

International Conference
on
Advances in Dynamics, Vibration and Control
(ICADVC-2018)
6th -8th June 2018



Organizing Secretaries

Dr. Ranjan Kumar Mitra

Dr. NirmalBaranHui

Organized by:

National Institute of Technology Durgapur

West Bengal – 713 209

www.nitdgp.ac.in

PREAMBLE:

The aim of ICADVC-2018 is to bring together the international leading scientists of dynamics, vibration and control communities, both theoreticians and experimentalists, and to present their original research work of very high quality. The themes of the conference are intended to be broad enough so as to cover most of the directions in dynamics, vibration and control, promoting wide interactions among different academic disciplines. Mathematical theory, numerical simulation, physical experiments, engineering design, information technique, biological and financial studies, and other various applications are included in the main program of the conference. The conference will also provide an excellent opportunity to researchers from different fields of science and engineering, both experts and new comers, for sharing ideas, experience and progress, and exploring new directions and problems among specialists in these fascinating areas of science and technology in the 21st Century.

Both oral and poster presentations will be included in the conference program. Internationally leading experts will deliver keynote lectures at the ICADVC-2018. It is expected that 100 participators from various countries will attend the conference.

Topics:

1 Structural Dynamics

- Fluid structure interaction
- Structural health monitoring
- Vibration due to seismic, wind and blast loading
- Soil-structures vibrations
- System identification and inverse problems
- Active vibration control and smart structures
- Vibration control and isolation
- Identification and modal analysis

2 Mechanical Vibration and Control

- Free and excited vibrations in linear or nonlinear structures and machinery
- Collision or/and friction induced vibrations

- Random vibration and control
- Vibration and control of electro-mechanical systems
- Vibration and control of rotor systems

3 Dynamics and Control in Multi-body Systems

- Theory and computation of dynamics and control in multi-body systems
- Contact and impact problems in multi-body systems
- Numerical simulation and experiment research
- Engineering applications

4 Analytical Dynamics

- Hamiltonian dynamics and Birkhoffian dynamics
- Dynamics with holonomic and nonholonomic constraints
- Symmetry and conservation
- Mathematical methods in dynamics

5 Nonlinear Dynamics of Discrete and Continuous Systems

- General theory and numerical methods of bifurcation and chaos
- Bifurcation and chaos in Hamiltonian systems
- Dynamics of non-smooth systems
- Dynamics of time-delay systems
- Dynamics of stochastic systems
- Pattern formation and complex systems
- Control of bifurcations and chaos

- Synchronization of chaotic systems

6 Control Theory and Application

- Adaptive and optimal control
- Control of distributed parameter systems
- Nonlinear control
- Stochastic control
- Robust control
- Adaptive and optimal control
- Control of distributed parameter systems
- Nonlinear control

7 Dynamics in Engineering, Biology, Economy and Other Related Fields

- Neurodynamics
- Dynamics in ecology, epidemic and environmental sciences
- Dynamics of biological systems
- Dynamics and control of complex networks
- Economy and finance dynamics
- Dynamic signal processing, monitoring and diagnostics in engineering systems
- Dynamics and vibration of micro-systems and micro-structures
- Dynamics analysis in nano-systems
- Dynamics of railroad vehicles and transportation systems
- Spacecraft dynamics and control

TARGET PARTICIPANTS:

Faculty members, research scholars from academic institutes / universities / colleges / polytechnics and practicing engineers / scientists / researchers from industries and research and development organizations can submit papers and present / participate in the conference.

SAMPLETEMPLATE:

The paper should be written in English in A4 size not exceeding 8 pages. To download the template please [CLICK HERE](#).

IMPORTANT DATES:

- **Registration starts:** April 20, 2018
- **Registration ends:** May 10, 2018

PAPER SUBMISSION GUIDELINES:

- All accepted, registered and presented papers will be published as a proceeding by **All accepted papers will be published in the SCOPUS INDEXED JOURNAL. Journal Name: Key Engineering Materials, Trans Tech Publications Ltd, Reinhardstrasse 18, 8008 Zurich, Switzerland, <http://www.scientific.net>**. All papers should be submitted electronically using the following link: <https://easychair.org/conferences/?conf=ICADV18>. **In case you are unable to login Easychair site, you may send your abstract/paper directly to the following email addresses: nirmalhui@gmail.com, rkmitra.me@gmail.com.**
- Maximum page limit is eight. Over length charges is INR 1000 or USD 50 per page.
- All papers should be formatted properly according to the “Instructions for Authors” provided in the following link:
- A paper may be rejected without review if it violates the formatting guidelines. Do not use images for equations. Use of poor quality images may cause rejection of the paper.
- Please remove author name, mail ID, affiliation, acknowledgements or any other text that may disclose author's identity from that paper (PDF). However, the paper title and abstract should be intact. Provide every detail (including name, mail id and affiliation) correctly in the forms during submission.

- Once a paper is accepted, no author should be added or removed from the author list.

BOARDING & LODGING:

Boarding, lodging and travel expenses shall be borne by the participants. Limited shared accommodation may be available in the Institute Guest House on first come first served basis. Several good hotels are available in and around Durgapur. Participants may contact directly or through the Organizing Secretaries for accommodation in Hotels. No TA/DA will be paid to the participants by NIT Durgapur.

- Correctly in the forms during submission.
- Once a paper is accepted, no author should be added or removed from the author list.

REGISTRATION FEES:

<i>Category</i>	<i>Early Registration (On or Before April30, 2018)</i>	
	India (in INR)	Foreign (in USD)
Student/ Research Scholar	5000	200
Others	8000	300

REGISTRATION PROCEDURE:

Hard copy of filled in and duly signed registration form (registration forms are also available on institute website: www.nitdgp.ac.in) duly forwarded by Director/Principal/Dean/HOD of the Institute should be sent to the contact person on or before the schedule date along with Demand Draft / multicurrency cheque in favour of "ICADVC16" payable at SBI, NIT Durgapur branch or through on-line transfer (A/C Name: ICADVC 2016, Bank Account No. 34979035289, State Bank Of India, RE College Branch, Branch Code: 2108, IFSC Code: SBIN0002108, MICR Code: 713002204).

GUIDELINES:

1. Each registration (in any category) includes the following (tentative):

- A. Access to all tutorials, keynotes, invited talks, technical sessions, and cultural program.
 - B. Conference Kit
 - C. Lunches, Tea/Coffee and Snacks.
 - D. One banquet dinner.
2. Each paper must have one early registration (in any category) to be included in the proceedings. Note that late registration papers may not be published in conference proceedings.
 3. To be included in the proceedings, each author of a student paper must be a bona fide student or research scholar. Each student or research scholar author must provide a proof of being bona fide student or research scholar. Note that no academician or industrial person can be an author of a student paper.
 4. If an author has more than one paper in the same category, extra papers of the same category can be covered according to the following rules: INR 2000 or USD 100 per additional paper. However, one author can register for a maximum of two papers.
 - 5.6. Once a registration is done, it cannot be transferred to anyone else. Moreover, please note that no request to change the paper category will be entertained.

VENUE:

Main Academic Building, National Institute of Technology Durgapur.

ABOUT THE INSTITUTE:

The National Institute of Technology Durgapur), was established by upgrading the Regional Engineering College, Durgapur by an Act of the Parliament in 2003 as an institute of national importance by the Govt. of India. It is a premier Technological Institution with deemed university status fully funded by the Government of India and is administered by an autonomous Board of Governors.

The Institute awards B. Tech., M.C.A., M.Sc., M.B.A., M. Tech. and Ph.D. degrees to students after their successful completion of the specified courses. The Institute imparts education in the disciplines of Biotechnology, Chemical Engineering, Chemistry, Civil Engineering, Computer Science and Engineering, Electrical Engineering, Electronics and Communication Engineering, Environmental Science, Information Technology, Mechanical Engineering, Metallurgical and Materials Engineering, Mathematics, Management Studies and Physics. For more information you may please visit our institute website: http://www.nitdgp.ac.in/about_us.php

HOW TO REACH NIT DURGAPUR:

The Institute is located about 160 KMs north-west of Kolkata on the Howrah-Delhi Main Railway-Route and on the National Highway No. 2. It is located at a distance of 8 KMs from Durgapur Railway station via City centre near Gandhimore. There are number of AC/non-AC buses plying from city center bus stand to Kolkata through NH-2. It takes near about 3 h by bus/train to reach Durgapur from Kolkata. For more information you may please visit our institute website: http://www.nitdgp.ac.in/about_us.php

Previous Conference: ICADVC 2016

The First International Conference on Advances in Dynamics, Vibration and Control (ICADVC 2016) was held at NIT Durgapur during February 25-27, 2016. ICADVC 2016 received 129 full-length manuscripts to be considered for possible publication in the conference proceedings. All the papers were peer reviewed by two independent reviewers. Finally, 89 manuscripts have been included for presentation and publication in the conference proceedings. Additionally two invited talks and two guest lectures were delivered. Apart from these, some key note lectures on recent advances on related areas was also delivered by different distinguished speakers. We are grateful to Dr. Rana Roy, IEST Shibpur; Dr. Diptesh Das of NIT Durgapur and Dr. Pronab Roy of NIT Durgapur for accepting our invitation to deliver expert lectures. Proceedings was printed by Narosa Publishing House, New Delhi in the Global Market. It is available at http://www.narosa.com/books_display.asp?catgcode=978-81-8487-550-8

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REGISTRATION FORM

International Conference on Advances in Dynamics, Vibration and Control (ICADVC-2018), 6th - 8th June 2018

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1. Name of the Participant (in block letters):
 2. Designation & Affiliation:
 3. Male/Female: Mobile No. :
E-mail ID: Telephone No.:
 4. Address for correspondence:
 5. Please tick whichever is applicable:
 Faculty Member Research Scholar
 Industry Professional Other, please specify
 R&D Professional
 6. Accommodation needed (Yes/No):
If yes please mention:
(i) Date and time of arrival: (iii) Single/double room:
(ii) Date and time of departure: (iv) AC/Non AC bed room:
 7. Payment details:
Bank Name: Amount:
DD / Cheque No: Date:
 8. Vegetarian / Non-Vegetarian:

Place: _____
Date: _____ _____
Signature of the Applicant

Forwarded by Director/Principal/ Dean/ HOD with Seal

- **Photocopy of this form may also be used for registration.**
- **Regular students/research Scholars are requested to attach photo copy of their ID Card.**
- **Demand Draft / Cheque should be drawn in favour of "ICADVC16" payable at SBI, NIT Durgapur branch.**

Platinum Sponsor (Rs. 1.0 Lakh)

- ❖ The sponsoring organization will get complimentary registration for 3 delegates from the sponsoring organization.
- ❖ Home page of ICADVC-2018 will display company logo along with hyperlink to company's website.
- ❖ Company logo on the banner of ICADVC-2018
- ❖ Exhibition space.
- ❖ Full page colour advertisement in the printed abstract proceeding.
- ❖ Slide display of company's name and logo in the start of each session.
- ❖ Invitation for conference dinner to registered delegates.

Gold Sponsor (Rs. 75,000/-)

- ❖ The sponsoring organization will get complimentary registration for 2 delegates from the sponsoring organization.
- ❖ Home page of ICADVC-2018 will display company logo along with hyperlink to company's website.
- ❖ Exhibition space.
- ❖ Full page colour advertisement in the printed abstract proceeding.
- ❖ Invitation for conference dinner to registered delegates.

Silver Sponsor (Rs. 50,000/-)

- ❖ The sponsoring organization will get complimentary registration for 1 delegates from the sponsoring organization.
- ❖ Home page of ICADVC-2018 will display company logo along with hyperlink to company's website.

- ❖ Exhibition space.
- ❖ Invitation for conference dinner to registered delegates.

Other Sponsors

- ❖ Full page colour advertisement in the printed abstract proceedings: INR 30,000/-
- ❖ Half page colour advertisement in the printed abstract proceedings: INR 20,000/-
- ❖ Full page monochrome in the printed abstract proceedings: INR 15,000/-
- ❖ Half page monochrome in the printed abstract proceedings: INR 8,000/-

For further details, the potential sponsors of particular events/programs are requested to contact the organizing chairs, ICADVC-2018.

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