

ISSN 1004-4574

CN 23-1324/X

JOURNAL OF NATURAL DISASTERS

# 自然灾害

# 学报



5000



- ★ 中国精品科技期刊
- ★ 全国中文核心期刊
- ★ 中国科学引文数据库 (CSCD) 来源期刊
- ★ 中国科技核心期刊
- ★ CNKI中国期刊全文数据库收录
- ★ 重庆维普全文数据库收录

第29卷 第3期 2020年6月

Vol. 29 No. 3 Jun. 2020



ISSN 1004-4574



06>



中国地震局工程力学研究所



中国灾害防御协会

主办

# 3

# 2020

协办单位: ●北京师范大学 ●清华大学 ●广州大学  
●湖南大学 ●中国气象局 ●中南林业科技大学

## 自然 灾 害 学 报

( ZIRAN ZAIHAI XUEBAO )

第 29 卷 第 3 期 2020 年 6 月

### 目 次

基于壳-弹簧模型的组合式预制管廊纵向抗震分析 .....	王长祥,梁建文,李东桥,等( 1 )
考虑基础柔性的土-结动力相互作用分区显-隐式分析算法 .....	陈少林,陆新宇,赵宇昕 ( 9 )
复杂地形对平面波散射问题频域解的数值求解方法 .....	丁海平,陈姚杰,于彦彦,等( 20 )
吹填泥浆固化土蠕变及长期强度特性研究 .....	杨爱武,杨少坤,梁超,等( 28 )
基于 CI 和强度分析方法的四川冬春季干旱事件变化特征 .....	周丽,谢舒蕾,吴彬 ( 36 )
火干扰后枫香次生林不同土层土壤理化性质研究 .....	陈小伟,刘发林,韩育明 ( 45 )
农作物抗风研究综述 .....	李正农,郝艳峰 ( 54 )
2017 年鹰潭市城区暴雨天气与回波特征分析 .....	桂园园,马中元,齐永胜,等( 63 )
常温养护条件下活性粉末混凝土抗硫酸盐侵蚀性能试验研究 .....	寇佳亮,刘菲菲,赵丹丹,等( 76 )
圆钢管型钢再生混凝土组合柱偏心受压性能试验研究 .....	马辉,白恒宇,邹昌明,等( 89 )
滨海核电厂取水口堤头地基三维地震响应分析 .....	刘昱平,赵杰,兰雯竣 ( 100 )
四川盆地突发性暖区暴雨特征及环境场条件分析 .....	肖递祥,王佳津,曹萍萍,等( 110 )
《巴黎协定》排放情景下中亚地区极端温度变化响应 .....	张晋韬,王芳 ( 119 )
堰塞体逐渐溃决数学模型研究 .....	赵洋,李守义 ( 129 )
断层两侧差异性土壤冻融对埋地管道力学性能影响研究 .....	薛景宏,王香,董孝曜 ( 138 )
大跨度钢连廊人致激励下 MTMD 减振控制 .....	郭宏超,李炎隆,王凯励,等( 145 )
PHC 管桩复合地基损伤破坏机理分析 .....	豆红强,纪歆雅,俞仰航,等( 153 )
藏东南交通干线(林芝段)冰湖溃决危险性分析与评价 .....	周路旭,刘建康,陈龙 ( 162 )
辽东山区春季极端低温时空分布特征及发生概率预测 .....	蔡慧君,金磊,肇同斌,等( 173 )
资料不充分地区的洪水保险研究 .....	李时,秦毅,刘强,等( 186 )
基于 GIS 的“8.8”九寨沟地震景区地质灾害风险评价 .....	罗路广,裴向军,谷虎,等( 193 )
基于三维变密度流模拟的潍坊北部沿海区海(咸)水入侵研究 .....	陈社明,刘宏伟,马震,等( 203 )

责任编辑:康丽君 徐文杰

## CONTENTS

Longitudinal seismic analysis of combined precast utility tunnels by using shell-spring model .....	WANG Changxiang, LIANG Jianwen, LI Dongqiao, et al. ( 1 )
Explicit-implicit algorithm for analysis of three-dimensional soil-foundation-structure dynamic interaction .....	CHEN Shaolin, LU Xinyu, ZHAO Yuxin( 9 )
Numerical solution in frequency domain for scattering of plane wave by complex topography .....	DING Haiping, CHEN Yaojie, YU Yanyan, et al. ( 20 )
Research on creep and long-term strength characteristics of solidified dredger mud .....	YANG Aiwu, YANG Shaokun, LIANG Chao, et al. ( 28 )
Variation characteristics of the winter and spring drought events in Sichuan based on CI and Intensity analysis .....	ZHOU Li, XIE Shulei, WU Bin( 36 )
Soil physical and chemical properties of different soil layers in <i>Liquidambar formosana</i> secondary forest after fire disturbance .....	CHEN Xiaowei, LIU Falin, HAN Yuming( 45 )
Research review about wind effects on crops .....	LI Zhengnong, HAO Yanfeng( 54 )
Analysis of rainstorm weather and echo characteristics in Yingtan city in 2017 .....	GUI Yuanyuan, MA Zhongyuan, QI Yongsheng, et al. ( 63 )
Experimental study on resistance to sulfate attack of active powder concrete under normal temperature curing condition .....	KOU Jialiang, LIU Feifei, ZHAO Dandan, et al. ( 76 )
Mechanical properties of profile steel-recycled aggregate concrete filled circular steel tube columns under eccentric compression loads .....	MA Hui, BAI Hengyu, ZOU Changming, et al. ( 89 )
Three-dimensional seismic response analysis of the foundation of the intake head of the offshore nuclear power plant .....	LIU Yuping, ZHAO Jie, LAN Wenjun(100)
Characteristics and environmental conditions of the sudden warm-sector rainstorms in Sichuan basin .....	XIAO Dixiang, WANG Jiajin, CAO Pingping, et al. (110)
Extreme temperature change in central Asia in responses to national-committed emission reductions under the Paris Agreement .....	ZHANG Jintao, WANG Fang(119)
Research on mathematical model of gradual collapse of sputum .....	ZHAO Yang, LI Shouyi (129)
Study on the influence of different soil freezing-thawing at both sides of the fault on the mechanical properties of buried pipelines .....	XUE Jinghong, WANG Xiang, DONG Xiaoyao(138)
MTMD vibration reduction control of large span steel corridor under the human-induced excitation .....	GUO Hongchao, LI Yanlong, WANG Kaili, et al. (145)
Damage failure mechanism of composite ground with pre-stressed high-strength concrete pipe piles .....	DOU Hongqiang <sup>1,2,3</sup> , JI Xinya <sup>1</sup> , YU Yanghang, et al. (153)
Risk analysis and evaluation of glacier lake outburst in traffic route of southeast Tibet(Linzhi) .....	ZHOU Luxu, LIU Jiankang, CHEN Long(162)
Spatial and temporal distribution characteristics and occurrence probability prediction of extreme low temperature in spring in eastern Liaoning mountainous area .....	CAI Huijun, JIN Lei, ZHAO Tongbin, et al. (173)
Study on flood insurance in areas with insufficient data .....	LI Shi, QIN Yi, LIU Qiang, et al. (186)
Risk assessment of geohazards induced by “8.8” earthquake based on GIS in Jiuzhaigou scenic area .....	LUO Luguang, PEI Xiangjun, GU Hu, et al. (193)
The research of sea-salted water intrusion in the northern coastal areas of Weifang city based on three- dimensional variable density flow simulation .....	CHEN Sheming, LIU Hongwei, MA Zhen, et al. (203)