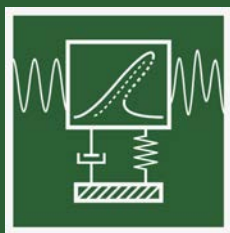


The 42nd International JVE Conference

Shanghai, China
October 19-21, 2019



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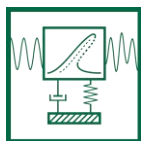
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The 42nd International JVE Conference

Industrial Engineering Problems and Solutions

October 19-21, 2019 in Shanghai, China



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The 42nd International JVE Conference will be held Shanghai, 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 order to further promote the Vibroengineering and its applications to the aerospace, automobile, energy and other industries. The Conference is organized by **JVE International** in partnership of **Hohai University, Jinan University, Shanghai Jiao Tong University** and **Jiangxi University of Science and Technology**.

The main theme of the conference focuses on (but not limited to):

Industrial Engineering Problems and Solutions

General Topics of the Conference:

- Materials and Measurements in Engineering
- Mathematical Models in Engineering
- Acoustics, Noise Control and Engineering Applications
- Mechanical Vibrations and Applications
- Fault Diagnosis Based on Vibration Signal Analysis
- Vibration Generation and Control
- Seismic Engineering and Applications
- Modal Analysis and Applications
- Vibration in Transportation Engineering
- Flow-induced Structural Vibrations
- Biomechanics and Biomedical Engineering
- Chaos, Non-linear Dynamics and Applications
- Dynamics and Oscillations in Electrical and Electronics Engineering
- Fractional Dynamics and Applications
- System Dynamics in Manufacturing System Modelling
- Dynamics of Smart and Functionally Graded Materials

Internationally renowned invited speakers and contributing authors from all over the world will present the latest advances in the area of Vibroengineering. This conference will feature a broad range of high-level technical presentations including invited distinguished experts. The conference will provide an opportunity to communicate your recent research advances, exchange ideas in innovative engineering technologies, meet old friends and make new business partners in the area of Vibroengineering. With your participation, this Conference will prove to be an exciting scientific event, a fruitful opportunity to promote scientific research and technological development of Vibroengineering and its applications.

With your participation, this conference will prove to be a very exciting event, a fruitful opportunity, to promote scientific research and technological development of vibration engineering and its applications.

All papers presented at JVE Conferences are published as short Conference papers in **Vibroengineering Procedia**. Conference papers published in **Vibroengineering Procedia** are indexed in EI Compendex, Scopus, Inspec, Gale Cengage, EBSCO, Semantic Scholar, Google Scholar, CNKI Scholar, cnpLINKer and Ulrich's Periodicals Directory.

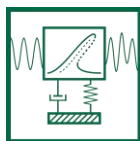


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The authors of best papers presented at the Conference will be invited to prepare the extended version of their papers (10-20 pages) which will be considered for publication in **Journal of Vibroengineering** (indexed in Web of Science, EI Compendex, EBSCO, Gale Cengage, Inspec, and more), **Journal of Measurements in Engineering** (indexed in Web of Science, EI Compendex, EBSCO, Gale Cengage, Inspec and more) and **Journal of Mathematical Models in Engineering** (indexed in EBSCO, Gale Cengage, DOAJ, Semantic Scholar, BASE, Ulric's Periodicals Directory and more).

The Conference Venue is at:
Pullman Shanghai Skyway,
#15 Da Pu Road, Huang Pu District,
Shanghai 200023, P. R. China

On behalf of the Organizing Committee, we would like to welcome the delegates to the 42nd International JVE Conference. We hope that you would enjoy the conference and find the program of the Conference exciting. We look forward to meeting you in October 2019 in Shanghai.



Chairs:

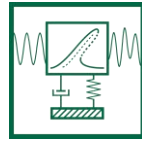
Prof. Maosen Cao Hohai University, China
Prof. Minvydas Ragulskis JVE International, Lithuania

International Scientific Committee Members:

Dong Wang Shanghai Jiao Tong University, China
Prof. Congdong Li Jinan University, China
Prof. Ting Qu Jinan University, China
Prof. Guoquan Huang Hong Kong University, Hong Kong

Organizing Committee:

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V. Veikutis Lithuanian University of Health Sciences, Lithuania
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V. Volkovas Kaunas University of Technology, Lithuania
J. Wallaschek Leibniz University Hannover, Germany
Mao Yuxin Zhejiang Gongshang University, China
M. Zakrzhevsky Riga Technical University, Latvia



Conference Program

Day 1: October 19

	Arrival of delegates and speakers
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Day 2: October 20

Location: Room 47F VIP2

09:00-10:00	Registration
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Day 2: October 20

Location: Room 47F VIP2

	PLENARY SESSION Session Chairs: Prof. Minvydas Ragulskis and Prof. Maosen Cao
10:00-10:10	Conference Opening Ceremony
10:10-10:20	Welcome Speech: Minvydas Ragulskis . Vibroengineering – past, present and the future
10:20-10:40	Invited Keynote Lecture: Prof. Maosen Cao (Hohai University, China) Multiscale strain gradient and multiscale pseudo damage force for characterization of structural damage
10:40-11:00	Invited Keynote Lecture: Kjell Ahlin (Xielalin Consulting, Sweden) Three vibration case studies – lessons learned

Day 2: October 20

Location: Room 47F VIP2

11:00-11:30	Coffee Break
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Day 2: October 20

Location: Room 47F VIP2

PARALLEL SESSION A1 Session Chairs: Prof. Minvydas Ragulskis and Dr. Chen Liu	
11:30-11:45	Dongying Wang. Experimental study on ground vibration response in gun firing environment
11:45-12:00	Olegs Jakovlevs. Modal analysis application for the problem of gamma-ray spectrometers resolution improving
12:00-12:15	Qiang Lei. Study on dynamic characteristic of closed-cell aluminum foam
12:15-12:30	Renqiang Jiao. Improving ride comfort for vibratory roller utilizing semi-active hydraulic cab mounts with control optimization
12:30-12:45	Nan Zheng. Dynamic characteristics of aero-engine's rotor under large maneuvering flight
12:45-13:00	Longlong Li. Fault identification technology for gear tooth surface wear based on MPE method by MI and improved FNN algorithm
13:00-13:15	Junlong Ren. Research on vibration displacement test method for large-caliber artillery muzzle

Day 2: October 20

Location: Room 47F VIP3

PARALLEL SESSION A2 Session Chairs: Prof. Maosen Cao and Dr. Desheng Li	
11:30-11:45	Hejuan Chen. Acoustic vibration response and power generation characteristics of airborne acoustic generator system
11:45-12:00	Si Li. Predictions of input pinion floating on concentric face gear transmission static load sharing
12:00-12:15	Lijia Chen. Dynamics similarity design and verification of rotor system
12:15-12:30	Elhaj A. I. Ahmed. Linear forced-rotordynamics analysis for optimizing the performance factors of machine motorized spindle using design explorer method
12:30-12:45	Tiantian Mi. Development of test bench with airflow for resonator acoustic performance measurement
12:45-13:00	Wencong Fu. The control strength quantification analysis of outer pendulum rod for double inverted pendulum
13:00-13:15	Ganggang Sha. Vibration-based damage growth monitoring in beam-like structures

Day 2: October 20

Location: B1F Buffet Restaurant

13:15-14:15	Lunch
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Day 2: October 20

Location: Room 47F VIP2

PARALLEL SESSION B1 Session Chairs: Kjell Ahlin and Dr. Olegs Jakovlevs	
14:15-14:30	Desheng Li. Level set medical image segmentation aided by cooperative quantum particle optimization with Lévy flights
14:30-14:45	Qiang Lei. Study on penetration characteristics of honeycomb aluminum
14:45-15:00	Huanchao Lv. Construction of 12 DOFs spur gear coupling dynamic model
15:00-15:15	Can Gong. Structural-acoustic modeling and analysis of an engineering machinery cab in the mid-frequency range
15:15-15:30	Ziwei Zhou. Influence of mass unbalancing of three-cylinder engine on idle vibration based on powertrain model
15:30-15:45	Chen Liu. Safety evaluation method of bridge plate rubber bearing based on SVM

Day 2: October 20

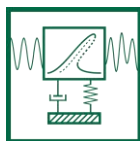
Location: Room 47F VIP3

PARALLEL SESSION B2 Session Chairs: Prof. Minvydas Ragulskis and Dr. Hejuan Chen	
14:15-14:30	Xuemin Liao. Research on the dynamic characteristics of the squeeze film damper of a certain aero-engine
14:30-14:45	Hanping Qiu. Study on multi-axis sine vibration test control techniques
14:45-15:00	Li Cui. Nonlinear crack assessment method in beams based on bispectrum-normal cloud model
15:00-15:15	Qingyang Wei. Damage detection in sluice hoist beams subject to excitation at resonance frequency band based on local primary frequency
15:15-15:30	Deng Tongfa. Experimental determination on the critical angle of seismic incidence of curved bridge
15:30-15:45	Mareks Mežitis. On the issue of acceleration of the compensating mass in an automatic balancing device with a horizontal axis of rotation

Day 2: October 20

Location: Room 47F VIP2

15:45-16:00	Conference closing ceremony
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Hohai University is a research university in Nanjing. The university's main focus is the research and study of coastal engineering, hydraulic engineering, water resources, ocean engineering and it primarily educates engineering subjects, with coordinated development of engineering, science, economics, management, arts and law. It is part of Project 211 (a development initiative by the Chinese government involving over 100 key universities) and has set up a graduate school. It is also a Chinese Ministry of Education Double First Class Discipline University, with Double First Class status in certain disciplines.



暨南大學
JINAN UNIVERSITY

Jinan University is one of the oldest universities established on China tracing back to the Qing dynasty (1644–1911).

Jinan University was founded in 1906 in Nanjing, whose mission is to spread Chinese learning and culture from North to South, and from China overseas. It is the first university in China to recruit foreign students, and is currently a Chinese university with the largest number of international students.

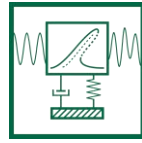


上海交通大學
SHANGHAI JIAO TONG UNIVERSITY

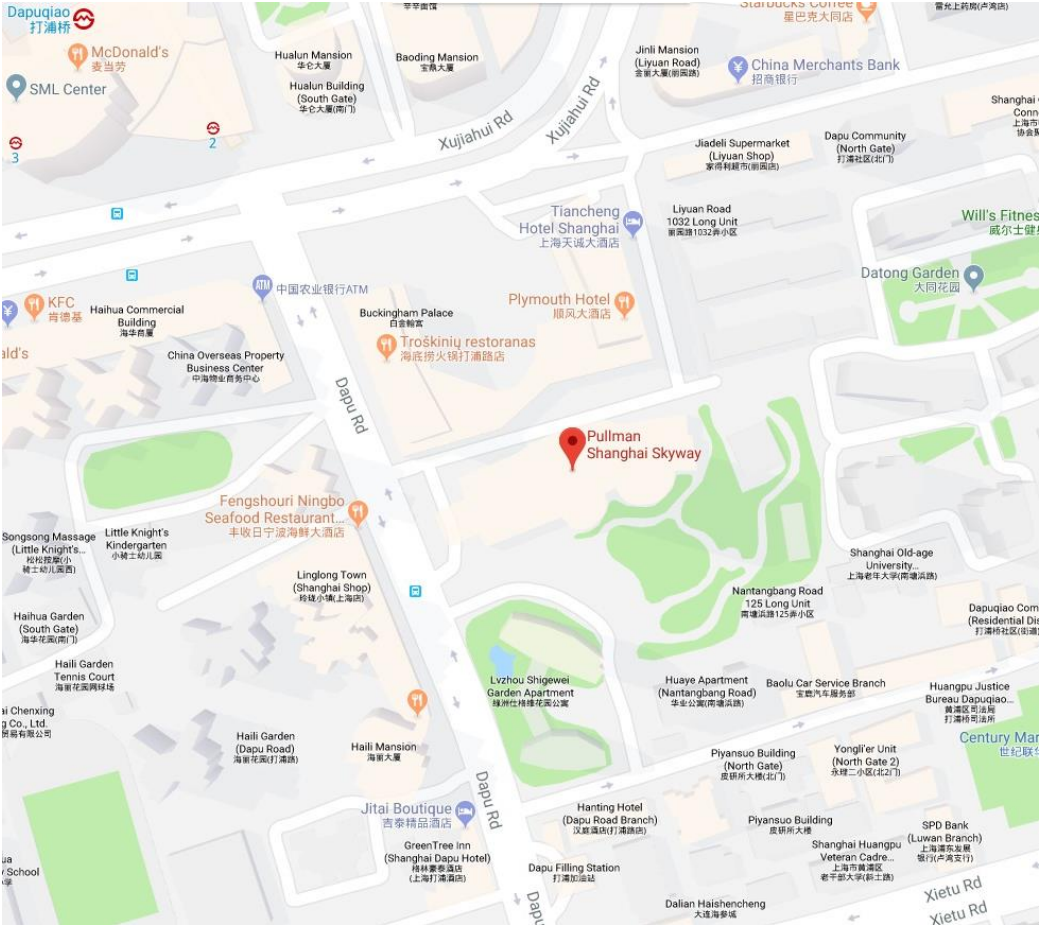
Shanghai Jiao Tong University (SJTU) is a major research university in Shanghai. Established in 1896 as Nanyang Public School by an imperial edict issued by the Guangxu Emperor, it has been referred to as "The MIT of the East" since the 1930s. It is renowned as one of the oldest, most prestigious and selective universities in China. Shanghai Jiao Tong is a C9 League university and a Chinese Ministry of Education Class A Double First Class University.



Jiangxi University of Science and Technology (JUST), formerly Southern Institute of Metallurgy, was established in 1958. On June 6, 2004, ratified by the State Education Commission, it was renamed as Jiangxi University of Science and Technology. It was initially subordinated to the former State Metallurgical Ministry and subsequently to the former China National Nonferrous Metals Industry Corporation (CNNC). Since September 1998, the university has been under the jurisdiction of both the Central government and the Jiangxi Provincial government, mainly under the administration of the latter



Conference Location



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P.R. China

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