



ICTACEM

2021

**EIGHTH
INTERNATIONAL CONFERENCE
ON
THEORETICAL, APPLIED, COMPUTATIONAL
AND EXPERIMENTAL MECHANICS**

December 20-22, 2021



**DEPARTMENT OF AEROSPACE ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR, INDIA**

ICTACEM

Mechanics is an area common to many disciplines of science and engineering and has made tremendous strides in recent years. ICTACEM Conference is aimed at bringing together academicians and researchers working in various disciplines of mechanics to exchange views as well as to share knowledge between people from different parts of the globe.

The Conference will be held during December 20-22, 2021 at the Indian Institute of Technology, Kharagpur. It will be composed of plenary and technical sessions. A number of world renowned academicians and researchers will deliver keynote and invited addresses.

THEMES

The conference will focus on current research trends in all disciplines of mechanics including interdisciplinary areas. The topics will include (but not limited to):

1. **Fluid mechanics**

Experimental and Computational Aerodynamics, Experimental and Computational Fluid Mechanics, Seepage Flow, Computational Mechanics, Computational Methods, Shock-Boundary Layer Interactions, Active and Passive Flow Controls, Fluid-structure interaction, High Enthalpy Flows and Hypersonic Aerodynamics, biomechanics, Bio-inspired mechanics, Aeroacoustics, Hydrodynamics, Turbulence, LES etc.

2. **Solid mechanics and Dynamics**

AI and Expert Systems, Classical Mechanics, Composite Materials and Structure, Computational Mechanics, Computational Methods, Damage Mechanics, Fracture Mechanics, Functionally Graded Materials, Fuzzy Logic, Genetic Algorithms and Neural Networks, Modelling and Simulation, Nano mechanics, Nonlinear Mechanics, Optimization, Smart Materials, Structures and Systems, Structural Dynamics, Aeroelasticity, Terramechanics, Uncertainty Quantification etc.

3. **Flight mechanics, Control and Navigation**

Space/Orbital Mechanics, UAV, MAV, AI and Expert Systems, Fuzzy Logic, Genetic Algorithms and Neural Networks, Satellite-Based Navigation Systems, Optimal, Non-linear and Robust control.

4. **Propulsion and Combustion**

Turbomachinery, Aerodynamics of gas turbine components , Development and Testing of Gas Turbine Systems, Heat transfer, Gas turbine blade cooling , rotor dynamics, Performance Analysis and Advanced Cycles, Droplet and spray combustion, Laser ignition, Combustion spectroscopy, LES of combustion, Alternative fuels, Non-conventional energy, Nano-fuels, Technology Development in Solid/Liquid/Hybrid Rockets, etc Statistical Thermodynamics, Uncertainty Quantification

CALL FOR PAPERS

Authors are invited to **SUBMIT ONLINE** extended abstracts (maximum two pages) of their papers indicating clearly the summary of the aims, methods of analysis, results and conclusions. The official language for the conference is English. The final acceptance of a paper will be based on the review of the extended abstract and will be available as a list of Accepted Papers on the website. Instructions for preparation of **extended abstract** and the **full length paper** are available as separate links on the website (Adobe PDF Version).

NOTE

- Extended Abstracts should not exceed TWO pages as per the format available in the website.
- Full length paper is limited to 10-12 pages as per the format available in the website.

PROCEEDINGS

The E-proceedings along with the printed copies of accepted extended abstracts will be published and made available to all participants at the time of conference.

Research Poster/Visualization Session

One major attraction for ICTACEM-2021 is the Student Poster/Visualization Competition. Presenting a poster is an excellent opportunity to display research outside of a paper while still contributing to the continuing advancements in the specific research area. To be eligible to present a poster, the presenting author must have completed the research presented on the poster while seeking a degree at a university at an undergraduate (Bachelor's) or graduate level (Master's or PhD). Submit your research and contribute to the continuing conversation on advancements in specific research area.

IMPORTANT DATES

1. Opening of Extended abstract submission for paper and/or poster (Online): **April 01,2021**
2. Deadline for Preliminary Registration and Submission of Extended Abstract (online): **May 31, 2021.**
3. Extended Abstract Acceptance Notification: **July 31, 2021.**
4. Final (Full) Paper Submission (online): **September 30, 2021.**
5. Registration Deadline (payment of registration fees): **October 31, 2021.**
6. Conference dates: **December 20-22, 2021.**

Note: No accommodation is guaranteed after the registration deadline of October 31, 2021.

Major attractions of conference:

1. **Best Paper Awards**

The Best Paper Awards will be selected from the papers those are presented at the conference and submitted in the written paper format for the conference proceeding publications, and that are recommended or nominated for Best Paper award consideration by one of the Conference paper technical reviewers and session chair.

2. **Best Poster/Visualization Awards**

The Best Poster/ Visualization Awards will be selected from the posters those are presented at the conference and submitted in the written paper format for the conference proceeding publications, and that are recommended or nominated for Best Poster/Visualization award consideration by one of the Conference technical reviewers and session chair.

Good quality papers will be considered for the publications in well-known journals.

REGISTRATION INFORMATION

1. **ONLINE** : Conference Pre-Registration Form should be submitted online along with the electronic version of the extended abstract before May 31, 2021.

2. Conference Registration should be submitted online through <http://www.ictacem2021.org> before October 31, 2021 along with the Registration fees.

REGISTRATION FEES

The registration fees for the Conference are as follows

Delegates from SAARC Countries:	Before October 31,2021	After October 31,2021
Educational Institutions	Rs. 8000	Rs. 10000
Research Organisations/Industries	Rs. 10000	Rs. 12000
Students	Rs. 2000	Rs. 2500
Delegates from Other Countries:		
Educational/research Institutes	US\$ 450	US\$ 500

Students

US\$ 100

US\$ 125

The fee will cover a copy of the conference proceedings, inaugural reception, breakfast, lunches and tea/coffee services during session breaks. Registered participants will be invited to the conference banquet and other evening programs.

MODE OF PAYMENT

NEFT, RTGS, Cards

ACCOMMODATION

Accommodation will be arranged in the guest houses on request located within the Institute campus on single/sharing basis.

WEATHER

The climate at Kharagpur during December is dry and moderately cool. The temperature ranges between 8°C to 15 °C

I.I.T. Campus

The campus is located in the city of Kharagpur in an idyllic and green environment. I.I.T. Kharagpur is the oldest amongst all I.I.T.s and the campus is spread over a large area. Kharagpur is well connected to all major cities in India by road and rail. The International Airport at Kolkata is about 130 km away. Kharagpur and Kolkata are well connected and the total journey takes about two and a half hours.

All basic facilities like hospital, medicine stores, banks, post and telegraph offices, internet, telecom centres with ISD/STD/FAX, grocery stores, food stalls/canteens, swimming pools, lawn tennis courts, etc. are available within the Institute campus. The State Bank of India located within the campus provides foreign exchange facilities.

ICTACEM Secretariat

Patron	Prof. V K Tewari, Director, IIT Kharagpur
Mentor	Prof. M Sinha Head of the department, Aerospace Engineering
Chairman	Prof. K P Sinhamahapatra ictacem@aero.iitkgp.ac.in
Vice-Chairman	Prof. B N Singh ictacem@aero.iitkgp.ac.in
Secretary Fluid Mechanics	Prof. A Roy arnab@aero.iitkgp.ac.in
Joint Secretary Fluid Mechanics	Prof. S M Dash smdash@aero.iitkgp.ac.in
Secretary Flight Mechanics, Control and Navigation	Prof. M K Laha mlaha@aero.iitkgp.ac.in
Joint Secretary Flight Mechanics, Control and Navigation	Prof. S Bhattacharyya susmita@aero.iitkgp.ac.in
Secretary Propulsion & Combustion	Prof. A Ghosh amardip.ghosh@aero.iitkgp.ac.in
Joint Secretary Propulsion & Combustion	Prof. S Karmakar skarmakar@aero.iitkgp.ac.in Prof. C S Mistry csmistry@aero.iitkgp.ac.in

Secretary Solid Mechanics and Dynamics Prof. B N Singh
bnsingh@aero.iitkgp.ac.in

Joint Secretary Solid Mechanics and Dynamics Prof. M R Sunny
sunny@aero.iitkgp.ac.in

Secretary International relations & Sponsorship Prof. D K Maiti
dkmaiti@aero.iitkgp.ac.in

Joint Secretary International relations & Sponsorship Prof. P Jana
prasun@aero.iitkgp.ac.in

Secretary Media & publication Prof. S Saha
ssaha@aero.iitkgp.ac.in

Prof S Hota
sikhahota@aero.iitkgp.ac.in

Secretary Finance Prof. R Joarder
jratan@aero.iitkgp.ac.in

Prof. A Prakash
ap@aero.iitkgp.ac.in

Contact Information

Chairman, ICTACEM 2021
Department of Aerospace Engineering
Indian Institute of Technology, Kharagpur - 721 302, India

ICTACEM 2021 Homepage: <http://www.ictacem2021.org/>
Email: ictacem@aero.iitkgp.ernet.in

Commented [1]: Confirm with KPS

Department of Aerospace Engineering

