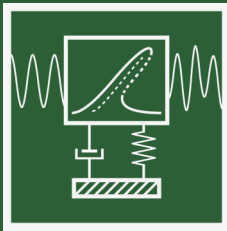


# The 35th International Conference on VIBROENGINEERING

Greater Noida (Delhi), India  
December 13-15th, 2018



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## **The 35th International Conference on VIBROENGINEERING**

**Dynamics, Noise, Vibration and Control**

**13-15th December 2018**

**Bennett University, Greater Noida (Delhi), India**



**The 35th International Conference on VIBROENGINEERING** will be held during 13-15th of December 2018 in Greater Noida (Delhi), India. 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 cooperation with **Department of Mechanical and Aerospace Engineering, Bennett University in India.**

The main theme of the conference focuses on (but not limited to):  
**Dynamics, Noise, Vibration and Control.**

**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, 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 Bennett University  
Plot No 8-11, Tech Zone II,  
Greater Noida (NCR Delhi), UP 201310, India

On behalf of the Organizing Committee, we would like to welcome the delegates to the 35th 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 Decmeber 2018 in Greater Noida (Delhi).



**Chairs:**

Prof. **Vinayak Ranjan** Bennett University, India  
Prof. **Minvydas Ragulskis** JVE International and Kaunas University of Technology, Lithuania

**Honorary Organizing Committee Members from Bennett University (India)**

|                              |  |
|------------------------------|--|
| Sri Vineet Jain              | Chancellor, Bennett University                                     |
| Raghunath K. Shevgaonkar     | Vice Chancellor, Bennett University                                |
| Suneel Tuli                  | Dean, School of Engineering and Applied Sciences                   |
| Deepak Garg                  | Head of the Department, Computer Science Engineering               |
| Rama Komaragiri              | Head of the Department, Electronics and Communications Engineering |
| Talakokula Visalakshi        | Head of the Department, Civil Engineering                          |
| Rajinder Singh Chauhan       | Head of the Department, Biotechnology                              |
| Krishna Thyagarajan          | Department of Physics  |
| K K Biswas                   | Department of Computer Science Engineering                         |
| Shivani Goel                 | Department of Computer Science Engineering                         |
| Sudhir Chandra               | Department of Electronics and Communications Engineering           |
| Mohammad Danish              | Mechanical and Aerospace Engineering                               |
| Deepali Atheaya              | Mechanical and Aerospace Engineering                               |
| Pawan Mishra                 | Mechanical and Aerospace Engineering                               |
| Baij Nath Singh              | Mechanical and Aerospace Engineering                               |
| Rajnish Tyagi                | Mechanical and Aerospace Engineering                               |
| Dr. Neelanchali Asija Bhalla | Mechanical and Aerospace Engineering                               |

**International Organizing Committee:**

|                  |   |
|------------------|---|
| V. Babitsky      | Loughborough University, UK                                   |
| M. Bayat         | Roudehen Branch, Islamic Azad University, Iran                |
| R. Burdzik       | Silesian University of Technology, Poland                     |
| M. S. Cao        | Hohai University, China                                       |
| Lu Chen          | Beihang University, China                                     |
| Z. Dabrowski     | Warsaw University of Technology, Poland                       |
| R. Ganiev        | Blagonravov Mechanical Engineering Research Institute, Russia |
| W. H. Hsieh      | National Formosa University, Taiwan, R. O. C.                 |
| V. Lyalin        | Izhevsk State Technical University, Russia                    |
| L. Qiu           | Nanjing University of Aeronautics and Astronautics, China     |
| S. Rakheja       | Concordia University, Canada                                  |
| M. A. F. Sanjuan | University Rey Juan Carlos, Spain                             |
| A. El Sinawi     | The Petroleum Institute, United Arab Emirates                 |
| G. Song          | University of Houston, United States of America               |
| S. Toyama        | Tokyo A&T University, Japan                                   |
| V. Veikutis      | Lithuanian University of Health Sciences, Lithuania           |



## Conference Program

**Day 1: December 13**

**Location: Bennett University**

|             |                     |
|-------------|---------------------|
| 09:30-10:30 | <b>Registration</b> |
|-------------|---------------------|

**Day 1: December 13**

**Location: Bennett University**

|             |  |
|-------------|--|
| 10:30-11:30 | <b>Conference Opening Ceremony</b>   |
|             | Welcome address by <b>Prof. Vinayak Ranjan</b><br><b>Inaugural address</b> by President of Bennett University <b>Mr. Sachin Jain</b> and Dean of School of Engineering and Applied Science <b>Prof. Suneet Tuli</b><br><br>Welcome Speech by <b>Prof. Minvydas Ragulskis</b> .<br>Vibroengineering – past, present and the future<br><br>Release of the conference proceedings: Vibroengineering PROCEEDIA |

**Day 1: December 13**

|             |                       |
|-------------|-----------------------|
| 11:30-12:30 | <b>High Tea Break</b> |
|-------------|-----------------------|

**Day 1: December 13**

**Location: Bennett University**

|             |  |
|-------------|--|
|             | <b>PLENARY SESSION</b><br>Session Chairs: <b>Prof. Minvydas Ragulskis</b> and <b>Prof. Vinayak Ranjan</b>  |
| 12:30-13:00 | Invited Keynote Lecture:<br><b>Prof. Subhash Rakheja</b> , (Concordia University, Montreal, QC, Canada)<br><br>Human responses to whole-body vehicular vibration: characterization and biodynamic modeling |



|             |  |
|-------------|--|
| 13:00-13:30 | <p>Invited Keynote Lecture:<br/><b>Prof. Rajiv V. Dubey</b>, (Professor and Chair, Department of Mechanical Engineering Director, Center for Assistive, Rehabilitation &amp; Robotics Technologies, University of South Florida, USA)</p> <p>A robotics based simulation tool for upper extremity prosthesis prescription and training</p> |
| 13:30-14:00 | <p>Invited Keynote Lecture:<br/><b>Prof. Rafal Burdzik</b>, (Silesian University of Technology, Faculty of Transport, Poland)</p> <p>Noise and vibration as sources of information in transport engineering</p>  |

**Day 1: December 13**

**Location: Bennett University**

|             |              |
|-------------|--------------|
| 14:00-15:00 | <b>Lunch</b> |
|-------------|--------------|

**Day 1: December 13**

**Location: Bennett University**

|             |   |
|-------------|---|
|             | <p>PLENARY SESSION<br/>Session Chairs: <b>Prof. Minvydas Ragulskis</b> and <b>Prof. Vinayak Ranjan</b></p>  |
| 15:00-15:30 | <p>Invited Keynote Lecture:<br/><b>Prof. S. S. Rao</b>, (Department of Mechanical and Aerospace Engineering, University of Miami, USA)</p> <p>Uncertainties in engineering analysis, design, and optimization: how to model them?</p>                       |
| 15:30-16:00 | <p>Invited Keynote Lecture:<br/><b>Prof. Vincentas Veikutis</b>, (Lithuanian University of Health Sciences, Lithuania)</p> <p>Problem of restenosis and thrombosis in cardiology: prospects for its solution and role of ultrasound based methodologies</p> |



**Day 1: December 13**

|             |                    |
|-------------|--------------------|
| 16:00-16:30 | Tea / Coffee Break |
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**Day 1: December 13**

|       |             |
|-------|-------------|
| 18:00 | Gala Dinner |
|-------|-------------|

**Day 2: December 14**

**Location: Bennett University**

|             |              |
|-------------|--------------|
| 09:00-10:00 | Registration |
|-------------|--------------|

**Day 2: December 14**

**Location: Bennett University**

| <b>ORAL SESSION 1</b><br>Session Chairs: <b>Prof. Minvydas Ragulskis and Prof. Rafał Burdzik</b> |  |
|--|--|
| 10:00-10:15  | <b>Seyed Abbas Mirjalili.</b> An investigation and study of the effect of configuration of the layers on the acoustic characteristics of nonwoven panels |
| 10:15-10:30  | <b>Ram Komawar.</b> Numerical investigation for influence of pre-twist on stress behavioral characteristics of curved blade                              |
| 10:30-10:45  | <b>Lei Zhu.</b> Modal analysis of liquid-filled pipeline under fluid-structure interaction by simulation and experiment methods                          |
| 10:45-11:00  | <b>Jingcheng Wang.</b> Numerical simulation of separation shock characteristics of a piston type explosive bolt  |
| 11:00-11:15  | <b>Vimal Chauhan.</b> Numerical study of shear thickening fluid with distinct particles dispersed in carrier fluid                                       |
| 11:15-11:30  | <b>Pawan Mishra.</b> Performance evaluation of Jaipur knee joint through kinematics gait symmetry with unilateral transfemoral Indian amputees           |
| 11:30-11:45  | <b>Ram Komawar.</b> Stress analysis of rectangular and square plates with various cutouts  |
| 11:45-12:00  | <b>Pooja Rawal.</b> Modelling and simulation of aerodynamic performance of Vortex generators for hatch back type cars                                    |

**Day 2: December 14**

**Location: Bennett University**

|             |       |
|-------------|-------|
| 12:00-13:00 | Lunch |
|-------------|-------|





**Day 2: December 14**

**Location: Bennett University**

| <b>ORAL SESSION 2</b><br>Session Chairs: <b>Prof. S. S. Rao</b> and <b>Prof. Rajiv V. Dubey</b> |  |
|---|--|
| 13:00-13:15   | <b>Madhusmita Mohanta.</b> Indian railway track analysis for displacement and vibration pattern estimation                           |
| 13:15-13:30   | <b>Ankush Jahagirdar.</b> Study of noise effect on bearing vibration signal based on statistical parameters                          |
| 13:30-13:45   | <b>Raj Kishor Das.</b> Vibration performances of MRE embedded sandwich beam: experimental study                                      |
| 13:45-14:00   | <b>Manish Chauhan.</b> Comparison of natural frequencies of isotropic plate using DSM with Wittrick-Williams algorithm               |
| 14:00-14:15   | <b>Rajnish Tyagi.</b> Estimation of wear rate in dual phase steel on the basis of the load sharing between constituent phases        |
| 14:15-14:30   | <b>Piyush Pratap Singh.</b> Analysis of free vibration of nano plate resting on Winkler foundation                                   |
| 14:30-14:45   | <b>Kaviraj Sengunthar.</b> The vibration health risk assessment on operators of different capacity dumpers at opencast mine in India |
| 14:45-15:00   | <b>Ram Komawar.</b> Free vibrational characteristics determination of plates with various cutouts                                    |

**Day 2: December 14**

|             |                           |
|-------------|---------------------------|
| 15:00-15:15 | <b>Tea / Coffee Break</b> |
|-------------|---------------------------|

**Day 2: December 14**

**Location: Bennett University**

| <b>PARA ORAL SESSION 3</b><br>Session Chairs: <b>Prof. Subhash Rakheja</b> and <b>Prof. Vincentas Veikutis</b> |  |
|--|--|
| 15:15-15:30  | <b>Srijna Singh.</b> Numerical simulation of Vortex-shedding from NACA4418 hydrofoil   |
| 15:30-15:45  | <b>Jain A. R. Tony Benedict.</b> An analytical study – dynamic behavior of the human hand to hold mechanical handle with and without coating   |
| 15:45-16:00  | <b>Abhijeet Chatterjee.</b> Mathematical modeling for estimation of acoustic radiation from clamped free tapered annular circular plate having different parabolically varying thickness |
| 16:00-16:15  | <b>Ahmad Ali Khan.</b> Vibration monitoring of rotor bearing system using MFS-lite   |
| 16:15-16:30  | <b>Amit Singh.</b> FEM simulation of three-point bending test of Inconel 718 coating on stainless steel substrate  |
| 16:30-16:45  | <b>Anup Kumar.</b> Effect of linear variation in density and circular variation in Poisson's ratio on time period of vibration of rectangular plate                                      |



16:45-17:00

**Miguel A. Casas-Ramos.** Optical accelerometer for seismic measurement

**Day 2: December 14**

**Location: Bennett University**

17:00-17:15

**CLOSING SESSION**  
Session Chairs: **Prof. Minvydas Ragulskis** and **Prof. Vinayak Ranjan**

**Day 3: December 15**

**City tour**

## Conference Location

The Conference Venue is at Bennett University  
Plot No 8-11, Tech Zone II,  
Greater Noida (NCR Delhi), UP 201310, India

