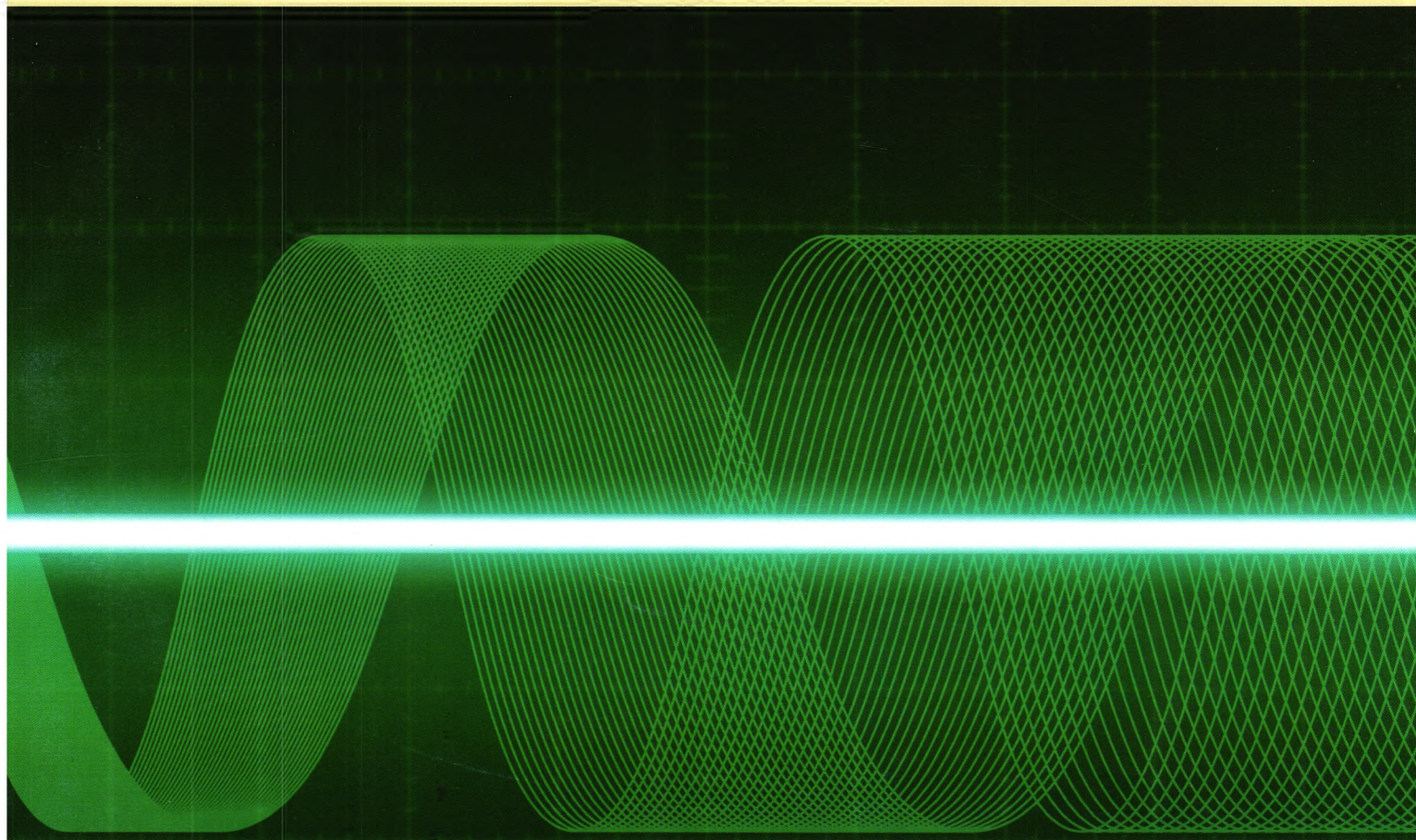


ISSN 1000-3835  
CN 31-1316/TU

# 振动与冲击

JOURNAL OF VIBRATION AND SHOCK



ZHENDONG YU CHONGJI

半月刊 | 第32卷 | **9/2013**

ISSN 1000-3835



9 771000 383134  
万方数据

中国振动工程学会  
上海交通大学 主办  
上海市振动工程学会



## 目 次

- 数据驱动与协方差驱动随机子空间法差异化分析 ..... 辛峻峰, 王树青, 刘福顺 (1)
- 基于 ICA 的镗削过程颤振征兆信号分离方法研究 ..... 李 欣, 梅德庆, 陈子辰 (5)
- 适用空间网格结构模态识别的改进功率谱峰值法 ..... 张毅刚, 刘才玮, 吴金志, 等 (10)
- 包带式解锁支座冲击环境研究 ..... 段家希, 李志来, 曹乃亮, 等 (16)
- 大型地下厂房结构振动反应分析 ..... 辛享林, 陈建康, 廖成刚, 等 (21)
- 考虑车轮 - 路面接触长度的桥头跳车动力荷载分析 ..... 丁 勇, 诸葛萍, 谢 旭, 等 (28)
- 爆炸冲击波作用下工事舱室内动物损伤效应试验研究 ..... 范俊奇, 董宏晓, 高永红, 等 (35)
- 基于 DSmT 与小波网络的齿轮箱早期故障融合诊断 ..... 陈法法, 汤宝平, 姚金宝 (40)
- 临界雷诺数下带人工水线斜拉索气动性能研究 ..... 杜晓庆, 张 烨, 顾 明 (46)
- 铝蜂窝串联缓冲结构静态压缩仿真与试验研究 ..... 李 萌, 刘荣强, 罗昌杰, 等 (50)
- 基于重构相空间短时状态预测残差的直升机旋翼损伤跟踪方法 ..... 朱旭程, 马 强, 侯志强 (57)
- 滚动轴承支承的齿轮传动轴 - 板耦合结构功率流传递特性研究 ..... 张秀芳, 霍 睿, 周 振, 等 (63)
- 履带车辆台架试验台负载模拟方法研究 ..... 杨家军, 周晓军 (68)
- 干摩擦振子双粘着运动响应的级数形式解及粘滑边界分析 ..... 钱大帅, 刘占生, 刘镇星, 等 (73)
- 两装药水下爆炸毁伤目标振动信号时频分析 ..... 张志华, 李 万, 罗 荣, 等 (79)
- 微机电数字地震检波器设计及误差标定补偿方法 ..... 杜 敏, 李巧燕, 徐国栋 (84)
- 基于局部均值分解与形态学分形维数的滚动轴承故障诊断方法 ..... 张 亢, 程军圣, 杨 宇 (90)
- 电液谐振式高频疲劳试验台动态特性研究 ..... 白继平, 阮 健, 贾文昂 (95)
- 带齿轮副船舶推进轴系动态响应仿真研究 ..... 朱俊飞, 周瑞平, 胡 义, 等 (100)
- 摆杆式操作机钳杆平升降缓冲刚度与阻尼研究 ..... 杨 晋, 何琪功, 同新星 (105)

强非线性振动系统极限环振幅控制研究·····	蔡 萍, 唐驾时 (110)
基于混沌和取样积分技术的大型风电增速箱早期故障诊断·····	孙自强, 陈长征, 谷艳玲, 等 (113)
土与一般平面不对称结构地震动力相互作用研究·····	甘志兴, 李春祥 (118)
基于人工神经网络的藏式结构有限元模型修正 ·····	杨 娜, 张 岩 (125)
基于小波变换与统计分析的转子碰摩声发射特性研究·····	于 洋, 杨 平, 杨理践 (130)
基于局部均值分解与形态谱的旋转机械故障诊断方法·····	张 亢, 程军圣, 杨 宇 (135)
谱分解理论及在时滞反馈控制中应用·····	毛晓彬 (141)
圆柱形战斗部破片速度及等效装药特性研究·····	孔祥韶, 吴卫国, 李晓彬, 等 (146)
计及板材料性能影响的微穿孔板吸声特性仿真计算·····	孙文娟, 苏巧平, 孔德义, 等 (150)
基于 EMD 间隔阈值消噪与极大似然估计的滚动轴承故障诊断方法 ·····	周 智, 朱永生, 张优云, 等 (155)
再生混凝土材料阻尼性能研究·····	梁超锋, 刘铁军, 邹笃建, 等 (160)
基于最小二乘支持向量机的结构地震响应时滞控制算法·····	赵德奇, 李春祥, 蓝声宁 (165)
改进的结构振动传递矩阵法·····	万浩川, 李以农, 郑 玲 (173)
层状周期结构动力衰减域特性研究·····	程志宝, 石志飞, 向宏军 (178)
受冲击玻璃破坏波传播过程分析·····	冯晓伟, 刘占芳, 陈 刚, 等 (183)
Kriging 响应面代理模型在有限元模型确认中的应用 ·····	张冬冬, 郭勤涛 (187)



## 本期广告索引

### 彩色广告

- 封二 武汉优泰电子技术有限公司
- 封三 北京东方振动和噪声技术研究所
- 封四 北京声望声电技术有限公司
- 前插 1 杭州亿恒科技有限公司
- 前插 2 南京安正软件工程有限公司
- 前插 3 德国 m+p 国际公司北京代表处
- 前插 4 德维创中国有限公司
- 前插 5 美国压电有限公司代表处

- 前插 6 扬州英迈克测控技术有限公司
- 前插 7 江苏泰斯特电子设备制造有限公司
- 前插 8 比利时 LMS 北京代表处

### 单色、彩色广告

- 后插 1 南京安正软件工程有限公司
- 后插 2 上海君协光电科技发展有限公司
- 后插 3 上海君协光电科技发展有限公司

# CONTENTS

- Performance comparison for data-driven and covariance-driven stochastic subspace identification method  
 ..... XIN Jun-feng, WANG Shu-qing, LIU Fu-shun ( 1 )
- ICA based separation of chatter symptom signals for precision hole boring processing  
 ..... LI Xin, MEI De-qing, CHEN Zi-chen ( 5 )
- Improved power spectrum peak method applied in the modal identification of spatial lattice structures  
 ..... ZHANG Yi-gang, LIU Cai-wei, WU Jin-zhi, et al (10)
- Shock environment of clamp-band unlocking support ..... DUAN Jia-xi, LI Zhi-lai, CAO Nai-liang, et al (16)
- Vibration response of large underground powerhouse ..... XING Xiang-lin, CHEN Jian-kang, LIAO Cheng-gang, et al (21)
- Numerical analysis of dynamic load in bridge-head bumping considering the contact length between tire and road  
 ..... DING Yong, ZHUGE Ping, XIE Xu, et al (28)
- Experimental investigation on damage effects on animals under the action of blast wave in a chamber  
 ..... FAN Jun-qi, DONG Hong-xiao, GAO Yong-hong, et al (35)
- Gearbox incipient fault fusion diagnosis based on DSMT and wavelet neural network  
 ..... CHEN Fa-fa, TANG Bao-ping, YAO Jin-bao (40)
- On aerodynamic characteristics of inclined stay cables with upper rivulet at critical Reynolds numbers  
 ..... DU Xiao-qing, ZHANG Ye, GU Ming (46)
- Numerical and experimental analyses on series aluminum honeycomb structures under quasi-static load  
 ..... LI Meng, LIU Rong-qiang, LUO Chang-jie, et al (50)
- Health monitoring of helicopter rotor based on the residual error of short time state prediction in reconstructed phase  
 space ..... ZHU Xu-cheng, MA Qiang, HOU Zhi-qiang (57)
- Transfer characteristics of power flow of the shaft-plate coupled structure in gear driving system supported by rolling  
 bearings ..... ZHANG Xiu-fang, HUO Rui, ZHOU Zhen, et al (63)
- Load emulation of track vehicle on test bed ..... YANG Jia-jun, ZHOU Xiao-jun (68)
- Series solution of double-stick motion response of dry friction oscillator and stick-slip boundary analysis  
 ..... QIAN Da-shuai, LIU Zhan-sheng, LIU Zhen-xing, et al (73)
- Time-frequency analysis of vibration signal of underwater target subjected to underwater explosion of two explosive  
 charges ..... ZHANG Zhi-hua, LI Wan, LUO Rong, et al (79)
- Design and error calibration of a micro-electro-mechanical digital geophone system  
 ..... DU Min, LI Qiao-yan, XU Guo-dong (84)
- Roller bearing fault diagnosis based on local mean decomposition and morphological fractal dimension  
 ..... ZHANG Kang, CHENG Jun-sheng, YANG Yu (90)
- Dynamic characteristics of electro-hydraulic resonant fatigue test rig ..... BAI Ji-ping, RUAN Jian, JIA Wen-ang (95)
- Dynamic response simulation on marine propulsion shaft with gear pair  
 ..... ZHU Jun-fei, ZHOU Rui-ping, HU Yi, et al (100)

---

Buffering stiffness and damping in vertical lifting and dropping movements of the clamping-bar of an oscillating-bar forging manipulator .....	YANG Jin, HE Qi-gong, TONG Xin-xing (105)
Amplitude control of limit cycles in a class of strongly nonlinear oscillation systems ...	CAI Ping, TANG Jia-shi (110)
Incipient fault diagnosis of large scale wind turbine gearbox based on chaos theory and sampling integral technology .....	SUN Zi-qiang, CHEN Chang-zheng, GU Yan-ling, et al (113)
Seismic behaviors of general asymmetric-plan structures considering soil-structure interaction .....	GAN Zhi-xing, LI Chun-xiang (118)
Finite element model updating of tibetan structure based on artificial neural network .....	YANG Na, ZHANG Yan (125)
Acoustic emission characteristics of rotor rubbing based on wavelet transform and statistical analysis .....	YU Yang, YANG Ping, YANG Li-jian (130)
Rotating machinery fault diagnosis based on local mean decomposition and pattern spectrum .....	ZHANG Kang, CHENG Jun-sheng, YANG Yu (135)
Spectral decomposition theory and its application in delayed feedback control .....	MAO Xiao-bin (141)
Fragment velocity and equivalent bare charge characteristic of cylindrical warhead .....	KONG Xiang-shao, WU Wei-guo, LI Xiao-bin, et al (146)
Calculation of acoustical characteristics of micro-perforated panel considering the effect of panel properties .....	SUN Wen-juan, SU Qiao-ping, KONG De-yi, et al (150)
Fault diagnosis of rolling bearings based on EMD Interval-Threshold denoising and maximum likelihood estimation .....	ZHOU Zhi, ZHU Yong-sheng, ZHANG You-yun, et al (155)
Damping capacity of recycled concrete .....	LIANG Chao-feng, LIU Tie-jun, ZOU Du-jian, et al (160)
Least squares support vector machine based time-delay control algorithm for reducing seismic responses of structures .....	ZHAO De-qi, LI Chun-xiang, LAN Sheng-ning (165)
Improved transfer matrix method in structural vibration analysis .....	WAN Hao-chuan, LI Yi-nong, ZHENG Ling (173)
Vibration attenuation zones of a laminated periodic structure .....	CHENG Zhi-bao, SHI Zhi-fei, XIANG Hong-jun (178)
Simulation of failure waves in glasses under shock compression .....	FENG Xiao-wei, LIU Zhan-fang, CHEN Gang, et al (183)
Application of Kriging response surface in finite element model validation ...	ZHANG Dong-dong, GUO Qin-tao (187)

---

## JOURNAL OF VIBRATION AND SHOCK

Vol. 32 No. 9 MAY 2013

Editorial Office: 1954 Huashan Rd. Shanghai, 200030, China

Issuer Abroad: China National Publishing Industry Trading Corporation  
(Post-Office Box No. 728, Beijing, China)

---