

◎ 目 录 /contents

电涡流阻尼减振技术·····	(1)
Feasibility Study of a Large-Scale Tuned Mass Damper with Eddy Current Damping Mechanism ·····WANG Z.H., CHEN Z.Q., WANG J.H. (汪志昊, 陈政清, 王建辉)(2)	
Inerter-Damper-Spring Passive Vibration Control: Its System and Realization with Eddy-Current Apparent Mass Damper ····· CHEN Z.Q., HUANG Z.W., HUA X.G. (陈政清, 黄智文, 华旭刚)(13)	
Modeling, Testing, and Validation of an Eddy Current Damper for Structural Vibration Control ····· HUANG Z.W., HUA X.G., CHEN Z.Q., NIU H.W. (黄智文, 华旭刚, 陈政清, 牛华伟)(21)	
永磁电涡流阻尼新技术及其在土木工程中的应用 ····· 陈政清, 华旭刚, 牛华伟, 黄智文, 张弘毅, 陈谨林 (32)	
Design and Dynamic Characterization of a Large-Scale Eddy Current Damper with Enhanced Performance for Vibration Control ·····ZHANG H.Y., CHEN Z.Q., HUA X.G., HUANG Z.W., NIU H.W. (张弘毅, 陈政清, 华旭刚, 黄智文, 牛华伟)(50)	
A Novel 500 kN Axial Eddy Current Damper Using Rack and Gear Mechanism:Design, Testing and Evaluation ····· LI S.Y., LI Y.F., MAO W.Y., WANG J.Z., CHEN Z.Q. (李寿英, 李亚峰, 毛伟阳, 王健钟, 陈政清)(74)	
Halbach 阵列板式电涡流阻尼单元参数分析与优化设计 ····· 黄智文, 蒲怡达, 张弘毅, 华旭刚, 陈政清 (89)	
Study on Enhanced Performance of CuFe Alloy's Eddy Current Damping and Its Advantages in Multi- Mode Vibration Control of Stay-Cable ····· YANG W.B., ZHANG H.Y., CHEN Z.Q., HUA X.G.,	

NIU H.W., LI S.Y. (杨文斌, 张弘毅, 陈政清, 华旭刚, 牛华伟, 李寿英)(102)

桥梁多阶模态涡振..... (119)

Higher Modes' Vertical Vortex-Induced Vibrations of Suspension Bridges—Part 2: Aeroelastic Model Study CHEN Z.Q., CHEN W., HUA X.G., HUANG Z.W.

(陈政清, 陈文, 华旭刚, 黄智文)(120)

大跨度桥梁竖弯涡振限值的主要影响因素分析 陈政清, 黄智文(129)

Experimental Investigation of Correction Factor for VIV Amplitude of Flexible Bridges from an Aeroelastic Model and Its 1 : 1 Section Model ZHOU S., HUA X.G., CHEN Z.Q., CHEN W.

(周帅, 华旭刚, 陈政清, 陈文)(137)

Vibration Control of Vortex-Induced Vibrations of a Bridge Deck by a Single-Side Pounding Tuned Mass Damper WANG W.X., WANG X.Y., HUA X.G., SONG G.B., CHEN Z.Q.

(王文熙, 王修勇, 华旭刚, 宋钢兵, 陈政清)(146)

大跨度悬索桥的多阶模态竖向涡振与控制 华旭刚, 黄智文, 陈政清(161)

Effects of End Condition and Aspect Ratio on Vortex-Induced Vibration of a 5 : 1 Rectangular Cylinder WANG C.Q., WEN Q., ZHOU S., HUA X.G., HUANG Z.W., CHEN Z.Q.

(王超群, 温青, 周帅, 华旭刚, 黄智文, 陈政清)(171)

流线型钢箱梁涡激振动机理与气动控制措施

..... 刘志文, 江智俊, 黎晓刚, 邵超逸, 王灿东, 陈政清(188)

Mechanism and Aerodynamic Countermeasures of Vortex-Induced Vibration of a Cable-Stayed Bridge with Narrow Π -Shaped Girder Sections LIU Z.W., HE F.W., YAN A.G., LIU Z.B.,

YIN T., CHEN Z.Q. (刘志文, 何法伟, 严爱国, 刘振标, 印涛, 陈政清)(202)

Discrete Viscous Dampers for Multi-Mode Vortex-Induced Vibration Control of Long-Span Suspension Bridges CAO Y.W., HUANG Z.W., ZHANG H.Y., HUA X.G., CHEN Z.Q., WAN T. B.

(曹益文, 黄智文, 张弘毅, 华旭刚, 陈政清, 万田保)(217)

Experimental and Numerical Study on Vibration Response, VIV Mechanism and Aerostatic Coefficients of Triple-Separated Decks Under Different Vertical Distances XIAO H., LIU Z.W., CHEN Z.Q.,

LIU Z.B., YAN A.G., YANG O. (肖晗, 刘志文, 陈政清, 刘振标, 严爱国, 杨鸥)(230)

索杆结构风致振动与控制 (249)

Flutter, Galloping, and Vortex-Induced Vibrations of H-Section Hangers

..... CHEN Z.Q., LIU M.G., HUA X.G., MOU T.M. (陈政清, 刘慕广, 华旭刚, 牟廷敏)(250)

Rain-Wind-Induced In-Plane and Out-of-Plane Vibrations of Stay Cables	LI S.Y., CHEN Z.Q., WU T., KAREEM A. (李寿英, 陈政清, 吴 腾, 卡里姆·阿赫桑)(259)
Mitigation of Wind-Induced Vibrations of Bridge Hangers Using Tuned Mass Dampers with Eddy Current Damping	NIU H.W., CHEN Z.Q., HUA X.G., ZHANG W. (牛华伟, 陈政清, 华旭刚, 张 伟)(270)
Optimal Design of Two Viscous Dampers for Multi-Mode Control of a Cable Covering Broad Frequency Range	YANG C., CHEN Z.Q., WANG W.X., HUA X.G., WANG Y.F. (杨 超, 陈政清, 王文熙, 华旭刚, 王亚飞)(285)
Galloping Vibration of Stay Cable Installed with a Rectangular Lamp: Field Observations and Wind Tunnel Tests	AN M., LI S.Y., LIU Z.W., YAN B.F., LI L.A., CHEN Z.Q. (安 苗, 李寿英, 刘志文, 晏班夫, 李龙安, 陈政清)(302)
Experimental Investigation on Wake-Induced Vibrations of the Hangers of Suspension Bridges Based on Three-Dimensional Elastic Test Model	DENG Y.C., LI S.Y., CHEN Z.Q. (邓羊晨, 李寿英, 陈政清)(314)
Experimental Investigation on High-Mode Vortex-Induced Vibration of a Flexible Stay Cable in Smooth Flow	LIU Z.W., LI S.Q., WANG L.H., YAN B.F., ZHANG R.L., CHEN Z.Q. (刘志文, 李书琼, 王连华, 晏班夫, 张瑞林, 陈政清)(325)
Monitoring-Based Identification of Nonlinear Aerodynamic Damping in Multi-Mode Vortex-Induced Vibrations of a Stay Cable	ZHANG R.L., LIU Z.W., ZHOU S., WANG Y.F., CHEN Z.Q. (张瑞林, 刘志文, 周 帅, 王亚飞, 陈政清)(341)
新能源结构	(353)
基于完全气动弹性模型的冷却塔风致响应风洞试验研究	邹云峰, 牛华伟, 陈政清(354)
An Empirical Model for Amplitude Prediction on VIV-Galloping Instability of Rectangular Cylinders	NIU H.W., ZHOU S., CHEN Z.Q., HUA X.G. (牛华伟, 周 帅, 陈政清, 华旭刚)(362)
Modelling Damping Sources in Monopile-Supported Offshore Wind Turbines	CHEN C., DUFFOUR P. (陈 超, 达福尔·菲利普)(381)
Eddy-Current Tuned Mass Dampers for Mitigation of Wind-Induced Response of the Noor III Solar Tower: Design, Installation and Validation	LIU M., LI S.Y., WU T., LI Y.F., MENG H.C., CHEN Z.Q. (刘 敏, 李寿英, 吴 腾, 李亚峰, 蒙华昌, 陈政清)(401)

Analytical Study on the Aerodynamic and Hydrodynamic Damping of the Platform in an Operating Spar-Type Floating Offshore Wind Turbine	MENG Q.K., HUA X.G., CHEN C., ZHOU S., LIU F.P., CHEN Z.Q. (孟庆坤, 华旭刚, 陈超, 周帅, 刘飞鹏, 陈政清) (413)
Optimal Calibration of a Tuned Liquid Column Damper (TLCD) for Rotating Wind Turbine Blades	CHEN B., ZHANG Z.L., HUA X.G., BASU B. (陈宇, 张自立, 华旭刚, 巴苏·比斯瓦卡特) (430)
多排槽式反射镜风压分布及干扰研究	康佳鑫, 牛华伟, 李红星, 何邵华 (455)
Experimental Study on Critical Wind Velocity of a 33-Meter-Span Flexible Photovoltaic Support Structure and Its Mitigation	LIU J.Q., LI S.Y., LUO J., CHEN Z.Q. (刘佳琪, 李寿英, 罗菁, 陈政清) (463)
基于气弹模型风洞试验的柔性光伏支架气动稳定性及干扰效应研究	陈权, 牛华伟, 李红星, 姜东 (481)
桥梁颤振与抖振	(491)
基于 ANSYS 的桥梁全模态颤振频域分析方法	华旭刚, 陈政清 (492)
中央稳定板提高桁架梁悬索桥颤振稳定性的气动机理	陈政清, 欧阳克俭, 牛华伟, 华旭刚 (499)
New Estimation Methodology of Six Complex Aerodynamic Admittance Functions	HAN Y., CHEN Z.Q., HUA X.G. (韩艳, 陈政清, 华旭刚) (506)
Dynamic Performance of a Slender Truss Bridge Subjected to Extreme Wind and Traffic Loads Considering 18 Flutter Derivatives	NIU H.W., ZHU J., CHEN Z.Q., ZHANG W. (牛华伟, 朱金, 陈政清, 张伟) (521)
知己知彼知差距——谈桥梁颤振研究的发展与挑战	陈政清 (535)
Experimental Investigation of Flutter Characteristics of Shallow Π Section at Post-Critical Regime	TANG Y., HUA X.G., CHEN Z.Q., ZHOU Y. (唐煜, 华旭刚, 陈政清, 周洋) (540)
大跨度流线型箱梁悬索桥颤振稳定性气动优化	刘志文, 谢普仁, 陈政清, 徐国平, 徐军 (557)
桥梁颤振导数识别及颤振分析的不确定性研究	封周权, 林阳, 华旭刚, 陈政清 (566)
振动控制理论与方法	(575)
Advanced Impact Force Model for Low-Speed Pounding Between Viscoelastic Materials and Steel	WANG W.X., HUA X.G., WANG X.Y., CHEN Z.Q., SONG G.B. (王文熙, 华旭刚, 王修勇, 陈政清, 宋钢兵) (576)

Optimal Design of TVMD with Linear and Nonlinear Viscous Damping for SDOF Systems Subjected to Harmonic Excitation	HUANG Z.W., HUA X.G., Chen Z.Q., NIU H.W. (黄智文, 华旭刚, 陈政清, 牛华伟)(588)
大跨度悬索桥加劲梁纵向运动特性及其电涡流阻尼控制研究	梁龙腾, 封周权, 陈政清, 牛华伟, 华旭刚(603)
Exploration of the Nonlinear Effect of Pendulum Tuned Mass Dampers on Vibration Control	XU K., HUA X.G., LACARBONARA W., HUANG Z.W., CHEN Z.Q. (徐 凯, 华旭刚, 拉卡博纳拉·沃尔特, 黄智文, 陈政清)(613)
Closed-Form Optimal Calibration of a Tuned Liquid Column Damper (TLCD) for Flexible Structures	CHEN B., ZHANG Z.L., HUA X.G. (陈 李, 张自立, 华旭刚)(632)
Mechanical Behavior and Seismic Control Performance of a Metallic Torsional Damper for Flexible Structures	CHEN S., WANG W.X., LIU G.K., ZHOU C., CHEN B., CHEN Z.Q. (陈 晟, 王文熙, 刘国坤, 周 超, 陈 李, 陈政清)(650)
A Novel Tuned Hydrodynamic Mass Damper Employing Added Mass and Damping from Interaction Between Heave Plate and Fluids	WANG W.X., ZHOU J., YU T.F., CHEN S., LUO Y.F., HUA X.G. (王文熙, 周 俊, 余天赋, 陈 晟, 罗一帆, 华旭刚)(668)
Active Vibration Control for Flexible Towers Based on Displacement Observation and Reduced-Order Controller in Modal Space: Theory and Experiment	WEN X.X., ZHANG H.Y., CHEN Z.Q., HUA X.G., NIU H.W., XU Z.D. (文茜茜, 张弘毅, 陈政清, 华旭刚, 牛华伟, 徐赵东)(690)
人致振动与控制	(709)
人行桥的人致振动理论与动力设计	陈政清, 刘光栋(710)
Control of Human-Induced Vibrations of a Curved Cable-Stayed Bridge: Design, Implementation, and Field Validation	WEN Q., HUA X.G., CHEN Z.Q., YANG Y., NIU H.W. (温 青, 华旭刚, 陈政清, 杨 勇, 牛华伟)(722)
基于稳态简谐激励的人行桥模态参数识别	温 青, 华旭刚, 陈政清, 王文熙, 牛华伟(735)
健康监测与其他主题	(745)
Performance Variations of a Cable-Stayed Bridge with Damaged Cables	YANG O., LI H., OU J.P., LI Q.S. (杨 鸥, 李 惠, 欧进萍, 李秋胜)(746)
Influence of Longitudinal Bar Corrosion on Impact Behavior of RC Beams	DAI M.J., YANG O., XIAO Y., LI F.C. (戴明江, 杨 鸥, 肖 岩, 李凤臣)(767)

- Bond Performance Between Slightly Corroded Steel Bar and Concrete after Exposure to High Temperature YANG O., ZHANG B., YAN G.R., CHEN J.
(杨 鸥, 张 白, 闫桂荣, 陈 俊)(778)
- Substructural Identification with Weighted Global Iteration Considering Unknown Interfacial Forces and External Excitation HE J., QI M.C., HUA X.G., CHEN Z.Q., YANG O., CAO Z.
(贺 佳, 齐梦晨, 华旭刚, 陈政清, 杨 鸥, 曹 张)(788)
- Simultaneous Identification of Time-Varying Parameters and External Loads Based on Extended Kalman Filter: Approach and ValidationZHANG X.X., HE J., HUA X.G., CHEN Z.Q., FENG Z.Q.
(张肖雄, 贺 佳, 华旭刚, 陈政清, 封周权)(799)
- An Improved Extended Kalman Filter for Parameters and Loads Identification Without Collocated MeasurementsHE J., QI M.C., TONG Z.H., HUA X.G., CHEN Z.Q.
(贺 佳, 齐梦晨, 童倬慧, 华旭刚, 陈政清)(817)
- Identification of Time-Varying Stiffness with Unknown Mass Distribution Based on Extended Kalman Filter ZHANG X.X., HE J., HUA X.G., CHEN Z.Q.
(张肖雄, 贺 佳, 华旭刚, 陈政清)(827)
- Bayesian Spectral Decomposition for Efficient Modal Identification Using Ambient Vibration
.....FENG Z.Q., ZHANG J.R., KATAFYGIOTIS L., HUA X.G., CHEN Z.Q.
(封周权, 张吉仁, 卡塔菲吉奥蒂斯·兰布洛斯, 华旭刚, 陈政清)(840)
- Bayesian Time Domain Approach for Damping Identification and Uncertainty Quantification in Stay Cables Using Free Vibration Response
..... FENG Z.Q., ZHANG J.R., XUAN X.Y., WANG Y.F., HUA X.G., CHEN Z.Q., YAN W.J.
(封周权, 张吉仁, 宣欣岩, 王亚飞, 华旭刚, 陈政清, 颜王吉)(860)
- A Machine Learning Based Method for Predicting the Shear Strength of Fiber-Reinforced Concrete Joints in Precast Segmental Bridges GE P., YANG O., HE J., ZHANG K.L., WU S.W.
(葛 鹏, 杨 鸥, 贺 佳, 张凯伦, 伍隋文)(875)
- Analytical Solutions for Static Longitudinal Displacements of Suspension Bridges Under a Moving Vertical Concentrated Load
..... JING H.K., FENG Z.Q., CHEN Z., HUANG G.P., HUA X.G., CHEN Z.Q., WAN T.B.
(井昊坤, 封周权, 陈 智, 黄国平, 华旭刚, 陈政清, 万田保)(888)