



JVE INTERNATIONAL LTD.



## INTERNATIONAL CONFERENCE VIBROENGINEERING 2014 PROGRAM

International Conference VIBROENGINEERING 2014 will be held on November 7-10, 2014 in Guiyang, one of the main industrial conglomerates in China. Authors from different Countries will present their latest research efforts during the conference. We will provide a platform to authors for exchanging ideas and research efforts together. The venue for the conference is Empark Grand Hotel, Guiyang.

All accepted short papers (4-6 pages length Proceedings format) intend to address the hottest issues in Vibroengineering of dynamical systems and will be published in JVE PROCEEDIA. The papers cover a wide series of topics in this area. The following subjects are principal topics:

- Vibration and wave processes;**
- Vibration and wave technologies;**
- Nonlinear vibrations;**
- Vibroshock systems;**
- Generation of vibrations and waves;**
- Vibrosterilization;**
- Transformation of motion by vibrations and waves;**
- Dynamics of intelligent mechanical systems;**
- Vibration control, identification, diagnostics and monitoring;**
- Biomechanical Engineering.**

The program of the Conference is arranged into one Invited Speakers Session and 8 Oral Sessions at Empark Grand Hotel.

On behalf of the Organizing Committee, we would like to welcome the delegates to International Conference VIBROENGINEERING 2014. We hope that you will enjoy the Conference and find VIBROENGINEERING 2014 Program exciting. We look forward to meeting you in November, Guiyang.



## Conference Program

**Day 1: November 08**      **Location: Empark Grand Hotel (Shouzhangjiejian Ballroom)**

08:45-09:00	<b>OPENING CEREMONY</b> Prof. <b>Minvydas Ragulskis</b> and Prof. <b>Chen Lu</b>
09:00-09:30	Keynote Speech by Prof. <b>Chen Lu</b> “Recent research progress of PHM in RSE”
09:30-10:00	Keynote Speech by Prof. <b>Shenfang Yuan</b> “Monitoring of a full-scale aircraft fatigue test and the need to improve evaluation reliability under time-varying condition”
10:00-10:30	Keynote Speech by Prof. <b>Wen-Hsiang Hsieh</b> “New vibratory conveyors”
10:30-10:50	<b>Coffee Break</b>
10:50-11:20	Keynote Speech by Prof. <b>Chuanri Li</b> “Reliability testing, product environmental engineering, shock and vibration signal analysis and tests”
11:20-11:50	Keynote Speech by Prof. <b>Shuhong Xiang</b> “The analysis and verification of acoustic testing of space system”
11:50-12:20	Keynote Speech by Prof. <b>Minvydas Ragulskis</b> “Dynamic visual cryptography – challenges and applications”
	Plenary Photo

12:30-14:00	<b>Lunch</b>
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**Day 1: November 08**      **Location: Empark Grand Hotel (Xi’an Ballroom)**

	<b>PARALLEL ORAL SESSION 1</b>
	Session Chair Prof. <b>Xiaoyang Li</b>
14:00-14:15	<b>Yuan Hongjie</b> “A novel approach to determine upper tolerance limit of non-stationary vibrations during rocket launch”
14:15-14:30	<b>Dae Hee Hwang</b> “Replacing open channel with pipe channel and flap gate to avoid foam formation at outfall of Angamos Power Plant, Chile”
14:30-14:45	<b>Hongxiao Chao</b> “A certain rubber shock absorber’s dynamic response research under impulse load”
14:45-15:00	<b>Zhengmingqing Li</b> “Analytical impact of the sliding friction on mesh stiffness of spur gear drives based on Ishikawa model”
15:00-15:15	<b>Fei Xu</b> “Synthesis of running RMS-induced non-Gaussian random vibration based on Weibull distribution”
15:15-15:30	<b>Qian Sun</b> “Signal processing and health assessment techniques in structural health monitoring”

15:30-15:45	<b>Tingfei Yan</b> “Design and analysis of a pneumatic test system for shock response spectrum”
15:45-16:00	<b>Dongjiang Han</b> “Experimental research on dynamic characteristics of a hybrid gas bearing-rotor system for high-speed permanent magnet machine”

**Day 1: November 08**                      **Location: Empark Grand Hotel (Chongqing Ballroom)**

	<b>PARALLEL ORAL SESSION 2</b>
	Session Chair Prof. <b>Minvydas Ragulskis</b>
14:00-14:15	<b>Song Yan</b> “Vibration fatigue reliability analysis of aircraft landing gear based on fuzzy theory under random vibration”
14:15-14:30	<b>Jie Zhou</b> “Research on optimum design of temperature-vibration accelerated storage test plan”
14:30-14:45	<b>Yang Bin</b> “Modal analysis of the human head-neck mathematical model”
14:45-15:00	<b>Zhang Minjie</b> “Review of recent advances in pyroshock for space system”
15:00-15:15	<b>Jichao Bian, Zhongguang Fu</b> “The experimental study on vibration characteristics of high-speed turbine generator bearing rotor system”
15:15-15:30	<b>Wang Dong</b> “Experimental investigation of nonlinear interface effects in a jointed beam”
15:30-15:45	<b>Xinghui Zhang</b> “Application of maximum correlated Kurtosis deconvolution on bearing fault detection and degradation analysis”
15:45-16:00	<b>Yicun Xie</b> “A new crack diagnosis method on box structure based on empirical mode decomposition”

**Day 1: November 08**

16:00-16:20	<b>Coffee Break</b>
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**Day 1: November 08**                      **Location: Empark Grand Hotel (Xi’an Ballroom)**

	<b>PARALLEL ORAL SESSION 3</b>
	Session Chair Prof. <b>Wen-Hsiang Hsieh</b>
16:20-16:45	<b>SPECTRA QUEST Inc.</b>
16:45-17:00	<b>Xiang ShuHong</b> “Analysis and experimental verification of acoustic test characteristics for spacecraft”
17:00-17:15	<b>Jianyao Yao</b> “A comparative study of time-marching schemes for fluid-structure interactions”
17:15-17:30	<b>Haiping Li</b> “Planetary gearbox fault diagnosis using morphological gradient filters”
17:30-17:45	<b>Chao Wang</b> “Fault diagnosis for hydraulic pump based on EEMD-KPCA and LVQ”
17:45-18:00	<b>Song Chao</b> “Improvement of shock response spectrum test for spacecraft unit using electromagnetic shaker”

18:00-18:15	<b>Ying Wu</b> “The relationship between type II plain dent damage degree and dent depth on varied internal pressure”
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**Day 1: November 08**                      **Location: Empark Grand Hotel (Chongqing Ballroom)**

	<b>PARALLEL ORAL SESSION 4</b>
	Session Chair Prof. <b>Shenfeng Yuan</b>
16:20-16:35	<b>Jingjing He</b> “Lamb wave-based probabilistic fatigue life prediction for riveted lap joints”
16:35-16:50	<b>Wang Zhaobing</b> “Verification and validation of integrated vehicle health management system”
16:50-17:05	<b>Chuanliang Zhang</b> “Product reliability evaluation based on manufacturing process information fusion”
17:05-17:20	<b>Xiankun Zhang</b> “Degradation and acceleration modeling for ball bearings based on kurtosis of vibration data”
17:20-17:35	<b>Chen Changting</b> “Research on speed’s influence on hydrostatic bearing’s stiffness”
17:35-17:50	<b>Chen Changting</b> “Experiment research on stability of herringbone grooved aerodynamic bearing-rotor system”
17:50-18:05	<b>Xuwen Miao, Guangyao Cai, Tian He</b> “Diagnosis of ball bearing with various degree rolling element defects based on local mean decomposition”
18:05-18:30	<b>SPECTRA QUEST Inc.</b>

**Day 1: November 08**

18:30-20:00	<b>CONFERENCE BANQUET</b>
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**Day 2: November 09**                      **Location: Empark Grand Hotel (Xi’an Ballroom)**

	<b>PARALLEL ORAL SESSION 5</b>
	Session Chair Prof. <b>Vincentas Veikutis</b>
08:30-08:45	<b>Zihan Chen</b> “Bearing fault diagnosis based on EMD-KPCA and ELM”
08:45-09:00	<b>Qingzhu Liu</b> “Bearing fault diagnosis based on TEO and SVM”
09:00-09:15	<b>Jichang Zhang</b> “Bearing fault diagnosis based on Shannon entropy and wavelet package decomposition”
09:15-09:30	<b>Tang Changliang</b> “Dynamics of multi-disk shafting supported on journal bearing”
09:30-09:45	<b>Xin Jianwen</b> “Availability simulation model of complex electromechanical systems with the consideration of testability parameters”
09:45-10:00	<b>Le Liu</b> “Fuzzy analysis of bearing accelerated degradation testing with uncertainty”
10:00-10:15	<b>Ruifeng Yang</b> “An availability model based on a three-stage failure process under age based replacement”



Day 2: November 09

Location: Empark Grand Hotel (Chongqing Ballroom)

	<b>PARALLEL ORAL SESSION 8</b>
	Session Chair Prof. <b>Xiaoyang Li</b>
10:50-11:05	<b>Shan Jiang</b> "A time-based model for random vibration fatigue analysis"
11:05-11:20	<b>Wang Meihui</b> "Optimal maintenance policy for a deteriorating system based on the improved $\delta$ -shock maintenance model"
11:20-11:35	<b>Meixia Tu, Wang Meihui</b> "Representation and measurement of the beam health based on one-dimensional model"
11:35-11:50	<b>Shuyun Chen</b> "Research on damping parameter identification of elastomer buffer"
11:50-12:05	<b>Yu Ding</b> "Performance assessment and fault classification for hydraulic pump based on LMD and LR"

Day 2: November 09

Location: Empark Grand Hotel (Xi'an Ballroom)

	<b>CLOSING SESSION</b>
12:05-12:20	Chairs Prof. <b>Chen Lu</b> & Prof. <b>Minvydas Ragulskis</b> <b>Organization committee Meeting</b>
12:20-12:30	Chairs Prof. <b>Chen Lu</b> & Prof. <b>Minvydas Ragulskis</b> <b>Best Paper Award, Closing Ceremony</b>



SpectraQuest, Inc. is a leading developer and manufacturer of complete Turn-key Systems for training and diagnosis in Machine Vibration Analysis, Rotor Balancing and Shaft/Coupling Alignment. System includes Machinery Fault Simulators, Interactive Training Program, Data Acquisition Hardware/ Software and Accessories. To accelerate the learning and design process SpectraQuest offers a series of interactive software CDs on Vibration Fundamentals and Calculations, Signal Processing, Alignment and Balancing. We provide a complete infrastructure for setting up a training program to enhance workforce skills in Machine Condition Monitoring for reducing maintenance cost while improving product quality and plant reliability. The products and services are as follows:

- Complete turnkey vibration training systems for machinery diagnosis that include a variety of rotor kits, hands-on training programs and manuals, laboratory exercises, educational software, and measurement systems.
- Multi-Channel Data Acquisition System including comprehensive analysis and modeling Software.
- Complete Balancing Software and Hardware.
- Shaft Alignment System.
- Software CDs.
- Semi and custom design “Test Rigs” for specialized rotor dynamics studies.
- Consulting services that include machinery troubleshooting, machinery condition assessment, specialized vibration oriented software development, implementation of Preventive Maintenance and Predictive Maintenance programs.

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For more information about the production, please contact Mr. Jason Ji (13761234929) or you can visit the Website: <http://www.sensorobots.net>



## Conference Venue

The Conference will be organized at Empark Grand Hotel, Guiyang. However, lower budget hotels are available around the area. Please check [cstrip.com](http://cstrip.com) or any other online booking services.

Please note that Conference Participants take individual responsibility for their stay during the conference. If you need help, please let us know.



Guiyang City, capital of Guizhou Province, is located in the southwest of China, on the eastern side of the Yungui Plateau. Guiyang is one of China's Spring Cities like Kunming. The climate is often mild and moist, neither extremely hot nor very cold. Spring, summer and autumn are the best seasons for visiting Guiyang. A great number of attractive sights can be found here, the Hongfeng Lake (Red Maple Lake), Huaxi Park and an abundance of historical relics of the Ming and Qing dynasties, such as the Jiaxiu Tower, Wenchang Pavilion, Yangming Cave and the Qingyan Ancient Town. Of all these scenic spots, Huang-guo-shu Scenic Spot is the most famous one. It is composed of over ten ground and underground waterfalls, Tianxing Park and the Aquatic Stone Forest. The Huang-guo-shu Waterfall is the center of this scenic spot. It is the biggest in Asia, and really a spectacular view.



# **www.jveconferences.com**

For more information, please visit: [www.jveconferences.com](http://www.jveconferences.com)

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