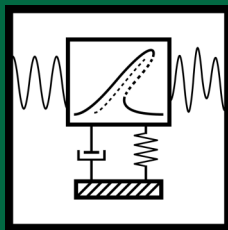


International Conference VIBROENGINEERING

Shanghai, China
7-8th December, 2016



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The 24th VIBROENGINEERING Conference:
Theories, Technologies and Applications in
Vibration Engineering
December 7-8th 2016 Shanghai, P. R. China



The 24th VIBROENGINEERING International Conference will be held during 7-8th of December, 2016 in Shanghai, P.R. China. Its purpose is to provide a platform for scientists, engineers and practitioners throughout the world to exchange ideas and present their latest research results in the areas of civil infrastructure, typically bridge engineering, hydraulic engineering, offshore engineering, and transportation structures, in order to further promote the Vibroengineering and its applications. The Conference is organized by JVE International.

The main theme of the conference will be – but not limited to – **Theories, Technologies and Applications in Vibration Engineering**.

Topics of the Conference:

Modelling & Simulation in Vibroengineering, Measurement & Signal Processing, Vibration Coupling & Interaction, Modal Analysis & Identification, Nonlinear Vibration & Dynamics, Noise & Uncertainty & Control, Diagnostics, Monitoring & Assessment, Biomedical Vibration Engineering.

Internationally renowned invited speakers and contributing authors from all over the world will present the latest advances in the thriving area of Vibroengineering. This conference will feature a broad range of high-level technical papers from all over the world. Invited distinguished experts will present brilliant presentations for our technical sessions and discussions with a focus on the conference theme. The conference will provide you with an opportunity to communicate with other scientists and engineers about recent research advances, and exchange ideas in innovative science and technologies, meet old friends and make new business partners in the areas of civil infrastructure, typically bridge engineering, hydraulic engineering, offshore engineering, and transportation structures.

With your participation, this conference will prove to be a very exciting event, a fruitful opportunity, to promote scientific research and technological development of vibroengineering and its application to the bridge engineering, hydraulic engineering, offshore engineering, and transportation industries.

All papers presented at VIBROENGINEERING Conferences are published as short Conference papers in Vibroengineering PROCEDIA. Conference papers published in Vibroengineering PROCEDIA is indexed in EI Compendex, Scopus, Inspec, Gale Cengage, Google Scholar and EBSCO.

The authors of best papers presented at the Conference will be invited to prepare the extended version of their papers (10-20 pages) which will be considered for publication in Journal of VIBROENGINEERING (indexed in SCI and other major databases), Journal of Measurements in Engineering (indexed in Inspec, EBSCO and Gale Cengage) and Journal of Mathematical Models in Engineering (indexed in Gale Cengage).



The program of the conference is arranged into one Invited Speakers Session and seven Oral Sessions. The Conference Venue will be held at an award winning Radisson Blue Hotel Shanghai Hong Qian. The Venue is located at 210 Taopu Road, Putou District Shanghai 200333, China.

Guests are recommended to contact Sales Manager, Serena Shao, of the hotel regarding the booking of rooms during the Conference:

sshao@radisson.com
+86 53559999*3812

On behalf of the Organizing Committee, we would like to welcome the delegates to the 24th International Conference VIBROENGINEERING. We hope that you will enjoy the conference and find the program of the Conference exciting. We look forward to meeting you in December 2016 in Shanghai.



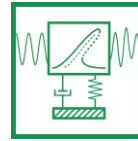
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International Organization Committee:

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Hongwei Tang, Shandong University, China
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V. Veikutis, Lithuanian University of Health Sciences, Lithuania
M. Zakrzhevsky, Riga Technical University, Latvia



Conference Program

Day 0: December 06

Location: Radisson Blue Hotel

18:00-21:00	Registration
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Day 1: December 07

Location: Radisson Blue Hotel

08:30-12:00	Registration
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Day 1: December 07

Location: Radisson Blue Hotel

	PLENARY SESSION Chairs Prof. Vincentas Veikutis and Prof. Ying Yang
09:00-09:05	OPENING CEREMONY
09:05-09:20	Opening Speech: Minvydas Ragulskis Vibroengineering – Past, Present and the Future
09:20-09:40	Plenary Speech: Ying Yang , Nanjing University of Astronautics and Aeronautics Design and optimization of small rotational piezoelectric wind energy harvesters for different load types and working conditions
09:40-10:00	Plenary Speech: Laifa Tao , Beijing University Curve similarity recognition based rolling bearing degradation state estimation and lifetime prediction
10:00-10:20	Plenary Speech: Hao Wen , Nanjing University of Astronautics and Aeronautics Nonlinear dynamics and control of electrodynamic tether for deorbiting space debris



10:20-10:40	<p>Plenary Speech: Vincentas Veikutis, Lithuanian University of Health Sciences Identification and mini-invasive correction for blood vessel wall atherosclerosis</p>
10:40-11:00	<p>Plenary Speech: Guangqing Lu, Jinan University Determining dynamic stiffness of structural connection by tested FRFs</p>

Day 1: December 07

Location: Radisson Blue Hotel

11:00-11:15	Coffee Break
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Day 1: December 07

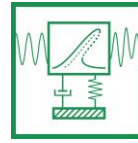
Location: Radisson Blue Hotel

	ORAL SESSION 1
	Session Chairs Prof. Shigeki Toyama and Dr. Pedro Lima
11:15-11:30	Fulin Wang; Uichi Nishizawa; Shigeki Toyama. Multi degree-of-freedom micro spherical ultrasonic motor using wire stators.
11:30-11:45	Pedro Lima; Eider Oliveira. Evaluation of low cost microphones for active noise control in duct.
11:45-12:00	Lan Shang; Huaitao Wang; Dafang Wu. Experimental research and numerical simulation on vibration characteristics of a rectangular plate structure in fast time-varying thermal environments
12:00-12:15	Wei Wang; Shaoyi Bei; Jingbo Zhao; Kai Zhu; Weixing Hang. Research on vehicle handling inverse dynamics based on optimal control while encountering emergency collision avoidance.
12:15-12:30	Lipin Zhang; Chen Lu; Laifa Tao. Rolling bearing health assessment using only normal samples.
12:30-12:45	Baoyuan Wang; Chunmao Ma; Gang Heng; Hongxiao Chao; Jun Liu. Research on measuring method of the angular displacement of muzzle vibration.
12:45-13:00	Hua Su; Chen Lu; Jian Ma. An approach to fault diagnosis for gearbox based on order tracking and extreme learning machine.

Day 1: December 07

Location: Radisson Blue Hotel

13:00-14:00	Lunch
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Day 1: December 07

Location: Radisson Blue Hotel

	ORAL SESSION 2
	Session Chair Prof. Minvydas Ragulskis and Dr. Laifa Tao
14:00-14:15	Dengwei Song; Chen Lu; Yujie Cheng. A novel fault diagnosis for hydraulic pump based on EEMD-LTSA and PNN
14:15-14:30	Jinwen Sun; Chen Lu; Yu Ding. Fault diagnosis for hydraulic pump based on intrinsic time-scale decomposition and softmax regression
14:30-14:45	K. J. Li; H. B. Chen; Y. Y. Wang; C. Wang. Fatigue analysis of simplified automobile model based on SEA and hybrid FE-SEA method.
14:45-15:00	Xin Wang; Yuding Bai; Yameng Jiang; Peng Qiu; Nannan Du. Stability enhancement method and experiment of orchard vehicle control.
15:00-15:15	Xi Wang; Baolin Hou. Sliding mode control of a 2-DOF manipulator with random base vibration based on modified exponential reaching law.
15:15-15:30	Yuchun Li; Nanfang Wu; Zhuang Wang. A new secondary instability phenomenon of parametric sloshing.
15:30-15:45	Hanping Qiu; Yaoqi Feng; Shichao Fan. The application of coordinate transformation matrix into the multi-degree of freedom vibration control.
15:45-16:00	Guojin Tan; Ziyu Liu; Yubo Jiao; Wensheng Wang. Determination of limit vehicle bump height in dynamic detection of simply supported bridge.

Day 1: December 07

Location: Radisson Blue Hotel

16:00-16:30	Coffee Break
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Day 1: December 07

Location: Radisson Blue Hotel

	ORAL SESSION 3
	Session Chairs Prof. Ying YANG and Dr. Hao Wen
16:30-16:45	Hanbing Liu; Hua Wang; Guojin Tan; Ziyu Liu. Reanalysis of the structural dynamic characteristics based on double coordinate free-interface mode synthesis and matrix perturbation method.
16:45-17:00	Fulong Liu; Fengshou Gu; Yunshi Zhao; Andrew Ball. A validation study of ACS-SSI for online condition monitoring of vehicle suspension systems.
17:00-17:15	Yijie Shui; Subhash Rakheja; Wenbin Shangguan. Kineto-dynamic optimization of seat-suspension
17:15-17:30	Peng Zhang; Guihuo Luo; Fei Wang. Dynamic characteristic analysis of a roller bearing rotor system.



17:30-17:45

C. Wang; H. B. Chen; Y. Y. Wang; K. J. Li. Research on high frequency vibro-acoustic response of typical structure based on finite element method

Day 1: December 07

Location: Radisson Blue Hotel

19:00-21:00

GALA DINNER

Day 2: December 08

Location: Radisson Blue Hotel

ORAL SESSION 4

Session Chairs Prof. **Vincentas Veikutis** and Dr. **Kuan Lu**

08:30-08:45

Nguyen Van Liem; Zhang Jianrun; Le Van Quynh; Jiao Renqiang. Study of fuzzy control for cab's isolation system of heavy truck

08:45-09:00

Dongying Han; Cuijiao Su; Peiming Shi. Research on fault diagnosis method of rolling bearing based on AMD and LabVIEW

09:00-09:15

Xin Zhang; Xianglong Ni; Jianmin Zhao; Fucheng Sun; Zhendong Du. Rolling bearing fault diagnosis using modified K-means cluster analysis

09:15-09:30

Kuan Lu; Lei Hou; Yushu Chen. The polynomial dimensional decomposition method in a class of dynamical system with uncertainty.

09:30-09:45

Sheng Pang; Yunxian Jia. A remaining useful life prediction and maintenance decision optimal model based on Gamma process.

09:45-10:00

Yongpeng Chu; Hao Wen; Ti Chen. Identification using Valanis model for beams with nonlinear bolted joint and boundary connection

10:00-10:15

Wang Wei; Bei Shaoyi; Wang Yongzhi; Zhu Kai; Yang Hui. Vehicle steering wheel angle identification research based on dynamic program method.

10:15-10:30

Changsheng Xiang; Yu Zhou; Bin Zhao; Liang Zhang; Fuchao Mao. Research of concrete cracking propagation based on information entropy evolution.

10:30-10:45

Piotr Kowalski; Anna Maklinowska-Krokosz. Influence of vertical and horizontal whole-body vibration on heart rate of employees age 50+ (pilot study)

10:45-11:00

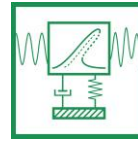
Piotr Kowalski; Jacek Zajac. Applications of test bench for whole-body vibration simulation

Day 2: December 08

Location: Radisson Blue Hotel

11:00-11:30

Coffee Break



Day 2: December 08

Location: Radisson Blue Hotel

	ORAL SESSION 5
	Session Chairs Prof. Hao Wen and Dr. Haiping Li
11:30-11:45	Xi Liu; Baolin Hou. A filtering method based on wavelet transform for collected data of automatic ammunition loading system.
11:45-12:00	Junning Li; Zhitao Ma; Wei Chen. Effects of oil film properties on roller bearing with light loads under various slip factors.
12:00-12:15	Zhengminqing Li; Hao Wu; Rupeng Zhu. Constructed solutions of face gear dynamics associated with engagement impact energy decay.
12:15-12:30	Jianmin Zhao; Haiping Li; Hongzhi Teng; Chen Chen. A novel method for detecting bearing defects based on EMD and fractal dimension.
12:30-12:45	Kai Chai; Qing-chao Yang; Jing-jun Lou. Dynamic characteristic analysis of two-stage quasi-zero stiffness vibration isolation system.
12:45-13:00	Xianglong Ni; Jianmin Zhao; Zhendong Du; Xin Zhang. Planetary gearbox fault diagnosis based on pseudo-fault signal assisted EMD.

Day 2: December 08

Location: Radisson Blue Hotel

13:00-14:00	LUNCH
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Day 2: December 08

Location: Radisson Blue Hotel

	ORAL SESSION 6
	Session Chairs Prof. Subhash Rakheja and Dr. Jie Li
14:00-14:15	Jie Li; Jianmin Zhao. Short-term trend prediction of bearing based on SGWT and MLE method.
14:15-14:30	Chao Tan; Hong-hua Wang; Ling Chen. Vibration characteristics of stators of bearingless switched reluctance motors.
14:30-14:45	Mu Chai; Subhash Rakheja; Wen Bin Shangguan. Relative ride vibration of off-road vehicles with front-, rear- and both axles torsio-elastic suspension.
14:45-15:00	Zhendong Du; Jianmin Zhao; Ruifeng Yang; Xinghui Zhang. Spare support model based on gamma degradation process.
15:00-15:15	Hongchun Sun; Zhiyuan Wang; Yong Xu. Research on sampling of vibration signals based on compressed sensing.
15:15-15:30	Wenming Jiang; Feng Lin. Numerical simulation on ground vibration caused by the demolition of a 200 m high chimney.
15:30-15:45	Rong Guo; Xiao-kang Wei; Jun Gao. Experimental NVH evaluation of a pure electric vehicle in transient operation modes.



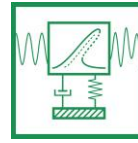
15:45-16:00	Jie Zhou; Yun-xian Jia; He-Yang Sun; Zhi-Jian Li. Dynamic response and dangerous point stress analysis of gear transmission system.
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Day 2: December 08 **Location: Radisson Blue Hotel**

16:00-16:30	Coffee Break
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Day 2: December 08 **Location: Radisson Blue Hotel**

	ORAL SESSION 7
	Session Chairs Prof. Andrzej Buchacz and Prof. Mahmoud Bayat
16:30-16:45	Mahmoud Bayat; Iman Pakar; Mahdi Bayat. Nonlinear vibration of rested Euler-Bernoulli beams on linear elastic foundation using Hamiltonian approach.
16:45-17:00	Andrzej Buchacz. Exact Methods for Obtaining Characteristics as Models of Transverse Vibrating Mechanical Subsystems of Freight Wagons.
17:00-17:15	En-Wei Chen; Jun Wang; Yi-Min Lu; Shuai Liu. Vibration analysis and control of an axially moving string by expanded Hamilton's principle.
17:15-17:30	Andrzej Buchacz; Andrzej Baier; Marek Placzek. A concept of technology for non-destructive testing of modernized freight cars based on analysis of their vibration.
17:30-17:45	Andrzej Wróbel; Andrzej Buchacz. Selection of the geometric and materials parameters in piezoelectric sensors level.
17:45-18:00	Xin Liu; Yunxian Jia; Jie Zhou; Tianbin Liu. Engine remaining useful life prediction based on trajectory similarity.
18:00-18:15	Ligang Cai; Ying Li; Zhifeng Liu; Yuezhen Wang; Jianyong Liu. Thermal characteristics analysis of the slide carriage system of the X axis based on the thermal contact resistance and the environment temperature change.
18:15-18:30	Rong Guo; Jun Gao; Xiaokang Wei. Influence of hydraulic engine mounts on engine shake based on full vehicle model
18:30-18:45	Mingyang Huang; Hong Nie; Ming Zhang. Dynamic analysis of ground steering response of aircraft with electric taxi system.



Day 2: December 08

Location: Radisson Blue Hotel

	CLOSING SESSION
19:00-19:05	Chairs Prof. Minvydas Ragulskis and Dr. Laifa Tao Ideas, Cooperation and Projects Meeting All Conference participants are welcome to attend
19:05-19:15	Best Papers Award, Closing Ceremony

Conference Partners:



可靠性与环境工程技术重点实验室
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