



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

工程力学

第32卷 第5期

ENGINEERING MECHANICS

Vol. 32 No. 5



5
2015

《工程力学》杂志社
Engineering Mechanics Press

目 次

基本方法

- 考虑设计相关载荷的稳态热传导拓扑优化设计 鲁英春, 李敏, 刘远东 (001)
弹性波二维散射快速多极子间接边界元法求解 刘中宪, 唐河仓, 王冬 (006)
流固耦合 S-型自主游动柔性鱼运动特性分析 郝栋伟, 张立翔, 王文全 (013)

土木工程学科

- 某超高层混凝土结构火灾作用下的力学响应分析 英明鉴, 李易, 陆新征, 叶列平, 闫维明 (019)
考虑非线性剪切效应的 RC 桥墩抗震分析模型 孙治国, 陈灿, 司炳君, 王东升 (028)
基于微观机理的梁柱节点焊接细节断裂分析 周晖, 王元清, 石永久, 熊俊 (037)
自保温再生混凝土空心砌块的热工性能研究 郑建嵒, 张会芝 (051)
船闸基坑边坡中桥梁基桩力学特性研究 储诚富, 董满生, 胡晴, 侯超群 (057)
基于颗粒真实几何形状的铁路道砟剪切过程三维离散元分析
..... 边学成, 李伟, 李公羽, Erol Tutumluer (064)
沉管隧道纵向地震响应分析的多体动力学方法 袁勇, 申中原, 禹海涛 (076)
内压波动下的 CO₂管道轴向表面裂纹疲劳扩展研究 金峤, 孙泽宇, 孙威 (084)
新型协同转动六节点三边形复合材料壳单元 张传杰, 李忠学, 向宇, 陈哲武, 郑涛 (094)
高强箍筋高强混凝土梁柱节点抗震性能试验研究 史庆轩, 王南, 翁帅, 田建勃, 郭智峰 (102)
桥梁气动导数的格子 Boltzmann 大涡模拟仿真 刘克同, 汤爱平, 曹鹏 (111)
集中荷载作用下宽翼缘双箱组合梁剪滞效应分析 胡少伟, 喻江, 张文敬 (120)
嵌入式基础叠合墙板平面外受弯性能试验研究与数值模拟分析
..... 种迅, 黄俊旗, 蒋庆, 叶献国, 周博文 (131)
爆炸荷载作用下深埋圆形隧洞饱和土-衬砌系统的动力响应 杨骁, 蒋志云, 张敏 (138)

目 次

- 随机均匀长颗粒链结构土体强度模型研究 卫振海, 王梦恕, 张顶立 (147)
低速冲击下 RC 梁的动态响应和破坏机理研究 刘 飞, 罗旗帜, 蒋志刚 (155)
RC 空间框架结构竖向倒塌全过程试验研究与理论分析 王少杰, 刘福胜, 徐赵东 (162)
马鞍屋盖表面锥形涡流动模型研究 叶继红, 董 欣 (168)
玄武岩纤维混凝土腐蚀条件下抗冻融性能试验研究 金生吉, 李忠良, 张 健, 王艳苓 (178)
剪切波作用下盾构隧道地震效应的拟静力分析方法研究 晏启祥, 张 煜, 王春艳, 耿 萍 (184)
平行裂隙群岩体强度与破裂特征的试验研究 苏海健, 靳洪文, 赵洪辉, 张茂林, 尹 乾 (192)
含液饱和多孔二维梁的动力特性分析 周凤奎, 马 强, 宋瑞霞 (198)

机械工程学科

- 倾斜状态下静压油垫承载性能研究 刘志峰, 湛承鹏, 赵永胜, 李小燕, 夏龙飞, 马建川 (208)
直齿圆柱齿轮啮合耦合振动系统参数振动研究 张 微, 丁 千 (213)
粉粒物料卸料蝶阀及其驱动系统的非线性分析 欧笛声, 丁茂红, 杜星锋, 王雨时 (221)
基于 ICM 法的传热结构周期性拓扑优化设计 龙 凯, 贾 娇 (227)

其他工程学科

- NACA0012 翼型抖振现象实验研究 任旭东, 赵子杰, 高 超, 李 峰 (236)
基于 LPT 近似算法的 CFD 并行计算网格分配算法 唐逸豪, 高振勋, 蒋崇文, 李椿萱 (243)
库伦摩擦对二元翼面气动弹性特性的影响 陆 磊, 李 敏, 甘 宽 (250)

CONTENTS**METHODOLOGIES**

- Topology optimization of steady heat conductive structures with design-dependent heat loads.....
..... LU Ying-chun , LI Min , LIU Yuan-dong (001)
- FMM-IBEM solution to two-dimensinal scattering of elastic waves.....
..... LIU Zhong-xian , TANG He-cang , WANG Dong (006)
- Swimming patterns of an S-type self-propelled flexible fish in fluid-structure interaction
- HAO Dong-wei , ZHANG Li-xiang , WANG Wen-quan (013)

CIVIL ENGINEERING

- The mechanical response analysis of a super tall concrete structure under fire
- YING Ming-jian , LI Yi , LU Xin-zheng , YE Lie-ping , YAN Wei-ming (019)
- Seismic analysis model considering nonlinear shear effect for RC bridge piers.....
..... SUN Zhi-guo , CHEN Can , SI Bing-jun , WANG Dong-sheng (028)
- Fracture analyses of welded details in beam-to-column connections using micromechanics-based models.....
..... ZHOU Hui , WANG Yuan-qing , SHI Yong-jiu , XIONG Jun (037)
- Thermal performance study of self-thermal insulation & recycled concrete hollow block
- ZHENG Jian-lan , ZHANG Hui-zhi (051)
- Study on mechanical properties of bridge piles foundation inthe pit slope of a ship lock
- CHU Cheng-fu , DONG Man-sheng , HU Qing , HOU Chao-qun (057)
- Three-dimensional discrete element analysis of railway ballast's shear process based on particles' real geometry
..... BIAN Xue-cheng , LI Wei , LI Gong-yu , TUTUMLUER-Erol (064)
- Multibody dynamics method for longitudinal seismic response analysis of immersed tunnels
- YUAN Yong , SHEN Zhong-yuan , YU Hai-tao (076)
- Study on fatigue crack growth in CO₂ pipelines with an axial surface crack under pulsating internal pressure
..... JIN Qiao , SUN Ze-yu , SUN Wei (084)
- A new 6-node co-rotational triangular composite shell element.....
..... ZHANG Chuan-jie , LI Zhong-xue , XIANG Yu , CHEN Zhe-wu , ZHENG Tao (094)
- Experimental study on seismic behavior of high-strength concrete frame joints with high-strength stirrups
- SHI Qing-xuan , WANG Nan , ZAN Shuai , TIAN Jian-bo , GUO Zhi-feng (102)
- Large eddy simulation of the aerodynamic derivatives of bridge using lattice Boltzmann method
- LIU Ke-tong , TANG Ai-ping , CAO Peng (111)
- Analysis of shear lag effect in double-box composite beams with wide flanges under concentrated loading.....
..... HU Shao-wei , YU Jiang , ZHANG Wen-jing (120)
- Experimental and numerical study on out-of-plane bending behavior of a superimposed wall with embedded foundation..... CHONG Xun , HUANG Jun-qi , JIANG Qing , YE Xian-guo , ZHOU Bo-wen (131)
- Dynamical analysis of a saturated soil-lining system with a deeply buried circular tunnel subjected to a blast load
- YANG Xiao , JIANG Zhi-yun , ZHANG Min (138)

CONTENTS

A strength model of soil mass with random uniform long particle chain structure.....	WEI Zhen-hai , WANG Meng-shu , ZHANG Ding-li (147)
Dynamic responses and failure mechanism of RC beams to low velocity impact	LIU Fei , LUO Qi-zhi , JIANG Zhi-gang (155)
Experimental and theoretical analyses on entire course of vertical progressive collapse of spatial RC frame structures.....	WANG Shao-jie , LIU Fu-sheng , XU Zhao-dong (162)
A model of saddle roof top surface pressures produced by conical vortices.....	YE Ji-hong , DONG Xin (168)
Experimental study on anti-freezing and thawing performance of reinforced concrete of basalt fiber under corrosion condition	JIN Sheng-ji , LI Zhong-liang , ZHANG Jian , WANG Yan-ling (178)
Quasi-static analysis method for seismic effect of shear waves on shield tunnel	YAN Qi-xiang , ZHANG Yu , WANG Chun-yan , GENG Ping (184)
Strength and fracture characteristic of rock mass containing parallel fissures	SU Hai-jian , JING Hong-wen , ZHAO Hong-hui , ZHANG Mao-lin , YIN Qian (192)
Dynamic response analysis of a two dimensional fluid-saturated porous beam.....	ZHOU Feng-xi , MA Qiang , SONG Rui-xia (198)

MECHANICAL ENGINEERING

Research on the bearing performance of hydrostatic oil pad under tilting condition	LIU Zhi-feng , ZHAN Cheng-peng , ZHAO Yong-sheng , LI Xiao-yan , XIA Long-fei , MA Jian-chuan (208)
Research on properties for parametric vibration of a spur gear meshing and coupling system	ZHANG Wei , DING Qian (213)
Nonlinear analysis of butterfly valve and its drive system for unloading powder materials	OU Di-sheng , DING Mao-hong , DU Xing-feng , WANG Yu-shi (221)
Periodic topology optimization design for thermal conductive structure using ICM method.....	LONG Kai , JIA Jiao (227)

OTHER ENGINEERING DISCIPLINES

Experimental study on the buffet phenomenon of NACA0012 airfoil	REN Xu-dong , ZHAO Zi-jie , GAO Chao , LI Feng (236)
Mesh block allocation algorithm in CFD parallel computation based on LPT approximate algorithm.....	TANG Yi-hao , GAO Zhen-xun , JIANG Chong-wen , LEE Chun-hian (243)
Influence of coulomb friction on two-dimenional aeroelastic airfoils	LU Lei , LI Min , GAN Kuan (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5期

ENGINEERING MECHANICS

(Monthly)

Vol.32 No.5 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

Website: http://gclx.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

国内: 北京报刊发行局

Abroad: China International Book Trading Corporation

全国各地邮局均可订购

Domestic: Beijing Newspapers & Periodicals Distribution
Bureau (Code: 82-862)

邮发代号 82-862

杂志社法人、社长 袁 骞

Head and Representative of artificial person Yuan Si

编委会主编 袁 骞

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

