8<sup>th</sup> National Conference on Wave Mechanics and Vibrations (WMVC-2018),

> 26-28 November, 2018 [Registration form]

- 1. Name:
- 2. Male/Female:
- 3. Position:
- 4. Department:
- 5. Institution/Organization:
- 6. Address:
- 7. E-mail Address: Mobile No.: Telephone No.: Fax No.:
- 8. Educational background
- 9. Areas of research interests:
- 10. Are you contributing a paper? If Yes, title of the paper:

11.	Details of Accompanying Persons (if any):		
	Name:		
	Age:	M/F:	Relationship:

- 12. Dates of arrival and departure(tentative):
- 13. Any more information you like to state?

A/C Payee Cheque / DD Particulars:

Amount .....No.....

Date .....Bank .....

Accommodation Required: Yes / No

Date: Place: Signature of the Applicant

Forwarded through Head Dept/ Institution

### **DEPARTMENT OF MATHEMATICS**

The department imparts teaching of Mathematics in undergraduate engineering and post graduate courses (2 years and 5 years integrated) in Mathematics. In the M.Sc. (Mathematics) various applied and pure courses viz. Differential Equation, Algebra, Numerical Analysis, Operations-Research, Topology, Functional Analysis, Statistics, Fuzzy Set Theory, Fluid Dynamics, etc. are taught as core/special papers. The Department of Mathematics is also specialized in creating human resources in the area of Topology, Functional analysis, Artificial intelligence, Complex analysis, Differential Equations, Fluid Dynamics, Fuzzy Set Theory, Algebra, Number Theory, Numerical Analysis, Optimization, Statistics, etc.

#### **IMPORTANT DATES**

Receipt of Abstract (Revised): September 15, 2018. Receipt of DD: September 15, 2018. Conference duration: 26-28 November, 2018. Receipt of full length paper (Revised): Sept. 15, 2018. **Patron:** 

**Prof. Animesh Biswas.** (Director, NITRourkela) **Conference Director and Convener:** Prof. S. Chakraverty, Department of Mathematics, NIT Rourkela **Conference** Co-Director(s) and Co-Convener(s): Dr. P. Biswas, Executive Secretary, Von Karman Society, Jalpaiguri, West Bengal Prof. S.B. Karanjai, President, Von Karman Society, Jalpaiguri, West Bengal All communications including Abstracts and Full-length papers MUST be sent to: Prof. S Chakraverty, Conference Director and Organizing secretary, WMVC-2018, Dept. of Mathematics, NIT Rourkela, Odisha-769008 Email:wmvc2018@gmail.com, Ph:0661-246-2713(Off.), 09438135400 (M)

And

Dr. P Biswas, Co-Director and Co-Convener, WMVC-2018, Executive secretary, Von Karman Society, Jalpaiguri, West Bengal-735101, Email:p.biswas1943@gmail.com, Ph: (0)9832311181, (0)8900524407

# 8<sup>th</sup> National Conference on

Wave Mechanics and Vibrations

(WMVC -2018)

26 – 28 November, 2018

Prof. S. Chakraverty (Conference Director & Convener)

### Dr. P. Biswas and Prof. S.B. Karanjai

(Conference Co-Directors & Co-Convener)

# **ORGANIZED BY**

Department of Mathematics National Institute of Technology Rourkela

> Rourkela, Odisha-769008 http://www.nitrkl.ac.in/





in collaboration with Von Karman Society for Advanced Study and Research in Mathematical Sciences, Old Police Line, Jalpaiguri, W. B. <u>https://sites.google.com/site/vonkar</u> mansociety/



(Selected peer-reviewed papers will be published by Springer as a Scopus indexed proceedings book)

# INTRODUCTION

The Eighth National Conference on Wave Mechanics and Vibrations [8th WMVC- 2018] will be held from November 26-28,2018 at the National Institute of Technology Rourkela (NITR), Odisha. Academicians, Scientists and researchers working in this field are cordially invited to contribute papers for presentation and active participation in all deliberations of the conference.

#### National Scientific Committee:

Prof. A. Adimurthi, TIFR CAM, Bangalore. Prof. V. D. Sharma, IIT Bombay, Mumbai. Prof. D. K. Sinha, Ex Vice-Chancellor, Visva-Bharati University. Prof. C. S. Manohar, IISC Bangalore. Prof. D. Ghose, IISC Bangalore. Prof. D. Roy, BRNS, DAE, Mumbai. Dr. V. K. Gahalaut, Director, National Centre for Seismology, MoES, New Delhi Dr. S. K. Agrawal, Executive Director, BMTPC, New Delhi. Prof. B.N. Rao, IIT Madras, Prof. S. K. Deb, IIT Guwahati. Prof. A. Chattopadhyay, IIT-ISM, Dhanbad. Prof. B. Ishwar, BRA Bihar University, Muzaffarpur Dr. S. K. Panigrahi, CBRI, Roorkee. Prof. G. Khadekar, RTM Nagpur University, Nagpur Prof. Uma Basu, University of Calcutta (Retired). Prof. Susmita Sarkar, University of Calcutta. Prof. Vipin Tyagi, JUET, Raghogarh, Guna(MP). Prof. P.M. Reddy, Kakatiya University, Warangal. Prof. K. Ray, Amity University, Jaipur, Rahsthan. Prof. R. Chattoraj, BIT, Deoghar. Dr. M. Ghosh, Dinhata College, Dinhata. Dr. D.S. Hooda, GJUST, Hissar, Haryana. Dr.A. Raychoudhury, SMIT, Majitar, Sikkim. Dr. S. Navak, Amrita University, Coimbatore. Dr. K. K. Pradhan, PMEC, Berhampur. **ORGANIZING COMMITEE:** 

Prof. A. Kumar.Prof. B. Sahoo.Prof. J.MohapatraProf. M.R TripathyProf. S. ChakravertyProf. S.R PattanaikProf. D. ChoudhuriProf. G.K Panda,Prof. R. KarProf. S. Pradhan

Prof. D. Singh. Prof. S.S Ray Prof. B.K Ojha . Prof. K.C Pati, Prof. S. Kayal

# TENTATIVE TOPICS TO BE COVERED

1. Computational and analytical methods in vibration problems and wave mechanics

Dynamics of concrete and steel structures
Earthquake engineering, seismic vibrations and soil dynamics

4. Nonlinear dynamics

5. Under- water Shock Waves (Tsunami)

6. Vibration problems associated with nuclear power

reactors, aerospace and marine structures

7. Vibrations of transport systems

8. Random vibrations

9.Buckling and Vibrations of beams, Plates and Shells,

Thermal Vibrations and Thermal Shocks

10. Intelligent and nano materials in sound and vibrations

11. Theoretical Astrophysics, Celestial Mechanics and related recent development

12. Fractional/arbitrary order Differential Equations in Wave Mechanics and Vibrations

13. Uncertainty models in Wave Mechanics and Vibrations

14.Soft computing, artificial intelligence and uncertainty in Wave Mechanics and Vibrations

15. Robot dynamics

16. Any other problems related to Sound and Vibration

#### **REGISTRATION FEE**

Authors: Rs.3000/-

Accompanying Person: Rs.1000/-

#### Student Delegates: Rs.2000/-

For Late registration, additional amount of Rs. 500/-(in each of the category) is payable after September 15, 2018.

Registration Fee includes Inauguration, Participation in the Technical Sessions, Conference kits, Book of Abstracts of Papers, Conference Working Lunch, Dinner and Snacks for conference days only. The Registration Fee should be paid through a **Demand Draft**, drawn in favor of "**CONFERENCE NIT Rourkela**" Payable at NIT Campus Branch (IFSC: SBIN0002109) Rourkela. The completed registration form along with the DD should be sent to

Prof. S. Chakraverty (*Conference Director and Organizing Secretary WMVC-2018*) Department of Mathematics, NIT Rourkela, Odisha- 769008, India

Phone: 0661-2462713 (O)

# ACCOMMODATION

Some rooms have been reserved in the Institute Guest House to accommodate the outstation delegates from November 26-28, 2018 as per the charges mentioned in NITR web site and may be allotted on first come first serve basis <u>ON PAYMENT BASIS</u> only. They may also stay in nearby hotels if they so desire. The institute is situated at only 15 minutes driving distance from Rourkela railway station. For institute accommodation please contact the Convener well in advance. [Email: wmvc2018@gmail.com]

#### Submission of Abstracts and full-length papers:

Abstracts of papers neatly typed in A-4 size format in MSWord may be submitted <u>through E-mail only</u> on or before **September 15, 2018.** The full-length paper within 10-20 A-4 size pages in MSWord must be submitted by e-mail attachment before 15<sup>th</sup> September, 2018. (Full length paper if chosen for including in the book may also be submitted later in LATEX if the publisher wants so). Selected peer-reviewed papers will be published by Springer as a Scopus indexed proceedings book. However, book of Abstracts of papers shall be available during the Conference in the Registration Counter.