地震工程学报

DIZHEN GONGCHENG XUEBAO

第 41 卷 第 1 期 2019 年 2 月

目 次

结构工程

土-结构动力相互作用问题分析中地震动输入的一种新方法 …… 刘晶波，谭 辉，王东洋，宝 鑫 (1)

双线地铁运营隔振沟屏障性能研究 …… 丁 智，张 霄，吴敏慧，李丹薇，陈雷越 (9)

体育场震后修复再建中混凝土结构消能减震设计研究 …… 张 燕，刘 涛 (16)

地震作用下混合桥结合段的极限承载力分析 …… 寇立亚 (23)

基于同震位移的隧道抗震设计及其工程应用 …… 黄禄渊，王成虎，杨树新 (29)

基于数学去噪后模拟地震信号测试混凝土结构抗震性能的研究 …… 王 群，关宏洁，张 倩 (36)

循环荷载作用下不均质地层中盾构隧道纵向响应研究 … 方宇翔，田 乙，康 成，吴文兵，梁荣柱 (42)

地震下双曲线冷却塔的响应分析 …… 马 奔，郝圣杰 (51)

岩土工程

一种深厚覆盖层场地地震动参数的确定方法 …… 李红军，杨正权，李德玉，王海波，朱凯斌 (60)

钢管桩单桩复合地基加固隧道软土地基试验研究 …… 李 雷 (69)

包裹碎石桩加固的砂土液化机理试验研究 …… 王晋宝，宋鑫彤，田美灵，王亚军 (76)

制样方法对非饱和压实黄土强度变化影响的试验研究 …… 蔡小玲，俞 莉 (86)

边坡加固的抗震性能参数分析 …… 高 昂，张孟喜 (94)

农居工程地基砂垫层隔震体系性能试验研究 …… 尹志勇，孙海峰，景立平，徐琨鹏，李纵横 (101)

饱和软土自由场地地震反应特性振动台试验 …… 程学磊，崔春义，孙宗光 (108)

基于树根桩加固的震后公路路基边坡综合修复技术 …… 肖 颜 (117)

基于遗传优化神经网络的高速公路路基沉降量预测 …… 彭立顺，蔡 润，刘进波，郭安宁，郭志宇 (124)

地震科学研究

PKPdif 波-内核低速层存在的地震学证据 …… 许健生，徐小明，隗永刚，周建超，郭祥云 (131)

用振幅变化长短时均值比实现地震预警中 P 波自动拾取 …… 李启成，何书耕 (138)

宁夏吴忠地区北部的浅部结构和隐伏断裂——地震反射剖面结果 ……
…… 李 倩，姬计法，焦德成，谭雅丽，花鑫升，鄯少英，刘增祺，郭新景 (147)

浅层人工地震探测揭示的夏垫断裂西南段特征 …… 孟立朋，彭远黔，冉志杰，温 超，王 燕 (155)

互层胶结土中正断层地震地表破裂位错特征研究 …… 龚 放，黄 今，白志勇 (162)

H/V 谱比方法在强震记录应用中几个影响因素的初步研究 …… 李红光，冷 崴 (169)

青藏高原东北缘 2 次地震热红外亮温异常分析 …… 惠少兴，魏从信，金昭娣 (177)

青海祁连 M_S5.2 地震微震检测与目录完备性研究 ……
…… 尹欣欣，曾文浩，李少华，赵林林，蒲 举，高永国 (183)

基于烈度指标的核电厂地震预警停堆参数研究 …… 胡进军，左占宣，吴旺成，谢礼立 (189)

万方数据

地震应急与恢复重建

基于汽车物联网的震区最优通行道路选择算法 …… 刘美灵，李　锐（195）
强震后既有建筑火灾危险性的模糊数学评估模型研究 …… 胡淑荣（201）
LM-BP 神经网络在震后建筑损失评估模型中的应用 …… 夏蕊芳，程国庆（208）
震后重建项目中基于灰色模型构建的多因素造价控制模型 …… 郭彦丽，侯云飞（215）

BIM 专题及其他

基于 BIM 的建筑砌体结构抗震性能评估方法研究 …… 胡　瑛，裴利剑，韩春秀（221）
基于 BIM 的建筑地震受损程度评估模型设计 …… 赵全斌，师　煜，邹秋元，王　成（227）
基于 BIM 的地震灾后民用建筑重建工程施工成本控制方法 …… 王　雁（233）
BIM 技术在地震灾后重建房屋建筑工程造价控制方法中的研究 …… 陈丽娟，陆　亚（239）
地震模拟系统的人机交互设计 …… 莫璐宇（245）
抗震巷道内空调通风系统的设计与实现 …… 桑海涛，郭献洲（251）
基于无人机倾斜摄影的强震区公路高位危岩崩塌形成机制及稳定性评价 ……
…… 陈宙翔，叶　咸，张文波，郭　彪，方留杨（257）

短文 1975 年海城地震和 1976 年和林格尔强震与 1976 年唐山大震的关系讨论……
…… 郭增建，郭安宁（268）

本期责任编辑：吴建华　张向红　　英文编辑：赵乘程
期刊基本参数：CN 62-1208/P * 1979 * q * A4 * 190 * zh * P * ￥30.00 * 500 * 38 * 2019-2 * n
万方数据

CHINA EARTHQUAKE ENGINEERING JOURNAL

Vol.41 No.1 February, 2019

CONTENTS

A New Seismic Motion Input Method in Soil-Structure Dynamic Interaction Analysis ……
…… *LIU Jingbo, TAN Hui, WANG Dongyang, BAO Xin* (1)

Vibration Isolation Effect of Isolation Trenches during Double-Line Subway Operation ……
…… *DING Zhi, ZHANG Xiao, WU Minhui, LI Danwei, CHEN Leiyue* (9)

Energy Dissipation Design for the Concrete Structures in a Stadium in Post-earthquake Restoration and Reconstruction
…… *ZHANG Yan, LIU Tao* (16)

Ultimate Bearing Capacity of the Joint Sections of Mixed Bridges under Earthquake Action …… *KOU Liya* (23)

Seismic Design and Engineering Application of Tunnels Based on Coseismic Displacement ……
…… *HUANG Luyuan, WANG Chenghu, YANG Shuxin* (29)

Seismic Performance Test of the Concrete Structure Based on Seismic Analog Signals after Denoising ……
…… *WANG Qun, GUAN Hongjie, ZHANG Qian* (36)

Longitudinal Response of Shield Tunnels in Inhomogeneous Formations under Cyclic Loading ……
…… *FANG Yuxiang, TIAN Yi, KANG Cheng, WU Wenbing, LIANG Rongzhu* (42)

Seismic Response Analysis of Hyperbolic Cooling Towers …… *MA Ben, HAO Shengjie* (51)

Determination of Site Ground Motion Parameters on Deep Overburden ……
…… *LI Hongjun, YANG Zhengquan, LI Deyu, WANG Haibo, ZHU Kaibin* (60)

Experimental Study on the Improvement of Soft-Soil Tunnel Foundation by Composite Foundation with Steel Pipe and Single Piles …… *LI Lei* (69)

Experimental Study on the Liquefaction Mechanism of Sandy Soil Enforced by Geo-encased Stone Columns ……
…… *WANG Jinbao, SONG Xintong, TIAN Meiling, WANG Yajun* (76)

Experimental Research on the Effect of the Sample Preparation Methods on the Strength Change of the Unsaturated Compacted Loess …… *CAI Xiaoling, YU Li* (86)

Analysis of Seismic Performance Parameters for Slope Reinforcement …… *GAO Ang, ZHANG Mengxi* (94)

Experimental Study on the Performance of Sand Cushion Isolation System in the Foundation of a Rural Residential Project …… *YIN Zhiyong, SUN Haifeng, JING Liping, XU Kunpeng, LI Zongheng* (101)

Shaking Table Tests on the Seismic Response Characteristics of a Free Field in Saturated Soft Soil ……
…… *CHENG Xuelei, CUI Chunyi, SUN Zongguang* (108)

Technology Based on Root-Pile Strengthening for the Comprehensive Post-earthquake Restoration of Highway Subgrade Slopes …… *XIAO Yan* (117)

Settlement Prediction of Highway Subgrades Based on Genetic Optimization Neural Network ……
…… *PENG Lishun, CAI Run, LIU Jinbo, GUO Anning, GUO Zhiyu* (124)

PKPdif Wave may Indicate Existence of Low-velocity Layer in Earth's Inner Core ……
…… *XU Jiansheng, XU Xiaoming, WEI Yonggang, ZHOU Jianchao, GUO Xiangyun* (131)

Automatic Picking up of P-wave First Arrival in Earthquake Early Warning Using STA/LTA Method ……
…… *LI Qicheng, HE Shugeng* (138)

万方数据

Characterization of Shallow Structures and Buried Faults in the North of Wuzhong Area , Ningxia Based on Seismic Reflection Profiles ……
LI Qian , JI Jifa , JIAO Decheng , TAN Yali , HUA Xinsheng ,FENG Shaoying , LIU Zengqi , GUO Xinjing (147)
Features of the Southwest Segment of Xiandian Fault Revealed through Shallow Seismic Prospecting ……
…… *MENG Lipeng , PENG Yuanqian , RAN Zhijie , WEN Chao , WANG Yan* (155)
Dislocation Characteristics of Seismic Surface Rupture of Normal Faults in Interbedded Cemented Soil ……
…… *GONG Fang , HUANG Jin , BAI Zhiyong* (162)
Preliminary Study on the Influencing Factors of the Horizontal-to-Vertical Spectral Ratio Applied in Strong Motion
…… *LI Hongguang , LENG Wei* (169)
Thermal Infrared Brightness Temperature Anomalies of Two Earthquakes on the Northeastern Margin of the Qinghai—Tibet Plateau …… *HUI Shaoxing , WEI Congxin , JIN Zhaodi* (177)
Missing Earthquakes Detection and Completeness of Earthquake Catalogs of the 2015 Qilian , Qinghai M_S5.2 Earthquake
…… *YIN Xinxin , ZENG Wenhao , LI Shaohua , ZHAO Linlin , PU Ju , GAO Yongguo* (183)
Analysis of the Earthquake Early-warning Parameters for Nuclear Power Plants Shutdown Based on the Intensity Measure …… *HU Jinjun , ZUO Zhanxuan , WU Wangcheng , XIE Lili* (189)
Algorithm Based on Vehicle Internet of Things for the Selection of the Optimal Passage Road in a Seismic Area ……
…… *LIU Meiling , LI Rui* (195)
A Fire Risk Assessment Model Based on Fuzzy Mathematics for the Existing Buildings after Strong Earthquakes ……
…… *HU Shurong* (201)
Application of the LM-BP Neural Network in the Economic Loss Assessment Model for Post-earthquake Buildings ……
…… *XIA Ruifang , CHENG Guoqing* (208)
Multi-factor Model Based on the Gray Model for the Cost Control of Post-earthquake Reconstruction Projects ……
…… *GUO Yanli , HOU Yunfei* (215)
A Seismic Performance Evaluation Method for Masonry Structures Based on BIM ……
…… *HU Ying , PEI Lijian , HAN Chunxiu* (221)
Design of a BIM-based Model for Assessing the Degree of Building Damage after an Earthquake ……
…… *ZHAO Quanbin , SHI Yu , ZOU Qiuyuan , WANG Cheng* (227)
BIM-based Method for the Cost Control of Civil Building Reconstruction after Earthquakes …… *WANG Yan* (233)
Application of BIM Technology in the Cost Control of Post-earthquake Building Reconstruction ……
…… *CHEN Lijuan , LU Ya* (239)
Human—Computer Interaction Design for the Seismic Simulation System …… *MO Luyu* (245)
Design and Realization of Air Conditioning and Ventilation Systems in Anti-seismic Roadways ……
…… *SANG Haitao , GUO Xianzhou* (251)
Formation Mechanism Analysis and Stability Evaluation of Dangerous Rock Collapses Based on the Oblique Photography by Unmanned Aerial Vehicles ……
…… *CHEN Zhouxiang , YE Xian , ZHANG Wenbo , GUO Biao , FANG Liuyang* (257)
A Discussion on the Relationship among the 1975 Haicheng, the 1976 Horinger Strong Earthquakes and the 1976 Tangshan Earthquake …… *GUO Zengjian* , *GUO Anning* (268)

万方数据