

全国中文核心期刊
中国科技核心期刊
中国科学引文数据库核心期刊

ISSN 1000-0844
CN 62-1208/P
CODEN: XDIXEF

地震工程学报

CHINA EARTHQUAKE ENGINEERING JOURNAL

第41卷 第6期
Vol. 41 No. 6

2019 **6**

ISSN 1000-0844



中国地震局兰州地震研究所
清华大学
中国地震学会
中国土木工程学会

地震工程学报

DIZHEN GONGCHENG XUEBAO

第 41 卷 第 6 期 2019 年 12 月

目次

专题与综述

纪念《西北地震学报》创刊 40 周年 《地震工程学报》编辑部 (1385)

海原地震百年纪念 从灾害链角度讨论 1920 年海原 8.5 级地震 郭增建, 郭安宁 (1394)

2019 年甘肃张掖 M5.0 地震余震序列重定位 鞠慧超, 张元生, 刘旭宙 (1396)

甘肃张掖 M5.0 地震前气枪信号走时变化研究 刘志国, 张元生, 邹 锐, 刘旭宙 (1402)

断裂带首波研究进展 杨 微 (1407)

机器学习在地震检测与震相识别的应用综述 贾 佳, 王夫运, 吴庆举 (1419)

结构抗震

地震动多点差异输入对架空管道地震响应影响研究 薛景宏, 王 鑫 (1426)

基于向量式有限元的黏滞阻尼减震结构抗竖向连续倒塌动力反应分析 曲激婷, 宋全宝 (1432)

层间隔震偏心结构双向地震耦合响应研究 刘德稳, 孙 毅, 齐荣庆, 赵 焯 (1440)

车辆行驶振动对古长城影响分析及评价 杜 浩, 陈 祥, 王登科 (1448)

自然腐蚀环境下钢筋混凝土梁疲劳应用性能试验研究 蔡小玲, 包 超, 闫忠义, 韩文臣 (1454)

基于隔震就位连接技术的高层钢框架结构建筑抗震技术研究 胡 可 (1460)

点支式玻璃建筑结构地震损伤评估模型研究 宋良瑞, 唐忠茂 (1466)

基于自由场局部变形的地下结构抗震 Pushover 分析方法 李述涛, 刘晶波, 宝 鑫, 王 菲, 王东洋 (1472)

地震作用下钢框架高层结构的抗震性能研究 邢 磊, 贾宝新, 邢 锐 (1482)

再生钢筋混凝土柱疲劳性能多尺度研究 阎慧群, 王清远, 熊 峰 (1488)

遗址建筑结构在不同地震作用下安全性能分析 饶 力 (1493)

基于振动法的建筑墙体装饰抗震裂综合设计研究 张兴刚, 闫秋羽, 陈 鹏, 王志强, 杨 政, 姜荣斌 (1499)

考虑劣化屈服老化裂纹后混凝土水库堤坝排水边坡抗震性研究 石 晶, 李 伟 (1506)

基于典型工程实例对剪力墙抗震性能动力时程分析的提高研究 余培杰, 翟 燕 (1514)

地震科学研究

基于地热钻孔资料探讨北京黄庄-高丽营断裂的构造活动特征 刘元章, 刘 凯, 刘久荣, 王树芳, 王丽亚, 崔一娇, 王 旭, 孙赵爽 (1521)

龙门山断裂带南段岩石圈磁场变化分析 宋成科, 倪 喆, 陈 斌, 袁浩浩 (1529)

宜昌台三类地倾斜仪观测数据的对比研究·····	袁 曲, 许裕之, 吕品姬, 张 辉, 王 慧, 宋潇潇 (1536)
基于 PMC 方法的辽宁测震台网监测能力评估·····	安祥宇, 赵 倩, 王晓睿, 王淑辉, 徐鹏深 (1545)
基于三维应变格林函数反演中小震震源机制·····	周 立, 林 强, 范 涛 (1553)
基于 AlphaGUARD P2000F 测氦仪利用水中溶解氦对 DDL-1 型气氦仪校准的实验研究·····	起卫罗, 曹舸斌, 方 伟 (1560)
2013 年岷县—漳县 6.6 级地震震前地磁异常分析·····	涂先新, 王弘宇, 王 杰, 翁 骋, 康 波 (1568)

岩土抗震

结构-土-结构动力相互作用对结构系统频率的影响·····	韩 冰, 陈少林, 梁建文 (1574)
复杂地基条件下桩-土-核岛结构相互作用模型研究·····	尹训强, 滕浩钧, 王桂莹 (1581)
基于 Pasternak 地基模型和 Adomian 分解方法的扩底桩水平动力响应分析·····	丁肇伟, 宋春雨, 陈龙珠 (1587)
基于试验的多年冻土典型路基变形研究·····	刘 琨, 徐舜华, 田文通, 孙平定 (1597)
宝兰客专天水市王家墩滑坡地震稳定性分析·····	陈亚光 (1607)
筑坝料动力变形特性试验与颗粒流模拟·····	高德清 (1615)
循环荷载作用下红黏土累积变形研究·····	谢 栋, 吴建奇 (1623)
近断层速度脉冲地震动的三维有限差分模拟·····	罗全波, 陈学良, 高孟潭, 李宗超, 李铁飞 (1630)

震灾防御及其他

地震状态下高层建筑物安全防护避让距离的估计研究·····	张立维 (1637)
商业建筑室内地震应急避难场所空间设计·····	李杰亮, 马肖彤 (1643)
基于 GIS 的社区地震应急避难场所配置模型构建——以银川市育林巷社区为例·····	张佳瑜, 白林波, 杨文伟 (1650)
利用遥感图像数据基于模板匹配的震毁灾损研究·····	欧立奇, 王红英, 罗小东, 李 盼, 刘 瀚 (1659)
基于实例分析的绿色钢结构抗震与环保性能研究·····	孙 静, 薛小杰 (1665)
震后混凝土缺陷加固修复构件性能实验分析·····	宋 丹, 李 林 (1671)
震后建筑群修复施工阶段工程造价动态预控系统·····	李 侠, 王心雨 (1679)

CHINA EARTHQUAKE ENGINEERING JOURNAL

Vol.41 No.6 December, 2019

CONTENTS

In Memory of the 40th Anniversary of the Northwestern Seismological Journal .....	.....
..... <i>The Editorial Department of the China Earthquake Engineering Journal</i> (1385)	
Discussion on the Haiyuan M8.5 Earthquake of 1920 from the View Point of Disaster Chain .....	.....
..... <i>GUO Zengjian, GUO Anning</i> (1394)	
Relocation of the Aftershock Sequence of the Zhangye M5.0 Earthquake in Gansu Province in 2019 .....	.....
..... <i>JU Huichao, ZHANG Yuansheng, LIU Xuzhou</i> (1396)	
Travel Time Changes of the Airgun Signal before the Zhangye M5.0 Earthquake in Gansu Province .....	.....
..... <i>LIU Zhiguo, ZHANG Yuansheng, ZOU Rui, LIU Xuzhou</i> (1402)	
Recent Advances in Fault Zone Head Waves .....	.....
..... <i>YANG Wei</i> (1407)	
Review of the Application of Machine Learning in Seismic Detection and Phase Identification .....	.....
..... <i>JIA Jia, WANG Fuyun, WU Qingju</i> (1419)	
Effect of Multi-support Differential Ground Motion Input on Seismic Response of Overhead Pipelines .....	.....
..... <i>XUE Jinghong, WANG Xin</i> (1426)	
Dynamic Response Analysis of Resisting Vertical Progressive Collapse of Frame Structures with Viscous Dampers Based on the Vector Form Intrinsic Finite Element Method .....	.....
..... <i>QU Jiting, SONG Quanbao</i> (1432)	
Coupling Seismic Response of Inter-story Isolated Eccentric Structures under a Bi-directional Earthquake .....	.....
..... <i>LIU Dewen, SUN Yi, QI Rongqing, ZHAO Xuan</i> (1440)	
Impact Analysis and Evaluation of Vehicle-driving-induced Vibration on the Ancient Great Wall .....	.....
..... <i>DU Hao, CHEN Xiang, WANG Dengke</i> (1448)	
Experimental Study on the Fatigue Performance of Reinforced Concrete Beams in a Natural Corrosion Environment .....	.....
..... <i>CAI Xiaoling, BAO Chao, YAN Zhongyi, HAN Wenchen</i> (1454)	
Seismic Resistance Technology of High-rise Steel Frame Structures Based on Isolation-in-Place Connection Technology .....	.....
..... <i>HU Ke</i> (1460)	
A Seismic Damage Assessment Model for Point-Supported Glass Building Structures .....	.....
..... <i>SONG Liangrui, TANG Zhongmao</i> (1466)	
Seismic Analysis of Underground Structures Based on Local Deformation of the Free Field via the Pushover Analysis Method .....	.....
..... <i>LI Shutao, LIU Jingbo, BAO Xin, WANG Fei, WANG Dongyang</i> (1472)	
Seismic Performance of High-rise Steel-frame Structures under Seismic Action .....	.....
..... <i>XING Lei, JIA Baoxin, XING Rui</i> (1482)	
Multi-scale Analysis of the Fatigue Behavior of Recycled Aggregate-Reinforced Concrete Columns .....	.....
..... <i>YAN Huiqun, WANG Qingyuan, XIONG Feng</i> (1488)	
Safety Performance of Building Structures in Relic Parks under Different Earthquakes .....	.....
..... <i>RAO Li</i> (1493)	
Synthetic Design of Anti-seismic Cracking of Building Wall Decoration Based on the Vibration Method .....	.....
..... <i>ZHANG Xinggang, YAN Qiuju, CHEN Peng, WANG Zhiqiang, YANG Zheng, JIANG Rongbin</i> (1499)	
Seismic Behavior of Drained Slopes on Concrete Reservoir Dams Considering Degradation Yield and Aging Cracks .....	.....
..... 万方数据 <i>SHI Jing, LI Wei</i> (1506)	

Dynamic Time-history Analysis of Seismic Performance of Shear Walls Based on a Typical Case	YU Peijie, ZHAI Yan (1514)
Characteristics of Tectonic Activity on the Huangzhuang — Gaoliying Fault in Beijing Based on Geothermal Drilling Data	LIU Yuanzhang, LIU Kai, LIU Jiurong, WANG Shufang, WANG Liya, CUI Yijiao, WANG Xu, SUN Zhaoshuang (1521)
Variation of the Lithospheric Magnetic Field in the Southern Segment of the Longmenshan Fault Zone	SONG Chengke, NI Zhe, CHEN Bin, YUAN Jiehao (1529)
A Comparative Study of the Observation Data from Three Kinds of Ground Tiltmeter at Yichang Station, China	YUAN Qu, XU Yuzhi, LÜ Pinji, ZHANG Hui, WANG Hui, SONG Xiaoxiao (1536)
Assessment of Earthquake Monitoring Capability of Liaoning Seismic Network Based on PMC Method	AN Xiangyu, ZHAO Qian, WANG Xiaorui, WANG Shuhui, XU Pengshen (1545)
Inversion of Focal Mechanisms of Small and Moderate Earthquakes Based on a Three-dimensional Strain Green Tensor Database	ZHOU Li, LIN Qiang, FAN Tao (1553)
Experimental Study of the Calibration of a DDL-1 Gas Radon Meter Based on the AlphaGUARD P2000F Emanometer and Dissolved Radon	QI Weiluo, CAO Gebin, FANG Wei (1560)
Geomagnetic Anomalies Prior to the Minxian—Zhangxian M6.6 Earthquake of 2013	TU Xianxin, WANG Hongyu, WANG Jie, WENG Cheng, KANG Bo (1568)
Effects of Structure-Soil-Structure Dynamic Interaction on the Frequency of Structural Systems	HAN Bing, CHEN Shaolin, LIANG Jianwen (1574)
A Model for Pile-Soil-Nuclear Island Structural Interaction under Complex Foundation Conditions	YIN Xunqiang, TENG Haojun, WANG Guixuan (1581)
Horizontal Dynamic Response of a Belled Pile Based on the Pasternak Foundation Model and the Adomian Decomposition Method	DING Zhaorwei, SONG Chunyu, CHEN Longzhu (1587)
Deformation of a Typical Embankment in Permafrost Regions Based on Experiments	LIU Kun, XU Shunhua, TIAN Wentong, SUN Pingding (1597)
Stability Analysis of Wangjiadun Landslide in Tianshui City under Earthquake Load	CHEN Yaguang (1607)
Test and Particle Flow Simulation of Dynamic Deformation Characteristics of Dam Materials	GAO Deqing (1615)
Accumulative Deformation of Red Clay in Southern Jiangxi under Cyclic Loading	XIE Li, WU Jianqi (1623)
Three-Dimensional Finite-Difference Simulation of Near-fault Velocity Pulse-like Ground Motions	LUO Quanbo, CHEN Xueliang, GAO Mengtan, LI Zongchao, LI Tiefei (1630)
Estimation of Safety Protective Setback Distances of High-rise Buildings under Earthquake	ZHANG Liwei (1637)
Spatial Design of Indoor Earthquake Emergency Shelter in Commercial Buildings	LI Jieliang, MA Xiaotong (1643)
Construction of an Earthquake Emergency Shelter Allocation Model for a Community Based on GIS ; a Case Study of the Yulin Lane Community in Yinchuan City	ZHANG Jiayu, BAI Linbo, YANG Wenwei (1650)
Earthquake Damage Loss Analysis Based on Template Matching and Remote-sensing Image Data	OU Liqi, WANG Hongying, LUO Xiaodong, LI Pan, LIU Han (1659)
Seismic and Environmental Protection Performance of Green Steel Structures Based on a Case Study	SUN Jing, XUE Xiaojie (1665)
Experimental Analysis of the Performance of Reinforcement and Repair Members on Concrete Defects after Earthquake	SONG Dan, LI Lin (1671)
A Dynamic Pre-control System for the Projected Cost of Post-earthquake Building Groups in Restoration and Construction Stages	LI Xia, WANG Xinyu (1679)