



International Union of Theoretical and Applied Mechanics



23rd INTERNATIONAL CONGRESS OF THEORETICAL AND APPLIED MECHANICS

Hosted by

The Chinese Society of Theoretical and Applied Mechanics (CSTAM)

Professor Haiyan Hu (President)

**19-24 August, 2012
Beijing, China**

**First Announcement
and
Call for Papers**

August 2011

<http://www.ictam2012.org>

General Information

The 23rd International Congress of Theoretical and Applied Mechanics (ICTAM2012) will be held in Beijing, China, from 19 to 24 August, 2012. The Congress is hosted by

The Chinese Society of Theoretical and Applied Mechanics (CSTAM)

The Congress venue is the China National Convention Center (CNCC), which is located in the heart of the Olympic Green of Beijing, adjacent to the National Stadium (Bird's Nest) and the National Aquatics Center (Water Cube).

President of ICTAM2012

Professor Yilong Bai

Secretary-General of ICTAM2012

Professor Jianxiang Wang

Executives of Local Organizing Committee

Professor Haiyan Hu (Treasurer)

Professor Daining Fang (Academic program)

Professor Youshi Hong (Promotion)

Professor Yazheng Yang (Administration)

Correspondence related to the Congress should be sent to:

ICTAM2012 Secretariat

The Chinese Society of Theoretical and Applied Mechanics
15 Beisihuanxi Road, Haidian District
Beijing 100190, China
Fax: +86 10 62559588
E-mail: ictam2012@cstam.org.cn

All information on ICTAM2012, including registration, submission of papers, transportation, accommodation etc., is available on the Congress website at:

<http://www.ictam2012.org>

Scientific Program

The scientific program starts and ends with Opening and Closing Lectures. The rest of the program consists of the G. K. Batchelor Prize Lecture, the Rodney Hill Prize Lecture, Sectional Lectures, Introductory Lectures of the mini-symposia, and contributed papers presented as lectures or seminars, mainly in mini-symposia and pre-nominated sessions. A detailed schedule for the Congress with all events included will be available at the Congress website.

Opening Lecturer

Shiyi Chen (China)

Closing Lecturer

Lambert Ben Freund (USA)

Sectional Lecturers

Kaushik Bhattacharya (USA)
René de Borst (Netherlands)
Michael Brenner (USA)
Alberto Corigliano (Italy)
Peter Eberhard (Germany)
Morteza Gharib (USA)
Raymond Goldstein (UK)
Robert Goldstein (Russia)
Yoichiro Matsumoto (Japan)
Parviz Moin (USA)
Alain Molinari (France)
Alan Needleman (USA)
Katepalli Sreenivasan (USA)
Pierre Suquet (France)
Grae Worster (UK)
Wei Yang (China)
Stéphane Zaleski (France)

Mini-Symposia and Chairs

Mechanical challenges in energy

Chairs: Kenneth Reifsnider (USA)
Jens Nørkær Sørensen (Denmark)
Dongxiao Zhang (China)

Mechanics of natural disasters

Chairs: Bernhard Schrefler (Italy)
Pavel Tkalich (Singapore)

Fluid-structure interactions in biological systems

Chairs: Gerhard Holzapfel (Austria)
Eric Lauga (USA)

Mechanics of transport in microfluidic devices

Chairs: Matthew Begley (USA)
Henrik Bruus (Denmark)

Dynamics and control of morphing structures

Chairs: Ephraim Garcia (USA)
Haiyan Hu (China)

Effects of small size scales in materials modeling

Chairs: Huajian Gao (USA)
Marc Geers (Netherlands)

Contributed Papers

Contributed papers are intended to cover all aspects of mechanics. A list of topics selected for pre-nominated sessions is given below, but papers on any topic in mechanics are welcome, and can be placed in the sessions General Fluid or Solid Mechanics. Invitations to present contributed papers will be made on the recommendation of the International Papers Committee, based on their review of submitted abstracts and short papers.

Pre-Nominated Sessions and Chairs

Fluid Mechanics

Biological fluid dynamics

Chairs: Silas Alben (USA), Tomas Bohr (Denmark)

Boundary layers

Chairs: Alfred Kluwick (Austria), Xiyun Lu (China)

Combustion and flames

Chairs: Sebastien Candel (France), Lixing Zhou (China)

Compressible flow

Chairs: Rainer Friedrich (Germany), Song Fu (China)

Convection

Chairs: John Patterson (Australia), Keqing Xia (China)

Drops, bubbles and multiphase flows

Chairs: Jacques Magnaudet (France), Roberto Zenit (Mexico)

Flow instability and transition

Chairs: Nadine Aubry (USA), Bruno Eckhardt (Germany)

Flow in thin films

Chairs: Seraphim Kalliadasis (UK), Gherhardt Ribatski (Brazil)

Geophysical and environmental fluid dynamics

Chairs: Henk Dijkstra (Netherlands), Grae Worster (UK)

Low Reynolds number flow

Chairs: Osamu Sano (Japan), Howard Stone (USA)

Magnetohydrodynamics

Chairs: Jean-Francois Pinton (France), Andre Thess (Germany)

Non-Newtonian and complex fluids

Chairs: Mike Graham (USA), Keqin Zhu (China)

Stirring and mixing

Chairs: Jianzhong Lin (China), Joerg Schumacher (Germany)

Turbulence

Chairs: Fazle Hussain (USA), Zhensu She (China)

Vortex dynamics

Chairs: Yasuhide Fukumoto (Japan), Slava Meleshko (Ukraine)

Waves in fluids

Chairs: Kendall Melville (USA), Nobumasa Sugimoto (Japan)

Solid Mechanics

Biomechanics and biomaterials

Chairs: Gang Bao (USA), James Goh (Singapore)

Contact and friction mechanics

Chairs: Irina Goryacheva (Russia), Hongwu Zhang (China)

Damage mechanics

Chairs: Romesh Batra (USA), Carl Herakovich (USA)

Elasticity

Chairs: Davide Bigoni (Italy), Reinhold Kienzler (Germany)

Fracture mechanics

Chairs: Francois Hild (France), Nikita Morozov (Russia)

Geophysics and geomechanics

Chairs: Felix Darve (France), Hans Muhlhaus (Australia)

Impact mechanics and wave propagation

Chairs: Krishnaswamy Ravi-Chandar (USA), Yulong Li (China)

Mechanics of multi-component materials and composites

Chairs: Shanyi Du (China), Anthony Waas (USA)

Mechanics of phase transformations

Chairs: Ferdinando Auricchio (Italy), Eliot Fried (Canada)

Mechatronics

Chairs: David Limebeer (UK), Heinz Ulbrich (Germany)

Multibody and vehicle dynamics

Chairs: Dieter Bestle (Germany), D.V. Singh (India)

Nanostructures and MEMS

Chairs: Ioannis Chasiotis (USA), Ole Sigmund (Denmark)

Plasticity, viscoplasticity and creep

Chairs: Christian Niordson (Denmark), George Voyiadjis (USA)

Stability of structures

Chairs: Timothy Healey (USA), Nicolas Triantafyllidis (France)

Structural optimization

Chairs: Tadeusz Burczynski (Poland), Erik Lund (Denmark)

Vibrations and control of structures

Chairs: Felix Chernousko (Russia), Marian Wiercigroch (UK)

Topics involving both fluid mechanics and solid mechanics

Acoustics

Chairs: Ricardo Musafir (Brazil), Yuesheng Wang (China)

Computational methods in mechanics

Chairs: Petros Koumoutsakos (Switzerland), Stefanie Reese (Germany)

Experimental methods in mechanics

Chairs: Arun Shukla (USA), Jerry Westerweel (Netherlands)

Chaos and pattern formation

Chairs: Dwight Barkley (UK), Lev Truskinovsky (France)

Electro- and magnetomechanical systems

Chairs: Yonggang Huang (USA), Zheng Zhong (China)

Fluid structure interactions

Chairs: Roger Ohayon (France), Yinlu Young (USA)

Smart materials

Chairs: Daining Fang (China), Robert McMeeking (USA)

Granular materials and flows

Chairs: Joe Goddard (USA), Detlef Lohse (Netherlands)

Mechanics of materials processing

Chairs: Francisco Chinesta (France), Gabor Stepan (Hungary)

Porous media

Chairs: Xikui Li (China), Dominique Salin (France)

Foams and cellular materials

Chairs: Andrew Kraynik (USA), Stelios Kyriakides (USA)

Education in mechanics

Chairs: Haiyan Hu (China), Keith Moffatt (UK)

Information on the two prize lectures will be announced in due course.

Call for Papers

Congress participants are encouraged to submit papers. Papers are sought for all topics. The official language of the Congress is English. The paper should present material that is novel and preferably unpublished at the time of the Congress. Prospective authors are asked to submit only one paper for consideration. No author will be invited to present more than one paper, with the exception that an author may present one paper on Education in Mechanics and another paper in one of the other sessions. Submission of an Abstract

and a Short Paper must be performed on the Congress website. Submission of a paper for consideration requires three steps:

1. Registration for Submission of Paper

All contributors are requested to register themselves using the *Paper On-Line Submission* function on the Congress website. The contributor is requested to input a valid email address, which will be used together with a password to log in to an account to submit the Abstract.

2. Submission of Abstract

The Abstract is limited to 150 words. It should not contain figures, drawings or extended references. The contributor can also choose whether he/she wishes to be considered for the IUTAM Bureau Prize, and can also choose the preferred presentation type (lecture/seminar presentation). Abstracts of all papers invited for presentation will be printed in the Abstract Book. After the submission is completed, the contributor will receive a confirmation email. Then the contributor can log in to the system to submit the Short Paper.

3. Submission of Short Paper

The Short Paper will be used for evaluation by the International Papers Committee. It must have the same title and list of authors as the Abstract. A Short Paper which does not match up with the submitted Abstract in terms of title or names of authors will not be considered. The Short Paper has to be prepared in PDF format and is limited to **TWO** A4 or 8½x11 inch pages maximum. A Short Paper which is more than two pages will be returned. It should be prepared as attractively as possible, much like a manuscript for journal submission. The text must be 10 point or larger in size. To submit the Short Paper, use the *Paper On-Line Submission* function on the Congress website at

<http://www.ictam2012.org>.

A template for preparing the Short Paper is provided on the website. If access to the website is not available, please request instructions by sending an e-mail to: ictam2012@cstam.org.cn.

Submissions will be accepted after September 1, 2011. The Abstract and Short Paper must reach the Secretariat no later than Monday, January 9, 2012.

Contributors will be informed of the decision of the International Papers Committee, and on the assignment of their paper to a session, before April 10, 2012. The author of a paper invited for presentation is expected to register and present the paper at the Congress.

Registration for Participation in Congress

Registration for participation in the Congress should be done using the *Registration for Participation* function of the Congress website. The registration fee, charged in Chinese Yuan (CNY), is as follows:

- ✚ Early bird registration (April 10-May 10, 2012): 4,600 CNY
- ✚ Regular registration (May 11-Aug. 12, 2012) : 5,000 CNY
- ✚ Late and on-site registration (Aug. 13-20, 2012): 5,500 CNY
- ✚ Student registration: 2,500 CNY
- ✚ Accompanying person: 750 CNY

The registration fee for a regular participant or a student covers admission to all congress sessions for 5 days, coffee breaks, an abstract book, a congress kit, the get-together party on Sunday, and the welcome reception on Monday. A student participant must provide a valid document showing his/her identity as a registered full-time student. The registration fee for an accompanying person covers a name badge, coffee breaks, the get-together party, and the welcome reception.

Registration fees will be refunded with a deduction of 750CNY if the Secretariat receives a written notification of cancellation before July 20, 2012. After this date, no refund will be made. Registration for participation and payment can be made on the Congress website. Logistics information, from visa application to local transportation, is provided on the Congress website. If there is a difficulty with the on-line registration and payment, please request instructions by sending an e-mail to: ictam2012@cstam.org.cn.

Publications

The Abstract Book and the ICTAM2012 CD-ROM with the Short Papers of accepted papers will be distributed to participants registered at the Congress. Proceedings will appear after the Congress. It will contain the text of the Opening and Closing Lectures, as well as the Batchelor and Hill Prize Lectures, Sectional Lectures and the Introductory Lectures of the Mini-Symposia; a list of all contributed papers presented at the Congress (but not the Abstracts); a list of

participants in ICTAM 2012; and a general report on the Congress. Authors of contributed papers presented at the Congress are encouraged to submit their work to appropriate journals for publication.

Support Grants

ICTAM2012 will have at its disposal limited funds to provide partial support to participants who are authors of an accepted presentation, but unable to secure adequate funds from their home countries. Prospective participants who wish to apply for financial assistance should request an application form from the Secretariat along with further instructions.

Accommodation

There are a number of hotels of different categories, close to CNNC, the Congress venue. Recommended hotels are listed on the website of the Congress. Participants should make their own reservations on the website of the Congress at <http://www.ictam2012.org>.

Information for Pre- and Post-Congress Tours

Information on travels, accommodation and additional tourist programs (pre- and post-conference tours) is available at the ICTAM2012 official Travel and Tourist Agency:

Head Office

China International Travel Service Limited
Rm 1110, CITS Bldg, 1 Dongdan Beidajie, Dongcheng District

Beijing 100005, China
Fax: +86 10 65222901
<http://www.cits.net>

Check list of important dates

Sept 1, 2011: Open of submission of paper
Jan 9, 2012: Deadline of submission of paper
Apr 10, 2012: Notification of acceptance of paper
Apr 10 - May 10, 2012: Early bird registration
May 11 - Aug 12, 2012: Regular registration
Aug 13 - Aug 20, 2012: Late and on-site registration
Aug 19 - Aug 24, 2012: ICTAM 2012