

# 防灾减灾工程学报

2022年第42卷

## 总 目 次

### 第1期

#### “重大灾害的机理、监控和风险研究”专栏

- 山洪对汶川县村镇建筑的破坏特征及影响因素分析 .....甄亿位,刘曙光,钟桂辉,等(1)
- “8·20”板子沟泥石流特征及防治措施 .....吕小波,游勇,李道凌,等(12)
- 通渭黄土滑坡变形特征及致灾机理分析 .....陈大伟,吴志坚,梁超,等(24)
- 边坡地震响应数值模拟中最优边界范围研究 .....张江伟,周爱红,迟明杰,等(34)
- 泥石流作用下夯土建筑灾变响应特征研究 .....李聪,邹强,蒋虎,等(42)
- 汶川震区绵鹿镇“8·20”登溪沟泥石流灾害调查与分析 .....丰强,唐川,陈明,等(51)

#### 论文

- 地震作用下地裂缝场地地表动力响应特性研究 .....熊仲明,王靖东,张朝,等(60)
- 近断层地震动下预制拼装桥墩桥梁结构碰撞响应分析 .....赵建锋,孟庆一,刘雪飞(69)
- 驳船撞击下RC桥墩的非线性动力响应与损伤特征分析 .....邵俊虎,占玉林,陈宁,等(81)
- SV波入射下斜坡地形对上覆土层地震动放大的影响研究 .....刘启方,李家祥,温瑞智(92)
- SV波垂直入射盆山耦合场地对地面运动的影响 .....高严,于彦彦(100)
- 地震作用下土-结构相互作用的简化时程分析 .....赵密,王维伟,黄景琦,等(111)
- 锈蚀RC柱的概率抗剪承载力模型与校准分析 .....余波,丁自豪,凌干展,等(118)
- 装配式混凝土框架子结构动态倒塌性能试验研究 .....杨涛,谢元康,郝天之(126)
- 低延性支撑钢框架结构抗倒塌性能简化评估方法 .....刘一赫,董志骞,李钢(135)
- 预制混凝土柱与独立基础浆锚连接抗震性能研究 .....陈俊,彭月,曹子美,等(142)
- 板件弯剪屈服耗能支撑滞回性能研究 .....李真真,赵宝成(151)
- 砂土液化对基础隔震结构地震反应的影响分析 .....朱明轩,陈礼飞,于旭,等(162)
- 基于修正惯用法的埋深对圆形隧道地震反应影响 .....马超,路德春,戚承志,等(171)
- 大型十字换乘车站结构地震响应及空间效应分析 .....郝朋飞,王国波,赵旭,等(180)
- 地铁振动荷载作用下场地动力响应及振动衰减规律研究 .....韩俊艳,万宁潭,赵密,等(191)
- 板桁结合加劲梁悬索桥颤振稳定措施试验研究 .....彭伟,杨雄伟(200)
- 循环荷载作用下加筋土路基动力响应研究 .....高海军,董丁明,赵琪,等(208)
- 嘉甬跨海高铁大桥工程浅层气地质及灾害防治分析 .....李好强,王勇,雷学文,等(216)
- 地震作用下土石混合体边坡稳定性分析研究 .....刘康琦,刘红岩(224)
- 不同剪切速率下吸力基础-黏土界面剪切特性研究 .....李大勇,张雨坤,高玉峰,等(231)

### 第2期

(复杂环境及耦合作用下工程结构可靠性专辑)

#### 多灾耦合作用下工程结构损伤识别与风险评估

- 地震与洪水作用下结构风险分析与设计研究进展 .....李钢,秦佩瑶,董志骞,等(237)

- 地震-燃气爆炸灾害链效应对剪力墙结构的损伤研究 .....霍林生, 英培钰, 薛兆余, 等 (251)
- 多灾耦合作用下钢管混凝土柱承载性能研究进展 .....惠存, 李永刚, 李克, 等 (259)
- 震后火作用下多层钢框架基于火灾荷载密度的易损性分析 .....蔡新江, 蒋伟杰, 毛小勇, 等 (269)
- 高层建筑风致疲劳分析中的钢材强度退化模型 .....郑晓伟, 吕恒林, 李宏男, 等 (276)
- 火灾下爆炸冲击波在钢结构中的传播规律及破坏机理 .....史明方, 刘振宇, 田志昌, 等 (283)
- 洪水冲刷和地震联合作用下砌体结构的失效风险评估 .....吕光辉, 李钢, 董志骞, 等 (294)
- 震后钢筋混凝土柱耐火性能有限元分析 .....刘猛, 尹文雯, 殷胜光, 等 (303)

#### 极端(恶劣)环境下工程结构破坏与耐久性分析

- 西部横断山区强降温气候条件下桥塔温度效应及抗裂性能优化研究 .....黄旭, 朱金, 李永乐, 等 (310)
- 下击暴流下单立柱三面式广告牌风压特性研究 .....涂佳黄, 吕海宇, 唐彪, 等 (320)
- 台风-风暴潮下海南地区砌体房屋物理脆弱性分析 .....赵开鹏, 李碧雄, 吴德民, 等 (330)
- 海蚀环境下考虑摩擦滑移的桥梁板式橡胶支座老化剪切性能研究 .....李悦, 高崇铭, 李冲, 等 (340)
- 冻融循环作用后钢筋混凝土电化学除氯效果研究 .....屈锋, 侯海龙, 胡松, 等 (347)
- 下击暴流作用下单层球面网壳倒塌破坏研究 .....霍林生, 赵伟, 陈超豪 (354)

#### 火灾作用下工程结构及材料性能分析

- 栓钉连接件、锚固及降温方式对高温喷水后型钢再生混凝土界面剪力传递的影响  
.....陈宗平, 戴上秦, 王成, 等 (362)
- 钢筋桁架装配式密肋楼盖火灾行为试验研究 .....谢群, 张守硕, 林明强, 等 (372)
- 钢筋混凝土框架的多尺度抗火混合模拟 .....蔡新江, 戚晨望, 毛小勇, 等 (383)
- 不同火灾下建筑常用防火板材隔热性能试验研究 .....范光明, 王玲玲, 王卫华 (391)
- 基于不同破坏准则的火灾下钢筋混凝土板可靠性评估 .....林旭华, 董毓利, 房圆圆, 等 (403)

#### 综述

- Fe-SMA的材料特性及在土木工程中的应用进展 .....张哲熹, 方成, 王伟, 等 (411)

### 第3期

#### 论文

- 不同缝面形态地裂缝场地地震响应规律研究 .....慕焕东, 邓亚虹, 纪帆, 等 (425)
- 极罕遇地震作用下LRB基础隔震结构地震响应特性 .....黄潇, 胡志祥, 刘运林 (436)
- 下穿隧道对地铁车站结构地震反应的影响研究 .....路德春, 郝文磊, 吴春玉, 等 (445)
- 基于FLAC<sup>3D</sup>液化场地桩基动力反应振动台试验数值分析方法 .....苏雷, 赵卓, 毕建巍, 等 (454)
- 大跨度单层球面网壳抗连续倒塌性能影响因素分析 .....王媛, 聂晓宁, 田黎敏 (464)
- 岩溶位置及组合效应对隧道的地震响应分析 .....李明达, 张昱, 周晶 (472)
- 远场类谐和地震波加速度反应谱的双峰特征分析 .....曹国绒, 王博, 杨柯, 等 (480)
- 地铁车站与上盖高层建筑一体化抗震性能研究 .....刘翠清 (490)
- 饱和砂土地震-地铁车站地震响应参数敏感性分析 .....许民泽, 崔春义, 王广兵, 等 (499)
- 越江电力地下综合管廊结构横向抗震性能研究 .....汤鹏, 杨明, 庄海洋, 等 (507)
- 考虑场地效应的概率地震危险性分析——以玉溪为例 .....梅伟, 顾世祥, 童保林, 等 (516)
- 基于铰缝损伤度的空心板桥铰缝损伤识别方法 .....项长生, 党聪, 周宇 (523)

- 脱硝钢架表面体型系数及风致响应分析 .....劳俊,王希慧,宋波,等(534)
- 高寒地区输电线路锥管板条装配式基础抗冻拔性能试验研究 .....王卫东,崔强,韩杨春,等(542)
- 饱和-非饱和土一维大变形固结模型 .....周亚东,姜龙飞,郭帅杰,等(553)
- 土体侧移作用下桩基侧向土压力的群桩效应 .....李琳,马荣,李敬梅,等(561)
- 无侧限压缩条件下重塑土微观结构研究 .....孙茜,阎长虹,刘羊(571)
- 间歇或连续运行下能源管廊热力响应特性现场试验 .....魏叶青,孔纲强,张继兵,等(579)
- 外表面轴向裂纹管道失效评估误差对比分析 .....郭凌云,周晶(586)
- 走滑断层作用下跨断层隧洞错断模型试验研究 .....王天强,崔臻,盛谦,等(597)
- 泥石流柔性防护系统耦合作用数值模拟 .....赵雷,张丽君,余志祥,等(606)
- 基于能量耗散过程的拦砂坝泄流孔堵塞判别研究 .....刘文润,陈剑刚,陈华勇,等(614)

### 综述

- 砖石质不可移动文物本体监测/检测技术研究进展 .....吴宜峰,赵金鑫,乔云飞,等(623)
- 堰塞坝溃决机理与溃决过程模拟技术研究综述 .....刘嘉欣,钟启明,陈亮,等(638)

## 第4期

### “重大灾害的机理、监控和风险研究”专栏

- 基于多传感器数据融合分析的路堑滑坡模型试验研究 .....马坤,张永谋,吴红刚,等(653)
- 确定性系数与地理探测器模型耦合的泥石流易发性评估方法研究  
——以安宁河流域为例 .....杜宇琛,葛永刚,梁馨月,等(664)
- 白龙江流域武都区段新发泥石流堆积物基本特征及颗粒级配分维研究  
.....崔开林,范玮佳,向灵芝,等(674)
- 甘肃岷县中寨沟流域内泥石流发育差异的主控因素分析 .....万飞鹏,杨为民,渠敬凯,等(683)
- 基于模糊失效准则的危岩稳定可靠度计算 .....张继旭,王林峰,夏万春(695)
- 基于局部软化阶梯双折减法的土坡稳定性研究 .....侯世伟,张永峰,张皓,等(705)
- 舟曲江顶崖大型滑坡成因及破坏机制分析 .....张卫雄,丁保艳,张文纶,等(714)

### 论文

- 浅埋富水软岩隧道大变形机理与控制研究 .....袁青,陈世豪,肖靖,等(723)
- 盾构隧道开挖对邻近桩基三维影响试验研究 .....路德春,丁超,林庆涛,等(732)
- 隧道纵向抗震分析的反应加速度方法 .....赵密,陈晓晖,黄景琦,等(742)
- 摩擦摆支座等效线性化参数及隔震设计方法研究 .....马振霄,温文露,管庆松,等(751)
- 装配式摩擦-软钢耗能支座设计与性能试验 .....方圣恩,陈小妹(761)
- 参数对地震动随机模拟结果的影响分析 .....党鹏飞,刘启方,马完君,等(768)
- 近断层山体地形三维地震动放大效应谱元法模拟 .....冯广军,刘中宪,陈頔,等(778)
- 上盖一体化地铁车站结构非线性地震响应分析 .....韩学川,陶连金,安韶,等(788)
- 成层地基挡土墙地震响应解析解及软夹层的影响研究 .....彭泽文,庄海洋,可文海(796)
- 连续刚构桥地震响应灰色关联参数敏感性分析 .....李静波,崔春义,许民泽,等(805)
- 圆形开口建筑火灾外立面热羽流温度演化研究 .....张子健,吕柏恩,张孝春,等(812)
- 基于节点删除法的村寨建筑群火灾蔓延危险建筑确定 .....郑飞扬,卢婷,宋志刚,等(819)

- 装配式钢牛腿连接节点耐火性能试验研究 .....刘冰,毛小勇,钱斌,等(826)
- 基于增量动力分析的近场框架结构楼层加速度响应研究 .....王健泽,钱雨凡,戴靠山,等(835)
- 剪应力压电智能骨料标定方法研究 .....侯爽,杨树森,冷志鹏(844)
- 动床条件下泥石流运动参数变化特征实验研究 .....李炳志,潘华利,邓其娟,等(850)
- 考虑软土应变软化效应的深埋式大圆筒承载性状分析 .....吴宜鹏,范庆来,任增乾,等(859)

### 防震减灾论坛

- 幕府山—焦山断裂的空间展布和浅部构造特征研究 .....孟科,杨浩,赵启光,等(866)
- 利用 FOCMEC 和 CAP 方法反演 2021 年大丰海域 M5.0 及天宁 M4.2 地震震源机制解  
.....杜航,郑江蓉,江吴琳,等(874)

### 第5期

(“双碳背景下土性改良与温度效应研究”专辑)

### 能源地下结构与工程

- 用于机场道面融雪的能源桩系统优化研究 .....闫振国,曾姝,杨军,等(881)
- 换热管埋设位置对桥面板除冰效果影响现场试验 .....陈鑫,孔纲强,刘汉龙,等(888)
- 城市能源隧道开发潜力及效益分析 .....毕金锋,姜弘,丁文其,等(897)
- 太阳能热排水固结模型试验研究 .....邓岳保,韩逸冬,郑良科,等(905)
- 基于离散元法的温度静力触探贯入与传热研究 .....莫品强,胡裕琛,王宽君,等(913)
- 考虑地基刚度分区的能源支护桩有限元模拟 .....田婉琪,程晓辉,关文,等(922)
- 能源桩试验材料热力学参数测试研究 .....元学栋,黎海星,崔宏志,等(929)
- 桩顶约束下桥梁大直径能量桩热力响应现场试验 .....任连伟,韩志攀,霍继炜,等(937)
- 国内外能量桩技术标准对比分析与探讨 .....戴国豪,孔纲强,钟国,等(945)
- 冻融作用下非饱和土热水力耦合数值模拟 .....刘恩龙,尹霄,张冲,等(953)

### 环境岩土与土工试验

- 我国近 20 年 11 次地震的土壤液化灾害回顾 .....吴琪,徐雨,陈国兴(961)
- 化学及干湿循环作用下泥灰岩损伤劣化特性分析 .....王林峰,程平,夏万春,等(976)
- 石灰石煅烧煤矸石水泥处理镍污染土的固化特性 .....侯世伟,张飞,张皓,等(986)
- 废弃口罩加筋固化土的强度特性与破坏模式 .....闭东民,孔纲强,陈庚,等(993)
- 添加剂对微生物胶结砂渗流特性的影响研究 .....彭萌,邓华锋,熊雨,等(999)
- 微生物矿化作用(MICP)-铺砂联合提高黄土抗侵蚀性试验研究 .....程瑶佳,唐朝生,泮晓华,等(1010)
- 脲酶抑制剂对 EICP 防风固沙效果的影响研究 .....范广才,缪林昌,孙潇昊,等(1019)
- 城市河道淤泥固化土干湿耐久性试验研究 .....徐杨,曹磊,阎长虹,等(1028)
- 基于纳米压痕技术的页岩土 MICP 结石体微观力学特性研究 .....刘子健,黄明,崔明娟,等(1036)
- 养护温度和冻融循环等对微生物胶结试样强度的影响 .....曹晨,赵志峰,王玮(1046)
- 温度作用下膨胀土的胀缩特性及微观机理 .....曾召田,潘斌,莫红艳,等(1053)
- 降低气泡混合轻质土吸水性的试验研究 .....杨卫东,黎冰,马文昊(1061)
- 格栅纵/横肋对筋-土界面拉拔特性的影响研究 .....路遥,肖成志,罗亚楠,等(1069)
- 基于分布式应变监测的埋地管道悬空识别方法研究 .....刘绪都,冯新,李明昊,等(1076)

- 装配式综合管廊光纤智能螺栓受力原型试验研究 .....韦 超, 朱鸿鹄, 王家琛, 等 (1085)
- 锥型组合桩竖向承载力模型试验研究 .....周先齐, 叶金铤, 金晓勤, 等 (1097)
- 黄土钻孔剪切变形与强度特性研究 .....于永堂, 朱建民, 郑建国, 等 (1104)
- 正常固结饱和黏土中倾斜平板锚承载力分析 .....杨德健, 江自强, 卢力强, 等 (1113)

## 第 6 期

### “城市综合防灾与抗灾韧性”专题

- 泸定 6.8 级地震交通网络应急服务能力分析 .....刘金龙, 林均岐, 潘 毅, 等 (1121)
- 基于功能需求导向的城市综合体震后修复路径优化方法研究 .....黄鹏超, 余丁浩, 李 钢, 等 (1130)
- 基于 IDA 方法地下结构易损性的地震动记录规模选取 .....蒋家卫, 高权宝, 陈国兴, 等 (1144)
- Rayleigh 波入射下建筑群-隧道群相互作用特性研究 .....刘中宪, 王建旭, 金立国, 等 (1153)
- 基于网络效率的城市轨道交通网络震后性能评估 .....范世杰, 游 丹, 侯本伟, 等 (1165)
- 基于建筑群震害仿真的应急疏散路径规划方法研究 .....周亦威, 陈 辉, 林旭川, 等 (1174)
- 城市地下基础设施韧性发展现状及策略 .....廖英泽, 王国盛, 李 喆, 等 (1183)
- 基于 DSR-灰云模型的西北城市抗震韧性评估 .....樊燕燕, 刘轩谷 (1191)
- 博物馆-展柜-浮放文物系统地震滑移与摇摆响应分析 .....刘 佩, 袁晨瑜, 杨维国, 等 (1203)
- 预应力 RC 框架-摇摆墙结构抗震减振性能研究 .....赵 江, 李文武, 周 攀 (1213)
- 吊顶地震时程反应分析的二维简化模型 .....冯云幸, 曲 哲, 李戚齐 (1222)
- 分布式多重调谐冲击阻尼器减震控制研究 .....鲁 正, 周梦瑶, 马乃寅 (1228)
- 基于一致危险性谱的砌体结构抗震性能分析 .....周 强, 陈 东, 肖 晖, 等 (1233)
- 考虑经验结构信息的 RC 框架剪切层模型建立方法 .....杨 植, 刘 洋, 熊 峰, 等 (1240)
- 近海高速铁路桥梁时变地震易损性分析 .....梁 岩, 闫士昌, 陆 尧, 等 (1248)
- 周围建筑群对大跨穹顶屋盖的风致干扰效应研究 .....霍林生, 齐 昊 (1257)

### 论文

- 冻融循环作用下西藏东南冰碛土剪切力学特性试验研究 .....邱恩喜, 何巧玲, 孙希望, 等 (1267)
- 唐山地震高烈度区  $V_{s30}$  经验估计研究 .....吴连斌, 兰景岩, 蔡金豆, 等 (1280)
- 横隔数目对猫头型输电塔抗震性能的影响 .....赵仰康, 王 晨, 宋鹏彦 (1287)
- 桁架转换钢筋混凝土井塔结构抗震性能研究 .....侯俊锋, 陈 光, 苏三庆, 等 (1294)
- RC 减震结构中震设计简化分析研究 .....马振霄, 温文露, 管庆松, 等 (1304)
- 近场地震作用下单跨斜交桥地震反应分析 .....陈敬一, 王利辉, 周雨龙, 等 (1314)
- 近断层桥梁最小搭接长度数值分析 .....贾宏宇, 岳伟勤, 杨 磊, 等 (1324)
- 冷-热不平衡热荷载下黏土地基中能量桩长期热-力学特性 .....杨 涛, 瞿广鑫, 花永盛 (1333)
- 可液化土层对土-地下结构地震反应的振动台试验设计 .....刘春晓, 陶连金, 边 金, 等 (1341)

### 地震快报

- 海上风电平台地震监测实验站记录的南黄海 M3.8 地震初探 .....孙业君, 何奕成, 王 俊, 等 (1351)
- 致谢 2022 年审稿专家 ..... (1354)

# Journal of Disaster Prevention and Mitigation Engineering

Vol.42 2022

## CONTENTS

### No.1

- Characterization and Impact Factors of the Damage to Village Buildings by Mountain Torrent Disasters in Wenchuan County  
 .....ZHEN Yiwei, LIU Shuguang, ZHONG Guihui, et al(1)
- Characteristics and Mitigation Measures of Banzi Gully Debris Flow on August 20<sup>th</sup>, 2019, in Wenchuan County, Sichuan  
 .....LYU Xiaobo, YOU Yong, LI Daoling, et al(12)
- Deformation Characteristics and Disaster-causing Mechanism Analysis of Tongwei Loess Landslide  
 .....CHEN Dawei, WU Zhijian, LIANG Chao, et al(24)
- Research on Boundary Range in Seismic Response Simulation of Slope  
 .....ZHANG Jiangwei, ZHOU Aihong, CHI Mingjie, et al(34)
- Disaster Response Characteristics of Rammed Earth Buildings to Debris Flow .....LI Cong, ZOU Qiang, JIANG Hu, et al(42)
- Field Investigation and Research on Debris Flow on August 20, 2019 in Mianshi Town, Epicenter of Wenchuan Earthquake  
 .....FENG Qiang, TANG Chuan, CHEN Ming, et al(51)
- Dynamic Response and Characteristics of the Ground Fissure Site under Earthquake  
 .....XIONG Zhongming, WANG Jingdong, ZHANG Chao, et al(60)
- Pounding Response of Bridge with Precast Segmental Bridge Piers under Near-fault Ground Motions  
 .....ZHAO Jianfeng, MENG Qingyi, LIU Xuefei(69)
- Nonlinear Dynamic Response and Damage Characteristic Analysis of RC Pier under Barge Collision  
 .....SHAO Junhu, ZHAN Yulin, CHEN Ning, et al(81)
- Study on the Effect of Ground Motion Amplification of Slope Topography to Overlying Soil Layer under Incident SV Waves  
 .....LIU Qifang, LI Jiaxiang, WEN Ruizhi(92)
- Effects of Coupled Basin-Mountain Terrain on Seismic Ground Motion under Vertical Incident SV Waves  
 .....GAO Yan, YU Yanyan(100)
- Simplified Time History Analysis for Soil-Structure Interaction under Earthquake  
 .....ZHAO Mi, WANG Weiwei, HUANG Jingqi, et al(111)
- Probabilistic Shear Strength Model and Its Calibration for Corroded RC Columns  
 .....YU Bo, DING Zihao, LING Ganzhan, et al(118)
- Experimental Study on Dynamic Collapse Performance of Prefabricated RC Frame Substructures  
 .....YANG Tao, XIE Yuankang, HAO Tianzhi(126)
- Simplified Collapse-Prevention Assessment Method for Steel Low-Ductility Concentrically Braced Frames  
 .....LIU Yihe, DONG Zhiqian, LI Gang(135)
- Research on Seismic Behavior of Prefabricated Concrete Columns and Independent Foundation with Grouted Corrugate  
 Sleeve .....CHEN Jun, PENG Yue, CAO Zimei, et al(142)
- Study on the Hysteretic Behavior of a Brace Dissipated Energy by Yielded Flexural-and-shear Plates  
 .....LI Zhenzhen, ZHAO Baocheng(151)
- Influence of Sand Liquefaction on Seismic Response of Base Isolated Structures  
 .....ZHU Mingxuan, CHEN Lifei, YU Xu, et al(162)
- Seismic Performance of Circle Tunnels Affected by Buried Depth Based on Modified Routine Method  
 .....MA Chao, LU Dechun, QI Chengzhi, et al(171)

Seismic Response and Spatial Effect Analysis of Large Cross Interchange Metro Station Structure .....	HAO Pengfei, WANG Guobo, ZHAO Xu, et al(180)
Research on Site Dynamic Response and Vibration Attenuation under the Vibration Loading of Subway .....	HAN Junyan, WAN Ningtan, ZHAO Mi, et al(191)
Experimental Study on the Flutter Stability Countermeasures of a Suspension Bridge with a Stiffened Plate-truss Composite Girder .....	PENG Wei, YANG Xiongwei(200)
Study on Dynamic Response of Reinforced Soil Subgrade under Cyclic Loading .....	GAO Haijun, DONG Dingming, ZHAO Qi, et al(208)
Engineering Geological Conditions and Shallow Gas Hazard Analysis of Jiayong Cross-sea High-speed Railway Bridge .....	LI Haoqiang, WANG Yong, LEI Xuewen, et al(216)
Stability Analysis of Soil-rock Mixture Slope under Earthquake .....	LIU Kangqi, LIU Hongyan(224)
Shear Behavior of Suction Foundation-Clay Interface under Different Shear Rates .....	LI Dayong, ZHANG Yukun, GAO Yufeng, et al(231)

## No.2

Research Progress on Risk Analysis and Design for Structures under Multiple Hazards of Earthquake and Flood .....	LI Gang, QIN Peiyao, DONG Zhiqian, et al(237)
Research on Damage of Shear Wall Structures Subjected to Earthquake-Gas Explosion Hazard Chain Effect .....	HUO Linsheng, YING Peiyu, XUE Zhaoyu, et al(251)
Investigation on the Load Bearing Capacity of Concrete Filled Steel Tube Columns under the Couple of Multiple Disasters .....	HUI Cun, LI Yonggang, LI Ke, et al(259)
Vulnerability Analysis of Multi Story Steel Frames under Post-Earthquake Fire based on Fire Load Density .....	CAI Xinjiang, JIANG Weijie, MAO Xiaoyong, et al(269)
Steel Strength Degradation Model for Wind-induced Fatigue Analysis of High-rise Buildings .....	ZHENG Xiaowei, LYU Henglin, LI Hongnan, et al(276)
Propagation Law of Explosion Shock Wave in Steel Structure .....	SHI Mingfang, LIU Zhenyu, TIAN Zhichang, et al(283)
Failure Risk Assessment of Masonry Structures under Flood Scouring and Earthquakes .....	LYU Guanghui, LI Gang, DONG Zhiqian, et al(294)
Finite Element Analysis on Fire Resistance Performance of Reinforced Concrete Columns after Earthquake .....	LIU Meng, YIN Wenwen, YIN Shengguang, et al(303)
Study on Thermal-induced Effect and Anti-Crack Performance Optimization of Bridge Pylon under Strong Cooling Weather Conditions in Hengduan Mountain Region of Western China .....	HUANG Xu, ZHU Jin, LI Yongle, et al(310)
Study on Wind Pressure Characteristics of Billboard under the Thunderstorm Downburst .....	TU Jiahuang, LYU Haiyu, TANG Biao, et al(320)
Analysis of Physical Vulnerability of Masonry Houses in Hainan Area under Typhoon-storm Surge .....	ZHAO Kaipeng, LI Bixiong, WU Demin, et al(330)
Research on the Aging Shear Performance of Plate Rubber Bearings in Bridges Considering Frictional Slip in Marine Corrosion Environment .....	LI Yue, GAO Chongming, LI Chong, et al(340)
Study on Electrochemical Chloride Extraction effect of Reinforced Concrete after Freeze-thaw Cycle .....	QU Feng, HOU Hailong, HU Song, et al(347)
Research on Progressive Collapse of Single-layer Spherical Reticulated Shells Subjected to Downbursts .....	HUO Linsheng, ZHAO Wei, CHEN Chaohao(354)
Effect of Stud Shear Connector, Anchorage and Cooling Method on Interfacial Shear Transfer of Steel Reinforced Recycled Aggregate Concrete after High Temperature and Water Spraying .....	CHEN Zongping, DAI Shangqin, WANG Cheng, et al(362)

- Study on Fire Behavior of Steel Truss Assembled Waffle Slab .....XIE Qun, ZHANG Shoushuo, LIN Mingqiang, et al(372)
- Multi-scale Hybrid Simulation of Fire Resistance of Reinforced Concrete Frame  
.....CAI Xinjiang, QI Chenwang, MAO Xiaoyong, et al(383)
- Experimental Study on Insulating Properties of Fire-resistant Plates Commonly Used in Building under Different Fire  
Conditions .....FAN Guangming, WANG Lingling, WANG Weihua(391)
- Reliability Assessment of Reinforced Concrete Slab in Fire based on Different Failure Criteria  
.....Lin Xuhua, Dong Yuli, Fang Yuanyuan, et al(403)
- Material Properties of Fe-SMA and Its Application in Civil Engineering  
.....ZHANG Zhexi, FANG Cheng, WANG Wei, et al(411)

### No.3

- Study on the Seismic Response Law of Ground Fissure Sites with Different Fracture Surfaces  
.....MU Huandong, DENG Yahong, JI Fan, et al(425)
- Seismic Response Behavior of LRB Base-isolated Structure under Extreme Rare Earthquakes  
.....HUANG Xiao, HU Zhixiang, LIU Yunlin(436)
- Influence of Undercrossing Tunnel on Seismic Response of Subway Station Structure  
.....LU Dechun, HAO Wenlei, WU Chunyu, et al(445)
- Numerical Simulation of Shake Table Test on Dynamic Response of Pile Foundation in Liquefiable Ground Using FLAC<sup>3D</sup>  
.....SU Lei, ZHAO Zhuo, BI Jianwei, et al(454)
- Influence Factors on Progressive-Collapse Resistance of Large-span Single-layer Latticed Domes  
.....WANG Yuan, NIE Xiaoning, TIAN Limin(464)
- Seismic Response Analysis of Tunnel under Karst Cave Locations and Combinatorial Effect  
.....LI Mingda, ZHANG Yu, ZHOU Jing(472)
- Analysis of the Bimodal Characteristics of Acceleration Response Spectra of Far-field Harmonic-like Ground Motions  
.....CAO Guorong, WANG Bo, YANG Ke, et al(480)
- Seismic Performance of Integrated Subway Station and Upper Cover with High-Rise Building .....LIU Cuiqing(490)
- Parameter Sensitivity Analysis for Seismic Response of Subway Station Embedded in Saturated Sand Layers  
.....XU Minze, CUI Chunyi, WANG Guangbin, et al(499)
- Lateral Seismic Performance of the Utility Tunnel Crossing the Yangzi River  
.....TANG Peng, YANG Ming, ZHUANG Haiyang, et al(507)
- Probabilistic Seismic Hazard Analysis Considering Site Effect: A Case Study of Yuxi City  
.....MEI Wei, GU Shixiang, TONG Baolin, et al(516)
- Hinge Joint Damage Identification Method of Hollow Slab Bridge based on Hinge Joint Damage Degree  
.....XIANG Changshen, DANG Cong, ZHOU Yu(523)
- Analysis of Superficial Shape Coefficient and Wind-induced Response of Denitrification Steel Frame  
.....LAO Jun, WANG Xihui, SONG Bo, et al(534)
- Experimental Investigation on Frost Resistance of Assembled Foundation with Cone Tube and Slab of Transmission Line  
in Alpine Region Area .....WANG Weidong, CUI Qiang, HAN Yangchun, et al(542)
- A One-Dimensional Large Strain Consolidation Model for Saturated-Unsaturated Soil  
.....ZHOU Yadong, JIANG Lonfei, GUO Shuaijie, et al(553)
- The Group Effect on the Lateral Earth Pressure of Piles Subjected to Lateral Soil Movement  
.....LI Lin, MA Rong, LI Jingmei, et al(561)
- Study on the Microstructure of the Remolded Soil under Unconfined Compression  
.....SUN Qian, YAN Changhong, LIU Yang(571)

Field Tests on Thermal Responses of Energy Utility Tunnel under Intermittence or Continuous Operation Mode	WEI Yeqing, KONG Gangqiang, ZHANG Jibing, et al(579)
Research on the Error of Failure Evaluation of the Pipeline with Axial Cracks on the Surface based on Statistical Analysis	GUO Lingyun, ZHOU Jing(586)
Model Experimental Study of the Influence of Strike-slip Fault with Dislocation on Tunnel	WANG Tianqiang, CUI Zhen, SHENG Qian, et al(597)
Coupled Numerical Simulation of Flexible Debris Flow Barrier	ZHAO Lei, ZHANG Lijun, YU Zhixiang, et al(606)
Blocking Judgment of Check Dam Discharging Orifices based on Energy Dissipation Process	LIU Wenrun, CHEN Jiangan, CHEN Huayong, et al(614)
A Review of Monitoring/Detecting Technology for Immovable Brick and Stone Cultural Relics	WU Yifeng, ZHAO Jinxin, QIAO Yunfei, et al(623)
Review on the Simulation Technologies of Breach Mechanism and Breaching Process of Landslide Dam	LIU Jiaxin, ZHONG Qiming, CHEN Liang, et al(638)

#### No.4

Research on Model Test of Cutting Landslide based on Multi-sensorData Fusion Analysis	MA Kun, ZHANG Yongmou, WU Honggang, et al(653)
Research of Debris Flow Susceptibility based on the Coupling of Certainty Factor Method and Geo Detector Model in Anning River Basin	DU Yuchen, GE Yonggang, LIANG Xinyue, et al(664)
Study on the Basic Characteristics and Particle Gradation Fractal Dimension of New Debris Flow Deposits in Wudu Section of Bailong River Basin	CUI Kailin, FAN Weijia, XIANG Lingzhi, et al(674)
Analysis on Main Controlling Factors of Debris Flow Development Differencein Zhongzhai Gully Basin of Minxian County, Gansu Province	WAN Feipeng, YANG Weimin, QU Jingkai, et al(683)
Reliability Calculation of Perilous Rock Stability based on Fuzzy Failure Criterion	ZHANG Jixu, WANG Linfeng, XIA Wanchun(695)
Research on Progressive Failure of Slope based on Softening Law and Step Double Reduction Method	HOU Shiwei, ZHANG Yongfeng, ZHANG Hao, et al(705)
Analysis on the Cause and Failure Mechanism of the Jiangdingya Large Landslide in Zhouqu, Gansu Province	ZHANG Weixiong, DING Baoyan, ZHANG Wenlun, et al(714)
Research on Large Deformation Mechanism and Countermeasures of Shallow Buried Tunnel in Soft Rock with Abundant Water	YUAN Qing, CHEN Shihao, XIAO Jing, et al(723)
Experimental Study on Three-dimensional Effects of Shield Tunnel Excavation on Adjacent Pile	LU Dechun, DING Chao, LIN Qingtao, et al(732)
Response Acceleration Method for Tunnel Longitudinal Seismic Analysis	ZHAO Mi, CHEN Xiaohui, HUANG Jingqi, et al(742)
Study on Equivalent Linearization Parameters and Base-isolation Design Method of Friction Pendulum System	MA Zhenxiao, WEN Wenlu, GUAN Qingsong, et al(751)
Design and Performance Tests of an Assembled Friction-soft Steel Energy Dissipation Bearing	FANG Shengen, CHEN Xiaomei(761)
Effects Analysis of Parameters on Stochastically Simulated Ground Motions	DANG Pengfei, LIU Qifang, MA Wanjun, et al(768)
Analysis on the 3-D Ground Motion Amplification of Mountain Topography near the Fault Using SEM	FENG Guangjun, LIU Zhongxian, CHEN Di, et al(778)

- Nonlinear Seismic Response Analysis of Integrated Subway Station Structure  
 .....HAN Xuechuan, TAO Lianjin, AN Shao, et al(788)
- Analytical Solution for the Seismic Response of a Retaining Wall with Multilayered Foundation and the Influence of Soft Interlayer .....PENG Zewen, ZHUANG Haiyang, KE Wenhai(796)
- Parameter Sensitivity Analysis of Seismic Response of a Continuous Rigid Frame Bridge based on Grey Correlation Method  
 .....LI Jingbo, CUI Chunyi, XU Minze, et al(805)
- Study on Temperature Evolution of Facade Thermal Plume from a Fire Compartment with Circular Opening  
 .....ZHANG Zijian, LYU Baien, ZHANG Xiaochun, et al(812)
- Determination of Fire Spread Hazardous Buildings in Village Building Complex based on Node Deletion Method  
 .....ZHENG Feiyang, LU Ting, SONG Zhigang, et al(819)
- Experimental Research on Fire Resistance of Prefabricated Steel Bracket Connection  
 .....LIU Bing, MAO Xiaoyong, QIAN Bin, et al(826)
- Floor Acceleration Response on Near-fault Frame Structures based on Incremental Dynamic Analysis Method  
 .....WANG Jianze, QIAN Yufan, DAI Kaoshan, et al(835)
- A Calibration Method of Shear Stress Piezoelectric Smart Aggregate .....HOU Shuang, YANG Shusen, LENG Zhipeng(844)
- Experimental Study on Variation Characteristics of Debris Flow Movement Parameters under Movable Bed Conditions  
 .....LI Bingzhi, PAN Huali, DENG Qijuan, et al(850)
- Bearing Behavior of Deeply-embedded Large-diameter Cylindrical Structure Considering Strain Softening Effect of Soft Clay  
 .....WU Yipeng, FAN Qinglai, REN Zengqian, et al(859)
- Research on the Spatial Distribution and Shallow Structural Characteristics of the Mufushan-Jiaoshan Fault  
 .....MENG Ke, YANG Hao, ZHAO Qiguang, et al(866)
- Inversion for the Focal Mechanisms of the 2021 Dafeng Sea  $M5.0$  Earthquake and Tianning  $M4.2$  Earthquake Using FOCMEC and CAP Methods .....DU Hang, ZHENG Jiangrong, JIANG Haolin, et al(874)

### No.5

- Study on Optimization of Energy Pile System for Snow Melting on Airport Pavement  
 .....YAN Zhenguo, ZENG Shu, YANG Jun, et al(881)
- Field Test on the Influence of the Embedding Position of Heat Exchanger Pipes on the Deicing Performance of the Bridge Deck .....CHEN Xin, KONG Gangqiang, LIU Hanlong, et al(888)
- Analyses on Potential and Benefit of Urban Energy Tunnel Development.....BI Jinfeng, JIANG Hong, DING Wenqi, et al(897)
- Model Test Research on Preloading Combined with Solar Thermal Drainage Consolidation Technology  
 .....DENG Yuebao, HAN Yidong, ZHENG Liangke, et al(905)
- Penetration and Heat Transfer of T-CPT based on DEM Simulation ...MO Pinqiang, HU Yuchen, WANG Kuanjun, et al(913)
- Finite Element Simulation of Energy Pile-anchor Retaining Structure Considering Subgrade Stiffness Partition  
 .....TIAN Wanqi, CHENG Xiaohui, GUAN Wen, et al(922)
- Measurement of Thermodynamic Parameters of Energy Pile Test Materials ...QI Xuedong, LI haixing, CUI Hongzhi, et al(929)
- Field Test on Thermal Response of Large Diameter Energy Pile under the Pile Top Constraint  
 .....REN Lianwei, HAN Zhipan, HUO Jiwei, et al(937)
- Comparative Analysis on Technical Standards of Energy Piles.....DAI Guohao, KONG Gangqiang, ZHONG Guo, et al(945)
- Numerical Simulation of Thermo-hydro-mechanical Coupling for Unsaturated Soil Subjected to Freezing-thawing Actions  
 .....LIU Enlong, YIN Xiao, ZHANG Chong, et al(953)
- Review of Soil Liquefaction Manifestation and Its Consequences for 11 Earthquakes in China Over the Last 20 Years  
 .....WU Qi, XU Yu, CHEN Guoxing(961)
- Analysis of Damage and Deterioration Characteristics of Marl under Chemical and Dry-wetting Cycles  
 .....WANG Linfeng, CHENG Ping, XIA Wanchun, et al(976)

Solidification Characteristics of Limestone Calcined Coal Ganguer Cement for Nickel-contaminated Soil .....	HOU Shiwei, ZHANG Fei, ZHANG Hao, et al(986)
Strength Characteristics and Failure Modes of Solidified Soil Reinforced by Waste Masks .....	BI Dongmin, KONG Gangqiang, CHEN Geng, et al(993)
Effect of Chemical Agents on Seepage Characteristics of Microbial Cemented Sand .....	PENG Meng, DENG Huafeng, XIONG Yu, et al(999)
Experimental Study on Erosion Resistance Improvement in Loess through Coupled Microbial Mineralization (MICP)-sand Paving .....	CHENG Yaojia, TANG Chaosheng, PAN Xiaohua, et al(1010)
Effects Researches of Urease Inhibitor on Wind-breaking and Sand-fixation of EICP .....	FAN Guangcai, MIAO Linchang, SUN Xiaohao, et al(1019)
Experimental Study on Drying-wetting Durability of Solidified Urban River Sludge .....	XU Yang, CAO Lei, YAN Changhong, et al(1028)
Investigation on the Micromechanical Properties of Bio-cement Shale Soil based on the Nanoindentation Technique .....	LIU Zijian, HUANG Ming, CUI Mingjuan, et al(1036)
Influence of Curing Temperature and Freeze-thaw Cycle on Reinforcement Strength by Microbial Cementation .....	CAO Chen, ZHAO Zhifeng, WANG Wei(1046)
Experimental Study on Temperature Effect on Swelling-shrinking Behaviours of Expansive Soil .....	ZENG Zhaotian, PAN Bin, MO Hongyan, et al(1053)
Experimental Study on Reducing Water Absorption of Air-foam Treated Lightweight Soil .....	YANG Weidong, LI Bing, MA Wenhao(1061)
Study of the Effect of Longitudinal and Transversal Ribs on Pullout Performance of Interface between Geogrids and Sand .....	LU Yao, XIAO Chengzhi, LUO Yanan, et al(1069)
Suspension Identification on Buried Pipeline based on Distributed Strain Monitoring .....	LIU Xudu, FENG Xin, LI Minghao, et al(1076)
Prototype Test Study on Loading Condition of Fiber-optic Smart Bolts of an Assembled Utility Tunnel .....	WEI Chao, ZHU Honghu, WANG Jiachen, et al(1085)
Experimental Study on Vertical Bearing Capacity of Conical Composite Piles .....	ZHOU Xianqi, YE Jinbi, JIN Xiaoqin, et al(1097)
Study on Deformation and Strength Characteristics of Xi'an Loess by Borehole Shear Tests .....	YU Yongtang, ZHU Jianmin, ZHENG Jianguo, et al(1104)
Analysis of Pullout Capacity of Inclined Plate Anchors in Normally Consolidated Saturated Clay .....	YANG Dejian, JIANG Ziqiang, LU Liqiang, et al(1113)

## No.6

Analysis of Emergency Service Capability of Transportation Network after Luding <i>M</i> 6.8 Earthquake .....	LIU Jinlong, LIN Junqi, PAN Yi, et al(1121)
Research on Optimization Method of Post-earthquake Repair Path for Urban Complex based on Functional Demand Orientation .....	HUANG Pengchao, YU Dinghao, LI Gang, et al(1130)
Quantification of Ground Motion Record Sets Scale in the IDA Method for Vulnerability Analysis of Underground Structures.....	JIANG Jiawei, GAO Quanbao, CHEN Guoxing, et al(1144)
Study on the Interaction Characteristics of Building Group and Tunnel Group under Rayleigh Wave Excitation .....	LIU Zhongxian, WANG Jianxu, JIN Liguang, et al(1153)
Post-earthquake Performance Evaluation of Urban Rail Transit Network based on Network Efficiency .....	FAN Shijie, YOU Dan, HOU Benwei, et al(1165)

- Research on Emergency Evacuation Route Planning Method based on Building Groups Seismic  
Damage Simulation .....ZHOU Yiwei, CHEN Hui, LIN Xuchuan, et al(1174)
- Development Status and Strategy of Urban Underground Infrastructure Resilience  
.....LIAO Yingze, WANG Guosheng, LI Zhe, et al(1183)
- Seismic Resilience Evaluation of Northwest Cities based on DSR-gray Cloud Model .....FAN Yanyan, LIU Xuangu(1191)
- Seismic Sliding and Rocking Response Analysis for Museum-Showcase-Freestanding Artifact Systems  
.....LIU Pei, YUAN Chenyu, YANG Weiguo, et al(1203)
- Research on the Seismic Performance and Vibration Reduction of Prestressed Rocking Wall-frame  
System .....ZHAO Jiang, LI Wenwu, ZHOU Pan(1213)
- A Two-dimensional Simplified Model for Seismic Response History Analysis of Suspended Ceilings  
.....FENG Yunxing, QU Zhe, LI Qiqi(1222)
- Study on Vibration Reduction Control of Distributed Multi-tuned Impact Dampers  
.....LU Zheng, ZHOU Mengyao, MA Naiyin(1228)
- Seismic Performance Analysis of Masonry Structures based on Uniform Hazard Spectrum  
.....ZHOU Qiang, CHEN Dong, XIAO Hui, et al(1233)
- Establishment Method of Story-based RC Frame Shear Model Utilizing Empirical Structural Information  
.....YANG Zhi, LIU Yang, XIONG Feng, et al(1240)
- Time-varying Seismic Fragility Analysis of Offshore High-Speed Railway Bridges  
.....LIANG Yan, YAN Shichang, LU Yao, et al(1248)
- Research on Wind-induced Interference Effects of Surrounding Buildings on the Long-span Dome-roof  
.....HUO Linsheng, QI Hao(1257)
- Experimental Study on Shear Mechanical Properties of Moraine Soil in Southeast Tibet Subjected to  
Freeze-thaw Cycles .....QIU Enxi, HE Qiaoling, SUN Xiwang, et al(1267)
- Empirical Estimation of  $V_{s30}$  in High Intensity Area of Tangshan Earthquake  
.....WU Lianbin, LAN Jingyan, CAI Jindou, et al(1280)
- Effect of the Number of Cross-sections on Seismic Response of Catenary-type Transmission Tower  
Structures .....ZHAO Yangkang, WANG Chen, SONG Pengyan(1287)
- Study on Seismic Performance of RC Well Tower Structure with Transferring Truss  
.....HOU Junfeng, CHEN Guang, SU Sanqing, et al(1294)
- Simplified Analysis and Study on Moderate Earthquake Design of RC Energy Dissipation Structure  
.....MA Zhenxiao, WEN Wenlu, GUAN Qingsong, et al(1304)
- Seismic Response Analysis of Skewed Bridges under Near-field Ground Motions  
.....CHEN Jingyi, WANG Lihui, ZHOU Yulong, et al(1314)
- Numerical Analysis on Minimum Support Length of Near-fault Bridges .....JIA Hongyu, YUE Weiqin, YANG Lei, et al(1324)
- Long-term Thermo-mechanical Behavior of Energy Pile in Clay under Unbalanced Cooling-heating Cycles  
.....YANG Tao, QU Guangxin, HUA Yongsheng(1333)
- Experimental Design of Shaking Table Test on Seismic Response of Soil and Underground Structures in  
Liquefiable Soil .....LIU Chunxiao, TAO Lianjin, BIAN Jin, et al(1341)
- A Preliminary Investigation of an M3.8 Earthquake in the South Yellow Sea Recorded by an  
Experimental Offshore Wind Power Platform based Seismic Station.....SUN Yejun, HE Yicheng, WANG Jun, et al(1351)