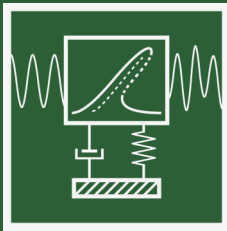


The 33rd International Conference on VIBROENGINEERING

Zittau, Germany
September 24-26th, 2018



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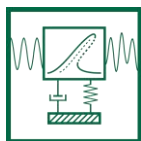
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The 33rd International Conference on VIBROENGINEERING

Vibration and Acoustics: Challenges in Mechanical Engineering

24-26th September 2018, Zittau, Germany



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The 33rd International Conference on VIBROENGINEERING will be held during 24-26th of September 2018 in Zittau, Germany. 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 with **Hochschule Zittau University of Applied Sciences**.

The main theme of the conference focuses on (but not limited to):
Vibration and Acoustics: Challenges in Mechanical Engineering.

General Topics of the Conference:

- Acoustics, Noise Control and Engineering Applications
- Chaos, Nonlinear Dynamics and Applications
- Fault Diagnosis Based on Vibration Signal Analysis
- Flow Induced Structural Vibrations
- Fractional Dynamics and Applications
- Mechanical Vibrations and Applications
- Modal Analysis and Applications
- Oscillations in Biomedical Engineering
- Oscillations in Electrical Engineering
- Seismic Engineering and Applications
- Vibration Generation and Control
- Vibration in Transportation Engineering

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 VIBROENGINEERING 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, Google Scholar and CNKI Scholar.

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,

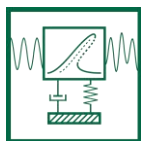


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Inspec and DOAJ), Journal of Measurements in Engineering (indexed in Web of Science, EI Compendex, EBSCO, Gale Cengage and Inspec) and Journal of Mathematical Models in Engineering (indexed in EBSCO, Gale Cengage).

The Conference Venue is at the main building University campus of Hochschule Zittau/Görlitz. Theodor- Körner- Allee 16, Building Z IV, Rooms 1.01 and 1.02
DE-02763 Zittau, Germany

On behalf of the Organizing Committee, we would like to welcome the delegates to the 33rd International Conference on VIBROENGINEERING. We hope that you would enjoy the conference and find the program of the Conference exciting. We look forward to meeting you in September 2018 in Zittau.



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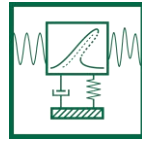
Chair:

Dr. **Martin Sturm**

Hochschule Zittau/Görlitz, Germany

Organizing Committee:

T. Ragulskis	JVE International, Lithuania
V. Babitsky	Loughborough University, UK
M. Bayat	Roudehen Branch, Islamic Azad University, Iran
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M. S. Cao	Hohai University, China
Lu Chen	Beihang University, China
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J. Duhovnik	University of Ljubljana, Slovenia
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W. H. Hsieh	National Formosa University, Taiwan, R. O. C.
V. Lyalin	Izhevsk State Technical University, Russia
R. Maskeliūnas	Vilnius Gediminas Technical University, Lithuania
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V. Veikutis	Lithuanian University of Health Sciences, Lithuania
J. Viba	Riga Technical University, Latvia
V. Volkovas	Kaunas University of Technology, Lithuania
J. Wallaschek	Leibniz University Hannover, Germany
Mao Yuxin	Zhejiang Gongshang University, China



Conference Program

Day 1: September 24

Location: Building Z IV 1st Floor, HSZG

13:00-15:00	Registration
15:00-16:30	Guided tour through selected Laboratories of the faculties Electrical Engineering and Mechanical Engineering
16:30-18:00	Possibility for casual knowledge share and discussion on possible collaborations

Day 1: September 24

Location: Restaurant “Alter Sack”

20:00	Small welcome dinner in Restaurant “Alter Sack”
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Day 2: September 25

Location: Building Z IV, HSZG

09:00-09:30	Registration
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Day 2: September 25

Location: Conference Room 1.01, Building Z IV, HSZG

	PLENARY SESSION Session Chairs: Tautvydas Ragulskis and Dr. Martin Sturm
09:30-09:45	Conference Opening Ceremony
09:45-10:00	Welcome Speech: Tautvydas Ragulskis . Vibroengineering – past, present and the future
10:00-10:20	Invited Keynote Lecture: Vassilis Kappatos , (University of Southern Denmark, Denmark) Acoustic Emission: a tool for damage and fault detection in wind turbines



10:20-10:40	Invited Keynote Lecture: Martin Sturm , (Hochschule Zittau/Görlitz, Germany) Modification of the motion characteristics of a one-mass linear vibratory conveyor
10:40-11:00	Invited Keynote Lecture: Giedrius Janušas , (Kaunas University of Technology, Lithuania) Methodology for identification of liquid concentration in the periodic microstructures applying numerical-experimental laser interferometric methods

Day 2: September 25

Location: Building Z IV, HSZG

11:00-11:30	Coffee Break
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Day 2: September 25

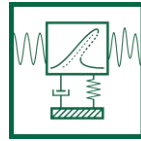
Location: Conference Room 1.01, Building Z IV, HSZG

	PARALLEL SESSION A1 Session Chairs: Dr. Giedrius Janušas and Dr. Gillich Gilbert-Rainer
11:30-11:45	Sara Salman Hassan Al-maeni . FE analysis and experimental determination of a shaft deflection under three-point loading
11:45-12:00	Jens Strobel . Influences on dynamic behavior of sliding chain conveyors
12:00-12:15	Shu Xu . Rolling bearing fault diagnosis based on EWT and ELM
12:15-12:30	Byoungwook Min . Scour depth around multiple piles for current and wave

Day 2: September 25

Location: Conference Room 1.02, Building Z IV, HSZG

	PARALLEL SESSION A2 Session Chairs: Dr. Cristian Tufisi and Dr. Rafal Burdzik
11:30-11:45	Shigeki Toyama . Development of deep-sea drone by spherical ultrasonic motor
11:45-12:00	Comlan Houngan . Measurement of the acoustic absorption coefficient of some local building materials for residential buildings using the Kundt tube method
12:00-12:15	Soji Shimono . Position error estimation of the underwater coordinate measurement machine using artificial neural network



12:15-12:30	Xue Liu. State assessment for bearing rotor static unbalance based on Welch-PSD and SAE
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Day 2: September 25 **Location: Conference Room 1.01, Building Z IV, HSZG**

12:30-13:00	Welcome speech of Zittau's mayor
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Day 2: September 25 **Location: Building Z IV, HSZG**

13:00-13:45	Lunch
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Day 2: September 25 **Location: Conference Room 1.01, Building Z IV, HSZG**

	PARALLEL SESSION B1 Session Chairs: Dr. Martin Sturm and Prof. Shigeki Toyama
13:45-14:00	Yu Chen. Centrifugal pump fault detection based on SWT and SVM
14:00-14:15	Raj Arjun S. I. Mode based frequency behaviour of a cracked beam
14:15-14:30	Toshitake Araie. Study of the chewing assistance mechanism in powered robotic dentures
14:30-14:45	Andris Martinovs. Influence of rubber ageing on damping capacity of rubber vibration absorber
14:45-15:00	Xingliu Zhang. Fault diagnosis of gearbox based on the nonlinear output frequency response functions and PNN
15:00-15:15	Bogdan Sorin Laurentiu. Study on the effect of the friction coefficient on the response of structures isolated with friction pendulums
15:15-15:30	Coffee Break
15:30-15:45	Gillich Gilbert-Rainer. A procedure for an accurate estimation of the natural frequencies of structures
15:45-16:00	Pavan Suswaram. Formulation of effective stiffness for predicting natural frequency of cracked beams
16:00-16:15	Shiyang Li. Vibration test method of nonlinear normal mode
16:15-16:30	Pawel Slowiński. Dependence of damage to the running surface of the railway rail on the vibroacoustic signal of a passing passenger train
16:30-16:45	Kamil Rehak. Determination of transmission error in spur gear by numerical approach
16:45-17:00	Rudolf Martonka. Compared transmission of vibrations on a car seat - human, Dummy



Day 2: September 25

Location: Conference Room 1.02, Building Z IV, HSZG

PARALLEL SESSION B2	
Session Chairs: Dr. Comlan Houngan and Dr. Sara Salman Hassan Al-maeni	
13:45-14:00	Cristian Tufisi. Numerical study on complex shaped cracks in cantilever beams concerning frequency and stiffness changes
14:00-14:15	Filip Pachla. The impact of the passenger train speed on the comfort of humans in a building close to the railway
14:15-14:30	Tong Zhang. Degradation assessment and trend prediction of rolling bearing based on MD-ESN
14:30-14:45	Lukasz Konieczny. Analysis of noise inside bus of hybrid bus vehicles
14:45-15:00	M. C. Srividya Mathematical modelling for dynamic analysis of cracked L-shape beam
15:00-15:15	Jacek Wodecki. Application of principal component analysis of time-frequency representation for gearbox fault detection
15:15-15:30	Coffee Break
15:30-15:45	Justyna Hebda-Sobkowicz. Mobile based vibration monitoring and its application to road quality monitoring in deep underground mine
15:45-16:00	Rafal Burdzik. Research on rail vibration of passing trains
16:00-16:15	Jacek Wodecki. Informative frequency band identification method using bi-frequency map clustering for fault detection in rotating machines
16:15-16:30	Jan Warczek. Research of damping influence for the transmission of energy in multi-masses systems
16:30-16:45	Michal Juzek. An attempt to reduce the vibration of gearbox with non-parallel shaft axes by modifying the spur gear fixing method

Day 2: September 25

Location: Conference Room 1.01, Building Z IV, HSZG

CLOSING SESSION	
Session Chairs: Tautvydas Ragulskis and Dr. Martin Sturm	
17:00-17:15	

Day 2: September 25

Location: Restaurant "Dornspachhaus"

20:00	Gala-Dinner in Restaurant "Dornspachhaus"
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Day 3: September 26 **Location: Narrow Track Train Station, Bahnhofstraße 41, Zittau**

08:45-13:00

Excursion by narrow track steam train to Oybin monastery from/to Zittau railway station

Day 3: September 26 **Location: Conference Room 1.01, Building Z IV, HSZG**

13:30-14:00

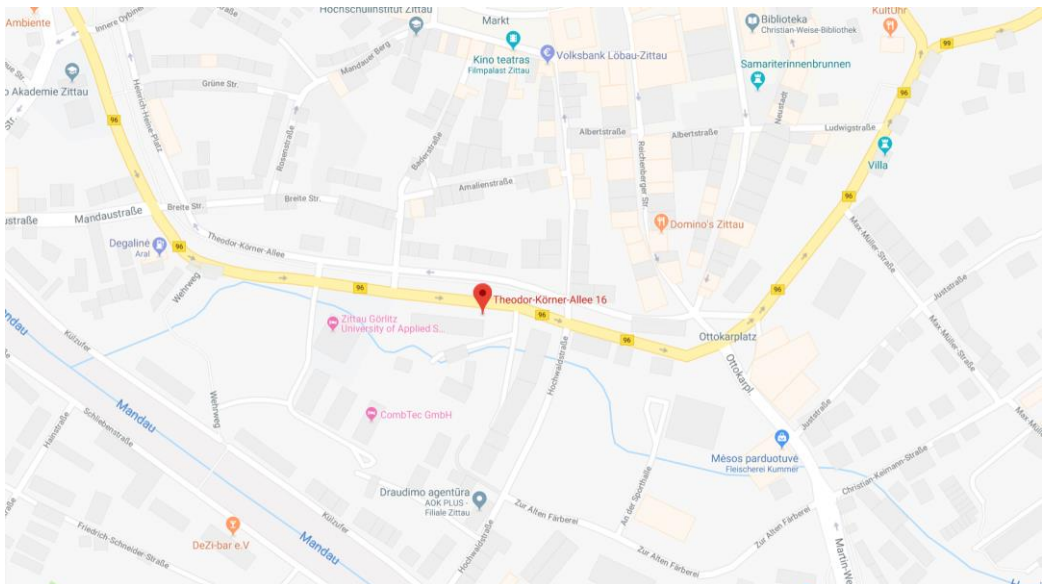
Conference closing ceremony, individual departure of the participants

Conference Location

Conference opening ceremony and conference sessions will be held in the main building of University campus of Hochschule Zittau/Görlitz. The address is:

Theodor- Körner- Allee 16, Building Z IV, Rooms 1.01 and 1.02

DE-02763 Zittau, Germany



Conference Partner:



**Hochschule
Zittau/Görlitz**
UNIVERSITY OF APPLIED SCIENCES