-qiao , WANG Peng-jun , YANG Jun (195)	
Damping performance analysis of the connected structure with energy-dissipation story	
..... LIU Liang-kun , PAN Zhao-dong , TAN Ping (202)	
Influence of buried depth on the seismic response of underground structures in 1-G shaking table tests.....	
..... JIANG Zhi-wei , LIU Jing-bo (209)	
Effect of parapet on wind load of flat roof array solar panel.....	
..... WANG Cai-yu , MA Wen-yong , HAN Xiao-le , GAO Fei (216)	
Study on surface wind pressure and pedestrian wind environment of super high-rise buildings.....	
..... ZHENG Xiao-nan , CUI Hui-min , LIU Qing-kuan (223)	
Application of conditional mean spectrum on super high-rise building in soft soils	
..... XU Liu-yun , ZHOU Zhi-guang (228)	
Experimental study on earthquake resistance of prestressed reinforced raw-soil structure	
..... GAO Xing , WANG Wei-yu (237)	
Experimental study on the influence of welding processes on the residual distortion of reinforcing I-section steel beams under load.....	
..... HUANG Jian-ming , WANG Yuan-qing , ZONG Liang , ZHANG Ya-wei (243)	
Seismic vulnerability analysis of subway station embedded in saturated sand layers	
..... XU Min-ze , CUI Chun-yi , LI Jing-bo , WANG Guang-bing , SU Jian , GAO Ling-xia (251)	
OTHER ENGINEERING DISCIPLINES	
Influence of stress loading history on the evolution of piezomagnetic field of ferromagnetic materials.....	
..... BAO Sheng , ZHAO Zheng-ye , LUO Qiang (259)	
Computation and analysis of aerodynamic performance of wind turbine blade based on BEM.....	
..... CHEN An-jie , WANG Ce , JIA Ya-ya , LIU Qing-kuan (264)	