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THE INDIAN SOCIETY OF THEORETICAL AND APPLIED MECHANICS (ISTAM) INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR - 721 302, INDIA

ANNOUNCEMENT



60th CONGRESS OF THE INDIAN SOCIETY OF THEORETICAL AND APPLIED MECHANICS (An International Conference)

DECEMBER 16-19, 2015



In collaboration with
**MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY (MNIT)
JAIPUR, RAJASTHAN, PIN - 302017, INDIA**

ABOUT ISTAM

The Indian Society of Theoretical and Applied Mechanics (ISTAM) was established in 1955, with its Headquarters at IIT Kharagpur. Since then the Annual conventions of the Society have been held at various IITs, Universities, RECs, NITs, Engineering Colleges and reputed research establishments in different parts of the country. It has been attracting a large number of researchers not only from India but also from abroad. The Society has gone a long way in promoting interdisciplinary research in basic and advanced Applied Mechanics. The Society has specific philosophy to encourage young scientists in the form of awards. Papers submitted are peer reviewed and are published in the form of e-Proceedings. Abstracts of papers, that are presented in the Congress are published in the Souvenir volume. The 60th Congress of ISTAM (An International Conference) will be held at the Malaviya National Institute of Technology (MNIT) Jaipur. More details about the 60th Congress of ISTAM can be obtained from the website: <http://istam.iitkgp.ac.in>
ISTAM Office: istam@maths.iitkgp.ernet.in

OFFICIALS



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Prof. T. Amaranath



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Prof. P.V.S.N. Murthy



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Prof. Prasad K. Bhaskaran

MEMBERSHIP FEES

Life Membership Fee	: Inland ₹ 5000 Foreign £60 or US\$100
Corporate Membership Fee	: Inland ₹ 40000 Foreign US\$1000

ABOUT THE HOST INSTITUTION

The Malaviya National Institute of Technology (MNIT) Jaipur, India (abbreviated as MNIT Jaipur), a Central Government engineering institution, is one of the 30 National Institutes of Technologies, established by the Ministry of Human Resource Development (MHRD), Government of India. The Institute was established in the year 1963 with the name **Malaviya Regional Engineering College (MREC), Jaipur** as a joint venture

of the Government of India and the Government of Rajasthan. Subsequently, on June 26, 2002 the college was given the status of National Institute of Technology, and on 15 August 2007 proclaimed by Govt. of India a Institute of National Importance through Act of Parliament. Extending into an area of over 317 acres of lush greenery, the campus of the Institute is imaginatively laid-out with a picturesque landscape. It presents a spectacle of harmony in modern architecture, and natural beauty which enthralls and inspires. The residential campus of the institute accommodates a population of nearly 5600 including faculty members, staff and students. The campus provides all essential amenities for the community living into the campus like staff clubs, hospital, bank, post office, community centre, school, staff residences, gymnasium, playing fields, guest houses, 24 Hours internet connectivity and canteen etc.

The institute admits, through the Central Seat Allocation Board (CSAB) based on the performance in Joint Entrance Examination (JEE), nearly 900 students every year to its eight four-year undergraduate programmes leading to the Bachelor of Technology (B.Tech) degree and a five-year undergraduate course leading to the Bachelor of Architecture (B.Arch) degree. In addition to PhD, M.Sc. and MBA programmes, the institute also offers admission to its various postgraduate courses namely M.Tech and M.Plan and through Centralized Counseling for M.Tech/M.Arch and M.Plan (CCMT) based on Graduate Aptitude Test in Engineering (GATE). There are over 180 faculty members in various departments of the institutes engaged in teaching and research. Besides a state-of-the art Centre for Tribology, a Materials Research Center (MRC) has also been created in the institute in order to augment the infrastructure for advanced research and to attain excellence in innovative research in materials technology. In addition, an ultra-modern corporate office (to house Director's, Registrar's and Deans' offices, Administrative and Accounts sections, Training & Placement office, Academic Section), a Digital Library, the Vivekananda Lecture Complex (having 49 theatres of total 34,360 m² covered area and with seating capacity of about 5,500 students), a new Computer Center (that includes Data Center, with 60 TB of storage and Private Cloud using VMware Cloud Suite, and Language lab) and the Acharya Bhawan (with 198 quarters to accommodate the faculty members) are in final stage of their development.

DEPARTMENT OF MECHANICAL ENGINEERING

Mechanical Engineering Department started functioning in 1963 at the time of inception of the institute. The Department offers academic programmes at three levels, viz. undergraduate (i.e., UG), masters (i.e., PG) and doctorate (i.e., Ph.D). The current strengths at UG and PG levels are 425

and 120, respectively. At UG level, the department offers Bachelor of Technology (B.Tech.) degree in Mechanical Engineering; and at PG level, it offers four masters programmes leading to M.Tech. degree with specialization in Design Engineering, Production Engineering, Industrial Engineering and Thermal Engineering). Presently, the department is enriched by twenty-three faculty members, the majority of whom holds doctoral degrees, and they are associated with four broad categories of mechanical engineering, namely Design Engineering, Production Engineering, Industrial Engineering and Thermal Engineering. The department is very well equipped with various laboratories (at UG and PG levels), computational facilities and resources both in terms of hardware and software. Currently, department has more than 120 computing systems and workstations loaded with wide range of software products (such as Autodesk Inventor, Auto CAD, various modules of Hyperworks etc.) covering all areas of mechanical engineering. Quality teaching is what we aim at so as to stimulate intellectual curiosity, creativity and innovativeness. With a dedicated team consisting of highly qualified and experienced faculty members and technical staffs, the department strives to provide a experience of unique engineering education in mechanical engineering to the highly motivated students admitted through a rigorous process. The department has a excellent placement record and many of its alumni are holding top positions in industry, academia and government sector in both India and abroad. The main strength of department lies in its Ph.D. Programme with more than 70 research scholars pursuing the programme. In addition to teaching, faculty members are also engaged in research not only in their core areas but also in interdisciplinary areas. In addition, continuing education programmes in specialized areas are also offered on a regular basis for industry professionals and academic staffs of other institutes/colleges. The department has been recognized as a centre for Quality Improvement Programme (QIP) for Faculty members of polytechnic colleges.

PAPER / ABSTRACT SUBMISSION

Participants intending to present a paper in the congress should upload electronically the full paper or abstract depending on their choice consisting of the research aim, brief literature survey, problem formulation, solution methodology and significant conclusions in the format specified below. The full paper will be sent for review. Based on the reviewers recommendation, it will be published in the electronic proceedings of the congress. The last date for submitting the full paper is **15th October 2015**. However one can submit the abstract of the presentation online till **20th of November 2015**. All the abstracts and abstracts of the submitted full

papers will appear in the e-proceedings. In case of multiple authors, all the authors will be given the participation certificate only when all of them register and attend the congress. Otherwise, only the presenting author will be given the certificate.

ABSTRACT FORMAT

The abstract/full paper should be neatly typed in MS word in 12 point, Times New Roman font, prepared in the format given below: Heading: 60th CONGRESS OF ISTAM, Section Code, Title of the Paper, Author 1, Author2*, 1 Affiliation, 2 Affiliation (*: Corresponding author – e-mail address with mobile number);

Paper presentation sessions are broadly categorized into TWO Sections.

Section 1: Fluid Mechanics

- FM1 Atmospheric Sciences and Oceanography
- FM2 Biomechanics
- FM3 Boundary layers
- FM4 Compressible flows
- FM5 Computational Fluid Dynamics
- FM6 Drops, bubbles and multiphase flows
- FM7 Experimental methods in Fluid Mechanics
- FM8 Flow through porous media
- FM9 Geophysical and environmental Fluid Dynamics
- FM10 Low-Reynolds number flows
- FM11 Mathematical Modeling
- FM12 Statistical Mechanics
- FM13 Aerospace Dynamics
- FM14 Aerospace Propulsion

Section 2: Solid Mechanics

- SM1 Computational Solid Mechanics
- SM2 Control of structures
- SM3 Elasticity
- SM4 Experimental methods in Solid Mechanics
- SM5 Fracture and Crack
- SM6 Mechanics of composites
- SM7 Viscoelasticity and creep
- SM8 Wave propagation
- SM9 Aerospace Structures

YOUNG SCIENTIST AWARDS

Three medals, one each, in the sections: 1. Fluid Mechanics, 2. Solid Mechanics, and 3. Experimental Techniques / Computational Methods will be awarded to researchers of age 30 years or below for presenting outstanding research work at the Congress. The work is expected to be done independently by the researcher. The author who would like to be considered for the “Young Scientist” award are requested to mention it on the top of the full length paper by writing “PAPER FOR THE YOUNG SCIENTIST AWARD”. Award paper must be presented personally by the author in the Award session of the congress.

The contender should upload electronically the full paper consisting of the research aim, brief literature survey, problem formulation, solution methodology and significant conclusions by 15th October 2015. The papers received after this deadline will not be considered for presentation in the award session. These full papers will be sent for review and based on the reviewers recommendation, the authors will be permitted to make presentation and also, it will be published in the e-proceedings of the congress. The Award session for medals will be held only if sufficient number of papers in each category is received. Apart from the medal, awardees will be waived with the registration fee for the following congress.

REGISTRATION PROCEDURE

The registration must be done online at <http://istam.iitkgp.ac.in>. The registration will commence from 25th April 2015, full length papers will be received until 15th October 2015 and the abstracts will be received until 20th November 2015. Registration is complete only when the registration fee details are filled in the online registration form and the soft copy of the abstract is uploaded. Registration Fee can be paid either by DD or Bank Transfer. Abstract/Paper will be considered for presentation on realizing the registration fee.

(LAST DATE OF CLOSING THE ONLINE REGISTRATION PROCESS IS 15th OCTOBER 2015 FOR FULL LENGTH PAPERS AND 20TH NOVEMBER 2015 FOR ABSTRACTS)

Registration Fee

A.	Delegate from Educational Institutes and R & D Organizations	₹ 4,000.00
	(For Life Members)	₹ 3,000.00
B.	Delegates from Industry	₹ 5,000.00

C.	Student Delegates (For Life Members Also)	₹ 2,000.00 ₹ 2,000.00
D.	Academic Institution In Group (Up to 3 Delegates)	₹ 10,000.00
E.	Industries In Group (Up to 3 delegates)	₹ 13,000.00
F.	Delegates from Abroad SAARC & BRICS countries	US \$ 350 or UK £ 200 Indian ₹ 5000 / US \$ 250

Registration Fee can be paid via bank transfer / Demand Draft drawn in favor of ISTAM payable at State Bank of India (SBI), Kharagpur (Branch 0202). One may transfer the money in to the ISTAM account as per the following details. Account Name: ISTAM; Account Number: 10224336294; Bank: State Bank of India (SBI), IIT Kharagpur, Kharagpur 721302, India. Bank Codes: MICR Code- 721002103-002135-10; Swift Code- SBININBB339; NEFT(IFSC) Code- SBIN0000202. Please note that DELEGATE NAME SHOULD BE INCORPORATED IN THE BANK TRANSACTION.

Those who intend to participate in the Congress are requested to upload the completed Registration Form along with the full paper / abstract to : <http://istam.iitkgp.ac.in>

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