



ISSN 1000-4750 CN11-2595/O3
CODEN GOLIEB Ei 收录期刊

工程力学

第32卷 第2期

ENGINEERING MECHANICS

Vol. 32 No. 2



2
2015

《工程力学》杂志社
Engineering Mechanics Press

目 次

基本方法

- 样本数目对岩土体参数联合分布模型识别精度的影响 唐小松, 李典庆, 周创兵, 方国光 (001)
Lemaitre 等向硬化弹塑性损伤耦合本构模型积分算法及程序实现 王军祥, 姜谙男 (012)
温度变化对受静电力作用微圆板的影响分析 曹天捷 (020)
基于两向设计地震动的二维自由场构建 何卫平, 何蕴龙 (031)
轴向变速运动弯曲梁的固有频率分析 陈 强, 杨国来, 王晓峰 (037)

土木工程学科

- 弹性地基上随机失谐周期加固管的波动局部化特性研究 丁 兰, 朱宏平, 吴巧云 (045)
撞击荷载下钢筋混凝土柱动力响应的数值研究 程小卫, 李 易, 陆新征, 闫维明 (053)
Q420 焊接圆钢管轴心受压稳定性能试验和设计方法研究 施 刚, 姜 雪, 周文静, 张 勇 (064)
考虑初始缺陷影响的混凝土梁动态弯拉破坏模式分析 杜修力, 揭鹏力, 金 浏 (074)
古建筑木结构直榫节点力学模型的研究 潘 毅, 王 超, 唐丽娜, 李玲娇 (082)
基于影响面的混凝土浇筑期施工荷载调查和统计分析
..... 谢 楠, 张 坚, 张 丽, 付小辉, 张青华 (090)
再生粗骨料的随机特性及分级方法研究 吴 瑾, 朱 磊, 景宪航 (097)
型钢混凝土异形柱-钢梁空间边节点的抗震性能及影响因素分析 陈宗平, 徐金俊, 薛建阳 (105)
盲孔法测试 Q690 高强钢管镀锌前后残余应力 杨俊芬, 李 渊, 彭奕亮 (114)
局部采用纤维增强混凝土剪力墙压弯性能研究
..... 党 争, 梁兴文, 邓明科, 王 晶, 秦 萌, 于 婧 (120)
速度脉冲地震作用下偏心结构的弹塑性抗震研究 补国斌, 蔡 健, 周 靖, 李康宁 (131)
阶梯墙框架结构体系的抗震性能分析 许卫晓, 孙景江, 杜 轲, 杨伟松 (139)
预应力碳纤维条带加固混凝土圆柱的地震损伤模型 周长东, 李 慧, 田 腾 (147)

目 次

穿芯高强螺栓-端板节点方钢管混凝土框架抗震性能数值分析	马尤苏夫, 王先铁, 周清汉, 王连坤 (154)
部分柱顶滑移钢筋混凝土框剪结构模型试验研究	吴 波, 吕文龙, 沈朝勇 (163)
大跨屋盖结构风振响应参数灵敏度分析	吴 迪, 武 岳, 杨庆山, 陈 旭 (171)
水平激励下任意截面柱形储液罐内液体的晃动响应	秦 念, 周 叮, 刘伟庆, 王佳栋 (178)
含共面裂隙群砂岩强度与破裂特征的试验研究	赵洪辉, 靖洪文, 苏海健, 李 丁 (183)
高温后型钢混凝土粘结滑移性能研究	李俊华, 邱栋梁, 俞 凯, 孙 彬 (190)
PBX 炸药粘弹性损伤本构模型参数敏感度分析	高 军, 黄再兴 (201)

机械工程学科

薄壁管材等曲率矫直临界曲率半径力学建模	张子骞, 颜云辉, 杨会林 (207)
随机参数双连杆柔性机械臂的可靠性分析	赵 宽, 陈建军, 曹鸿钧, 云永琥 (214)

其他工程学科

带有初始缺陷船用加筋板极限强度的不确定性分析	施兴华, 杭 岑, 滕春艳, 石晓彦 (221)
一般支撑条件下横向流中弹性圆柱的响应	李云东, 杨翊仁, 李 鹏 (227)
气液固三相管流耦合水击振动特性的参数影响分析	陈 明, 伍建林, 王建华 (233)
考虑结构响应及轴线形状的防浪堤抗波浪冲击数值模拟研究	楼云锋, 李 炏, 葛鸿辉, 马 波, 金先龙 (241)
一种基于响应面的翼型鲁棒优化设计方法	邬晓敬, 张伟伟, 肖 华, 宋述芳, 蒋跃文 (250)

CONTENTS**METHODOLOGIES**

- Effect of sample size on identification of a joint probability distribution underlying correlated geotechnical parameters TANG Xiao-song , LI Dian-qing , ZHOU Chuang-bing , PHOON Kok-kwang (001)
Integration algorithm for isotropic hardening using Lemaitre's coupled elastoplastic damage model and program implementation WANG Jun-xiang , JIANG An-nan (012)
Analysis of temperatuire change effect on electrostatically actuated clamped circular micro-plates CAO Tian-jie (020)
Free field wave motions based on two components of design earthquake ground motion HE Wei-ping , HE Yun-long (031)
Analysis of the natural frequency of an axially moving beam with non-uniform velocity CHEN Qiang , YANG Guo-lai , WANG Xiao-feng (037)

CIVIL ENGINEERING

- Study on wave localization in randomly disordered periodically stiffened pipes on elastic foundations DING Lan , ZHU Hong-ping , WU Qiao-yun (045)
Numerical investigation on dynamic reponse of reinforced concrete columns subjected to impact loading CHENG Xiao-wei , LI Yi , LU Xin-zheng , YAN Wei-ming (053)
Experimental study on the buckling behavior of Q420 high strength steel welded tubes under axial compression and design methods SHI Gang , JIANG Xue , ZHOU Wen-jing , ZHANG Yong (064)
Dynamic flexural-tensile failure mode analysis of concrete beam with initial defect DU Xiu-li , JIE Peng-li , JIN Liu (074)
Study on mechanical model of straight-tenon joints in ancient timber structures PAN Yi , WANG Chao , TANG Li-na , LI Ling-jiao (082)
Surveys and statistical analyses of construction loads during concrete placement based on influence surface XIE Nan , ZHANG Jian , ZHANG Li , FU Xiao-hui , ZHANG Qing-hua (090)
Study on stochastic characteristics and classification criteria of recycled coarse aggregate WU Jin , ZHU Lei , JING Xian-hang (097)
Seismic behavior and influence factor analysis on 3D side joints composed of steel reinforced concrete special-shaped columns and steel beams CHEN Zong-ping , XU Jin-jun , XUE Jian-yang (105)
Experimental study on the residual stress of Q690 high-strength steel pipe before and after galvanization using blind-hole method YANG Jun-fen , LI Yuan , PENG Yi-liang (114)
The compression-bending behavior of shear wall with fiber-reinforced concrete in bottom region DANG Zheng , LIANG Xing-wen , DENG Ming-ke , WANG Jing , QIN Meng , YU Jing (120)
Elastoplastic aseismic research on eccentric structures subjected to velocity pulse-like ground motion BU Guo-bin , CAI Jian , ZHOU Jing , LI Kang-ning (131)
Seismic performance analysis of stepped wall-frame structure XU Wei-xiao , SUN Jing-jiang , DU Ke , YANG Wei-song (139)
Seismic damage model of circular reinforced concrete columns strengthened with prestressed CFRP strips ZHOU Chang-dong , LI Hui , TIAN Teng (147)

CONTENTS

Numerical analysis of the seismic behavior of a square concrete-filled steel tube frame with through bolt-end plate joints	MA Yousufu , WANG Xian-tie , ZHOU Qing-han , WANG Lian-kun (154)
Model test of RC frame-shear wall structure with partial columns sliding at upper ends	WU Bo , LÜ Wen-long , SHEN Chao-yong (163)
Parameter sensitivity analysis of wind-induced response of long-span roofs	WU Di , WU Yue , YANG Qing-shan , CHEN Xu (171)
Sloshing response of liquid in cylindrical tank with arbitrary cross-section under lateral excitations	QIN Nian , ZHOU Ding , LIU Wei-qing , WANG Jia-dong (178)
Strength and fracture characteristics of sandstone containing coplanar fissure group	ZHAO Hong-hui , JING Hong-wen , SU Hai-jian , LI Ding (183)
Study on bond-slip behavior between spaded steel and concrete in SRC structures after exposed to high temperature	LI Jun-hua , QIU Dong-liang , YU Kai , SUN Bin (190)
Parameter sensitivity analysis for viscoelastic damage constitutive model of PBX materials	GAO Jun , HUANG Zai-xing (201)

MECHANICAL ENGINEERING

Modeling of the critical radius for straightening thin-walled tubes with equal curvatures	ZHANG Zi-qian , YAN Yun-hui , YANG Hui-lin (207)
Reliability analysis on two-link flexible robot manipulator with random parameters	ZHAO Kuan , CHEN Jian-jun , CAO Hong-jun , YUN Yong-hu (214)

OTHER ENGINEERING DISCIPLINES

Uncertainty in analyzing ultimate strength of ship stiffening plates with initial imperfections using nonlinear finite element methods	SHI Xing-hua , HANG Cen , JI Chun-yan , SHI Xiao-yan (221)
Responses of an elastic cylinder with general elastic supports at both ends subjected to cross flow	LI Yun-dong , YANG Yi-ren , LI Peng (227)
Analysis of parametric influence of a coupled water hammer on the vibration characteristics of gas-liquid-solid three-phase flow in pipelines	CHEN Ming , WU Jian-lin , WANG Jian-hua (233)
Simulation of wave impact breakwater considering structural response and shape of breakwater axis	LOU Yun-feng , LI Hao , GE Hong-hui , MA Bo , JIN Xian-long (241)
A robust aerodynamic design for airfoil based on response surface method	WU Xiao-jing , ZHANG Wei-wei , XIAO Hua , SONG Shu-fang , JIANG Yue-wen (250)

本刊责任编辑：黄丽艳
本刊责任编审：崔京浩

工程力学
Gongcheng Lixue

(月刊)

2015 年 第 32 卷 第 2 期

ENGINEERING MECHANICS

(Monthly)

Vol.32 No.2 2015

主管单位 中国科学技术协会

Supervisor China Association for Science and Technology

主办单位 中国力学学会

Sponsor The Chinese Society of Theoretical
and Applied Mechanics

出版单位 《工程力学》杂志社

Publication Engineering Mechanics Press

杂志社地址 北京清华大学新水利馆 114 室

Editorial Office Engineering Mechanics Press

《工程力学》杂志社

Room 114, New Hydraulic Building

邮政编码 100084

Tsinghua University,

电 话 (010)62788648

100084, Beijing, China

传 真 (010)62788648

Tel. : +86-10-62788648

电子信箱: gclxbjb@tsinghua.edu.cn

Fax : +86-10-62788648

网 址: http://gclx.tsinghua.edu.cn

E-mail: gclxbjb@tsinghua.edu.cn

印刷单位 北京科信印刷有限公司

Printing Beijing Kexin Printing Co., Ltd

发 行 国外: 中国国际图书贸易总公司

Distributors

Abroad: China International Book Trading Corporation

国内: 北京报刊发行局

Domestic: Beijing Newspapers & Periodicals Distribution

全国各地邮局均可订购

Bureau (Code: 82-862)

邮发代号 82-862

杂志社法人、社长 袁 驰

Head and Representative of artificial person Yuan Si

编委会主编 袁 驰

Editor-in-Chief Yuan Si

名 誉 主 编 崔京浩

Honorary Editor-in-Chief Cui Jinghao

编辑部主任 黄丽艳

Director of Editorial Office Huang Liyan

国际标准刊号 ISSN1000-4750 国内统一刊号 CN11-2595/O3

定价: 55.00

美国国际刊名代码中心授予的国际刊名代码 (CODEN) GOLIEB

每月下旬出版

百种中国杰出学术期刊, 工业技术类核心期刊, O3 力学类核心期刊

ISSN 1000-4750

RCCSE 中国权威学术期刊(A⁺)

工程索引(Ei)收录期刊



02>