



ISSN1000—4939  
CN61—1112/O3

# 应用力学学报

CHINESE JOURNAL OF APPLIED MECHANICS

2018

第35卷 第1期  
Vol.35 No.1

ISSN 1000-4939



9 771000 493185



西安交通大学主办



# 应用力学学报

第 35 卷 第 1 期 总第 149 期

2018 年 2 月 15 日出版

## 目 次

基于 CFD/CSD 耦合含间隙三维全动舵面气动弹性研究.....	黄程德 郑冠男 杨国伟 黄杰( 1 )
一维六方准晶非周期半平面的有限摩擦接触问题.....	赵雪芬 李星( 8 )
基于 LADM 模型的爆轰参数计算.....	胡绍鸣 李辰芳 于非( 15 )
基于应变响应叠加原理的飞行载荷测量建模研究.....	张赐宝 李涛 滕中科 冯建民( 22 )
超固结饱和黏性土的弹塑性本构模型及三轴试验模拟.....	胡小荣 董肖龙 陈晓宇 胡勃阳( 28 )
某型飞机客舱地板振源识别与分析.....	周江贝 李凯翔 李鹏( 36 )
装药质量对约束空间内爆炸准静态超压载荷的影响规律研究.....	徐维铮 吴卫国( 42 )
波浪中舰船远程尾流区气泡运动研究.....	何升阳 张志友 金良安 苑志江( 47 )
桨-轴-艇纵向耦合振动机理研究.....	楼京俊 张阳阳 俞翔( 54 )
两级串联扩张腔式消声器声学特性的分析.....	韩雷 李宏丽 裘进浩 吴义鹏( 60 )
球阀不同开度下自流注水管路流固耦合动力学特性研究.....	王丹 白长青 毛义军( 65 )
柔性基础准零刚度隔振系统动力学特性分析.....	杨庆超 柴凯 楼京俊 李爽( 70 )
基于统一强度理论加筋土挡墙土压力计算.....	廖红建 杨博 谈云志( 75 )
轴向时滞反馈控制下悬索非线性响应分析.....	彭剑 李禄欣 赵珧冰 王修勇( 81 )
基于进化多项式回归方法的土体本构关系.....	冯胜洋 魏丽敏 李向阳 蒋复量 叶勇军 郑平卫( 86 )
地震动位移与加速度输入模型差异研究.....	何卫平 周宜红 何蕴龙( 93 )
柱面螺旋槽干气密封微尺度流动场稳态近似计算.....	丁雪兴 贺振泓 张伟政 陆俊杰 苗春昊( 99 )
主动控制用大输出力电磁作动器优化设计.....	马建国 帅长庚 李彦( 106 )
二维板的键型近场动力学损伤模拟.....	石春香 王远洋( 111 )
支护条件下软岩隧道小型拱形塌腔围岩变形分析.....	李又云 钟乃龙 赵亚伟 张玉伟( 116 )
基于摩擦振动理论的轮装制动盘系统动特性分析.....	张明明 韩文龙 刘桢 韩省亮 荣克林 王求生( 123 )
层合板的一种等强度优化设计方法.....	王帅培 刘斌( 129 )
输电线路脱冰跳跃动态模型研究.....	吴天宝 胡中原 王健 王刚锋( 134 )
复杂板-腔系统声振耦合机理分析.....	胡东森 白振国( 141 )
基于响应面法的 V 带轮多目标优化设计.....	刘承杰 李倩 罗鹏 赵磊( 147 )
基于颗粒物质力学的粉末高速压制过程中应力传递分布分析.....	张炜 周剑 于世伟 张雪洁 刘焜( 154 )
舰用柴油发电机组聚氨酯隔振器设计与仿真研究.....	刘勇 曹进一 吕志强 杨雪( 161 )
一种仅副台肩的新型钻井工具接头的研制与应用.....	胡中志 练章华 朱宽亮 牟凤英 张颖 冯京海( 166 )
高强度钢材对接焊缝拉伸性能试验研究.....	郭宏超 郝李鹏 李炎隆 刘云贺 梁刚( 172 )
汽轮发电机基础动力特性分析及优化设计.....	李红霞 付旭 王敏杰 李征 李召军( 178 )
多层梯度点阵夹芯结构抗爆性能研究.....	韩笑 杨丽红 于国财 曲嘉 吴林志( 185 )
颗粒物对变压器油表面张力的影响研究.....	陈彬 韩超 刘阁 邓阳琴 金兴( 191 )
电站锅炉 T91 过热器管生长应力的计算与分析.....	孙利 阎维平( 197 )
基于矢量和法的华丽金安金沙江大桥左岸桥址边坡稳定性研究.....	严飞 文海 锁沛斯( 205 )
簇式弹性连接组合梁桥的力学性能分析.....	陈祺 周叮 刘朵 张建东( 211 )
深井气侵关井引发的井筒多相水击压力特性研究.....	罗朝东( 218 )
本刊启事.....	( 222 )
英文摘要.....	(i~xvi)

期刊基本参数 CN61-1112/O3\*1984\*S\*A4\*240\*zh\*p\*¥65\*1000\*36\*2018-02

# Chinese Journal of Applied Mechanics

Vol.35 No.1

Feb. 2018

## CONTENTS

Aeroelastic study of a three dimensional all-movable wing with free play using CFD/CSD coupling	Huang Chengde Zheng Guannan Yang Guowei Huang Jie (i)
The frictional contact problem for aperiodical half-plane in one-dimensional hexagonal quasicrystals	Zhao Xuefen Li Xing (i)
Calculation of detonation parameters based on the LADM model	Hu Shaoming Li Chenfang Yu Fei (ii)
Research on modeling of flight load measurement based on strain response superposition principle	Zhang Cibao Li Tao Teng Shenke Feng Jianmin (ii)
The elasto-plastic constitutive model and tri-axial numerical simulation for saturated over-consolidated clay	Hu Xiaorong Dong Xiaolong Chen Xiaoyu Hu Boyang (iii)
Analysis and identification of the vibration sources for a certain aircraft cabin floor	Zhou Jiangbei Li Kaixiang Li Peng (iii)
Influence of mass of explosives on the characteristics of quasi-static overpressure in confined space	Xu Weizheng Wu Weiguo (iv)
Motion characteristics for bubbles of the far wake of ships in the waves	He Shengyang Zhang Zhiyou Jin Liang'an Yuan Zhijiang (iv)
Study on longitudinal coupling vibration mechanism of propeller-shaft-hull system	Lou Jingjun Zhang Yangyang Yu Xiang (v)
Analysis of acoustic characteristic of expansion muffler in two stage series	Han Lei Ji Hongli Qiu Jinhao Wu Yipeng (v)
Study on fluid-solid coupling dynamic characteristics of dump flooding pipeline under different openings of ball valves	Wang Dan Bai Changqing Mao Yijun (v)
Dynamic characteristic analysis of quasi-zero stiffness vibration isolation system with flexible foundation	Yang Qingchao Chai Kai Lou Jingjun Li Shuang (vi)
Calculation of earth pressure on reinforced soil retaining walls based on unified strength theory	Liao Hongjian Yang Bo Tan Yunzhi (vi)
Nonlinear responses of suspended cables with a longitudinal time-delay feedback control	Peng Jian Li Luxin Zhao Yaobing Wang Xiuyong (vii)
Constitutive relationship of soil based on the evolutionary polynomial regression method	Feng Shengyang Wei Limin Li Xiangyang Jiang Fuliang Ye Yongjun Zheng Pingwei (vii)
Difference between seismic input models based on displacement and acceleration	He Weiping Zhou Yihong He Yunlong (viii)
Approximate calculation of steady micro-scale flow of cylindrical spiral groove dry gas seal	Ding Xuexing He Zhenhong Zhang Weizheng Lu Junjie Miao Chunhao (viii)
Optimization design of electromagnetic actuator with large output force for active control	Ma Jianguo Shuai Changgeng Li Yan (ix)
Bond-based peridynamics damage modeling of a 2-D isotropic plate	Shi Chunxiang Wang Yuanyang (ix)
Deformation of small arch collapsed cavities in soft rock tunnel under supporting conditions	Li Youyun Zhong Nailong Zhao Yawei Zhang Yuwei (ix)
Dynamic analysis of wheel mounted disc system based on frictional vibration theories	Zhang Mingming Han Wenlong Liu Zhen Han Shengliang Rong Kelin Wang Qiusheng (x)
An equal strength optimal design method for laminated plates	Wang Shuaipei Liu Bin (x)
Dynamical modeling of ice-shedding on transmission line	Wu Tianbao Hu Zhongyuan Wang Jian Wang Gangfeng (xi)
Analysis of vibro-acoustic coupling theory of a complex plate-cavity model	Hu Dongsen Bai Zhenguo (xi)
Multi-objective optimization design of V-pulley based on response surface method	Liu Chengjie Li Qian Luo Peng Zhao Lei (xi)
Investigation of the stress transmission characterization in high velocity powder compaction based on mechanics of granular materials	Zhang Wei Zhou Jian Yu Shiwei Zhang Xuejie Liu Kun (xii)
Finite element analysis of polyurethane isolator used in diesel engine set	Liu Yong Cao Jinyi Lü Zhiqiang Yang Xue (xii)
Development and application of drilling tool joint with only secondary shoulder	Hu Zhongzhi Lian Zhanghua Zhu Kuanliang Mou Fengying Zhang Ying Feng Jinghai (xiii)
Experimental study on tensile test of butt weld of high strength steel	Guo Hongchao Hao Lipeng Li Yanlong Liu Yunhe Liang Gang (xiii)
Dynamic characteristics analysis and optimization for stream turbine generator foundation	Li Hongxia Fu Xu Wang Minjie Li Zheng Li Zhaojun (xiv)
Blast resistance of multilayer graded lattice sandwich structures	Han Xiao Yang Lihong Yu Guocai Qu Jia Wu Linzhi (xiv)
Study on the surface tension of transformer oil containing particulate matter	Chen Bin Han Chao Liu Ge Deng Yangqin Jin Xing (xv)
Calculation of growth stresses and analysis of oxide scales formation on superheaters of T91	Sun Li Yan Weiping (xv)
Slope stability against sliding of Jin'an Jinshajiang River bridge site of Huaping-Lijiang highway based on vector sum method	Yan Fei Wen Hai Suo Peisi (xv)
Mechanical properties analysis of composite beam bridge with cluster elastic connectors	Chen Qi Zhou Ding Liu Duo Zhang Jiandong (xvi)
Research on water hammer pressure in multiphase flow along wellhole in shutting operation	Luo Chaodong (xvi)