President’s Address
From the Office of the Secretary-General
IUTAM Summer Schools 2007, 2008 and 2009
Co-sponsored events 2007 and 2008

International Congress, XXII ICTAM, Adelaide, August 2008

IUTAM Home Page:

http://www.iutam.net
or: http://www.iutam.org or: http://www.iutam.info
President’s Address

Dear Colleagues,

As the Congress Committee and the local organizers implement IUTAM plans for ICTAM 22, to be held in Adelaide, Australia next year, one is reminded of the breadth of research activity that now comprises Theoretical and Applied Mechanics. The characteristics that have defined the field since its origins -- force, motion and deformation as integrated through Newton's laws, the rules of geometry and analysis, and experimental observation -- still provide the backbone for activities. However, the program that is emerging portends mechanics discussions incorporating such topics as geophysics, cell and developmental biology, materials science, statistical mechanics, manufacturing, instrumentation, nanotechnology and quantum mechanics, among others.

This expectation is also based, to some extent, on experience at ICTAM 21 in Warsaw. Many established colleagues at the core of the discipline were in attendance, of course. Noteworthy, from our point of view, is that many younger researchers also attended. Furthermore, the individual contributions made by this latter group, in the form of lectures and posters and discussion, added a vitality to the Congress that was palpable.

A decade ago, some members of the community harbored apprehension about the capacity of our discipline to sustain its vigor. The spirit evident at recent Congresses has largely allayed that concern. The reinvigoration is embodied in the young people with a sense of direction who are joining us. It is incumbent upon IUTAM, as the world-wide body representing the discipline, to encourage this participation and to provide a receptive forum in which this participation can enrich the field overall.

We look forward to a continuation of this process being in evidence in Adelaide next year.

Ben Freund
President of IUTAM
From the Office of the Secretary-General

IUTAM Report 2006:

The IUTAM Report 2006 has been published in May 2007. It contains among others the minutes of the General Assembly held in Providence (RI), USA, in August 2006.

Summer 2007 meetings of the Bureau and the XCCC:

The summer 2007 meetings of the Bureau and the XCCC will be held in Beijing, China, on 18 and 19 August.

Agenda items to be discussed at the Bureau meeting are:

- Matters concerning Adhering Organizations
- Matters concerning Affiliated Organizations
- Matters concerning IUTAM Working Parties
- Matters concerning ICSU
- Reports by the Treasurer and the Secretary-General
- Publication of Proceedings
- Follow-up actions of 2006 General Assembly meeting

Dick van Campen
Secretary-General of IUTAM
07-1 = GA 04-09  IUTAM Symposium on Relation of Shell, Plate, Beam and 3D Models
Place: Tbilisi, Georgia
Date: April 23 – 28, 2007
Chairman: Prof. G. Jaiani
Director, Tbilisi State University, I. Vekua Inst. Appl. Math., 2 University Str., 0143 Tbilisi, Georgia
Email: jaiani@viam.hepi.edu.ge

IUTAM Representative on Scientific Committee: Prof. D.H. van Campen

07-2 = GA 04-02  IUTAM Symposium on Recent Advances in Multiphase Flows: Numerical and Experimental
Place: Istanbul, Turkey
Date: June 11-14, 2007
Chairman: Prof. A. Acrivos
Levich Institute, Steinman Hall #1M, City College of CUNY, 140th Street & Convent Avenue, New York, NY 10031, USA, Email: acrivos@sci.ccny.cuny.edu
Co-Chairman: Prof. C.F. Delale

IUTAM Representative on Scientific Committee: Prof. L. van Wijngaarden

07-3 = GA 04-06  IUTAM Symposium on Unsteady Separated Flows and their Control
Place: Corfu, Greece
Date: June 18-22, 2007
Chairman: Dr. M. Braza
Unite Mixte de Recherche, Institut de Mecanique des Fluides de Toulouse, F-31400 Toulouse, France
Email: braza@imft.fr
Co-Chairman: Prof. K. Hourigan

IUTAM Representative on Scientific Committee: Prof. C. Cercignani
07-4 = GA 04-12 IUTAM Symposium on Scaling in Solid Mechanics

Place: Cardiff, UK
Date: June 25-29, 2007
Chairman: Prof. F.M. Borodich
Cardiff University, School of Engineering, Institute of Theoretical, Applied and Computational Mechanics, CF24 0YF Cardiff, UK
Email: BorodichFM@Cardiff.ac.uk

IUTAM Representative on Scientific Committee: Prof. J. Engelbrecht

07-5 = GA 04-08 IUTAM Symposium on Fluid-Structure Interaction in Ocean Engineering

Place: Hamburg-Harburg, Germany
Date: July 23-27, 2007
Chairman: Prof. E.J. Kreuzer
TU Hamburg-Harburg, Arbeitsbereich Mechanik und Meerestechnik, D-21071 Hamburg, Germany
Email: Kreuzer@tu-harburg.de

IUTAM Representative on Scientific Committee: Prof. N. Olhoff

07-6 = GA 04-07 IUTAM Symposium on Swelling and Shrinking of Porous Materials: From Colloid Science to Poro-Mechanics

Place: Petrópolis-RJ, Brazil
Date: August 6-10, 2007
Chairman: Prof. M.A. Murad
National Laboratory for Scientific Computing, 25651-075 Quitandinha, Petrópolis-RJ, Brazil
Email: murad@lncc.br

IUTAM Representative on Scientific Committee: Prof. D.H. van Campen
07-7 = GA 04-04  IUTAM Symposium on Advances in Micro- and Nanofluidics

Place: Dresden, Germany
Date: September 06 - 08, 2007
Chairman: Prof. N.A. Adams
TU Dresden, Institut für Strömungsmechanik, George-Bär-Strasse 3c, D-01062 Dresden, Germany
Email: nikolaus.adams@ism.mw.tu-dresden.de

IUTAM Representative on Scientific Committee: Prof. C. Cercignani

07-8 = GA 04-10  IUTAM Symposium on Mechanical Properties of Cellular Materials

Place: Cachan, France
Date: September 17-21, 2007
Chairman: Prof. H. Zhao
LMT-Cachan, 61, Avenue du Président Wilson, 94235 Cachan Cedex, France
Email: zhao@lmt.ens-cachan.fr
Co-Chairman: Prof. N.A. Fleck

IUTAM Representative on Scientific Committee: Prof. Z. Zheng

07-9 = GA 04-11  IUTAM Symposium on Multi-Scale Plasticity of Crystalline Materials

Place: Eindhoven, Netherlands
Date: November 5-9, 2007
Chairman: Prof. M.G.D. Geers
Eindhoven University of Technology, Dept.Mechanical Engineering, P.O. Box 513, 5600 MB Eindhoven, Neth.
Email: m.g.d.geers@tue.nl
Co-Chairman: Dr. E.P. Busso

IUTAM Representative on Scientific Committee: Prof. L.B. Freund
IUTAM Symposia 2008

**GA.06-15 (=S.12)**  IUTAM Symposium on Theoretical, Modelling and Computational Aspects of Inelastic Media

**Place:** Cape Town, South Africa  
**Date:** January 14-18, 2008  
**Chairman:** Prof. B.D. Reddy  
University of Cape Town, Centre for Research in Computational and Applied Mechanics, Private Bag X3, 7701 Rondebosch, South Africa, **email:** daya.reddy@uct.ac.za

IUTAM Representative on Scientific Committee: Prof. G. Maier

**GA.06-07 (=S.2)**  IUTAM Symposium on Modelling Nanomaterials and Nanosystems

**Place:** Aalborg, Denmark  
**Date:** May 19-22, 2008  
**Chairman:** Prof. R. Pyrz  
Aalborg University, Department of Mechanical Engineering, Pontoppidanstraede 101, 9200 Aalborg East, **email:** rp@ime.aau.dk

IUTAM Representative on Scientific Committee: Prof. L.B. Freund

**GA.06-12 (=S.7)**  IUTAM Symposium on Cellular, Molecular and Tissue Mechanics

**Place:** Cape God, New England coast, Massachusetts, USA  
**Date:** June 18-21, 2008  
**Chairman:** Dr. G. Krishna  
University of Michigan, Department of Mechanical Engineering, 2350 Hayward, Ann Arbor, MI 48109, USA, **email:** krishna@umich.edu
Co-Chairman: **Dr. E. Arruda**  
University of Michigan, Department of Mechanical Engineering, 2350 Hayward, Ann Arbor, MI 48109, USA, **email:** arruda@umich.edu

IUTAM Representative on Scientific Committee: Prof. J. Engelbrecht

**GA.06-14 (=S.11)**  
IUTAM Symposium on Variational Concepts with Applications to the Mechanics of Materials

**Place:** Bochum, Germany  
**Date:** September 22-26, 2008  
**Chairman:** Prof. K. Hackl  
Ruhr University Bochum, Lehrstuhlk fuer Allgemeine Mechanik, 44780 Bochum, Germany, **email:** Klaus.Hackl@rub.de

IUTAM Representative on Scientific Committee: Prof. M.P Bendsøe

**GA.06-01 (=F.1)**  
IUTAM Symposium on 150 Years of Vortex Dynamics

**Place:** Lyngby, Denmark  
**Date:** October 12-17, 2008  
**Chairman:** Prof. H. Aref  
Virginia Tech, College of Engineering, 333 Norris Hall (0217), VA 24061 Blacksburg, USA  
**Email:** haref@vt.edu

IUTAM Representative on Scientific Committee: Prof. H.K. Moffatt
GA.06-11 (=S.6)  IUTAM Symposium on Progress in the Theory and Numerics of Configurational Mechanics

Place: Kaiserslautern, Germany
Date: October 20-24, 2008
Chairman: Prof. P. Steinmann
University of Kaiserslautern, Applied Mechanics, Gottlieb-Daimler-Strasse, 67653 Kaiserslautern, Germany, email: ps@rhrk.uni-kl.de

IUTAM Representative on Scientific Committee: Prof. L.B. Freund

GA.06-02 (=F.2)  IUTAM Symposium on Turbulence in the Atmosphere and Oceans

Place: St. Andrews, UK
Date: 2008, no exact dates available yet
Chairman: Prof. D.G. Dritschel
University of St. Andrews, Department of Applied Mathematics, North Haugh, St Andrews KY16 9SS, UK, email: dgd@mcs.st-and.ac.uk

IUTAM Representative on Scientific Committee: Prof. H.K. Moffatt

GA.06-10 (=S.5)  IUTAM Symposium on Multi Functional Material Structures and Systems

Place: Bangalore, India
Date: 2008, no exact dates available yet
Chairman: Prof. B. Dattaguru
Indian Institute of Science, Bangalore, Department of Aerospace Engineering, Bangalore 560 012, India, email: datgur@aero.iisc.ernet.in

IUTAM Representative on Scientific Committee: Prof. J. Dual
IUTAM Symposia 2009

GA.06-08 (=S.3)  IUTAM Symposium on Recent Advances of Acoustic Waves in Solids

Place: Taipei, China-Taipei
Date: May 25-28, 2009
Chairman: Prof. T.-T. Wu
National Taiwan University, Institute of Applied Mechanics, Taipei 106, China-Taipei, email: wutt@ndt.iam.ntu.edu.tw

IUTAM Representative on Scientific Committee: Prof. J. Engelbrecht

GA.06-04 (=F.6)  IUTAM Symposium on Laminar-Turbulent Transition

Place: Stockholm, Sweden
Date: June 23-26, 2009
Chairman: Prof. D. Henningson
Royal Institute of Technology (KTH), Department of Mechanics, Osquars Backe 18, SE-10044 Stockholm, Sweden, email: henning@mech.kth.se

IUTAM Representative on Scientific Committee: Prof. P. Huerre

GA.06-03 (=F.3)  IUTAM Symposium on The Physics of Wall-bounded Turbulent Flows on Rough Walls

Place: Cambridge, UK
Date: July 07-09, 2009
Chairman: Dr. T.B. Nickels
University of Cambridge, Engineering Department, Trumpington Street, Cambridge CB2 1PZ, UK, email: tbn22@eng.cam.ac.uk

IUTAM Representative on Scientific Committee: Prof. A. Kluwick
GA.06-05 (=F/S.2) IUTAM-ISIMM Symposium on Mathematical Modeling and Physical Instances of Granular Flows

Place: Reggio Calabria, Italy
Date: 2009, no exact dates available yet
Chairman: Prof. J. Goddard
University of California at San Diego, Department of Mechanical and Aerospace Engineering, 9500 Gilman Drive, La Jolla, CA 92093-0411, USA, email: jgoddard@ucsd.edu

IUTAM Representative on Scientific Committee: Prof. C. Cercignani

GA.06-06 (=S.1) IUTAM Symposium on The Vibration Analysis of Structures with Uncertainties

Place: St. Petersburg, Russia
Date: 2009, no exact dates available yet
Chairman: Prof. A. Belyaev
Russian Academy of Sciences, Institute of Problems in Mechanical Engineering, VO, Bolshoi pr. 61, St. Petersburg 199178, Russia, email: belyaev@director.ipme.ru

Co-Chairman: Prof. R. Langley
University of Cambridge, Engineering Department, Cambridge CB2 1TN, UK, email: rsl21@cam.ac.uk

IUTAM Representative on Scientific Committee: Prof. D.H. van Campen

GA.06-09 (=S.4) IUTAM Symposium on Emerging Trends in Rotor Dynamics

Place: New Delhi, India
Date: 2009, no exact dates available yet
Chairman: Prof. K. Gupta
Indian Institute of Technology, Delhi, Mechanical Engineering Department, PO: IIT Haus Khas, New Delhi – 10016, India, email: kgupta@mech.iitd.ernet.in

IUTAM Representative on Scientific Committee: Prof. D.H. van Campen
GA.06-13 (=S.8)  IUTAM Symposium on Dynamic Fracture and Fragmentation

Place: Albuquerque, USA
Date: 2009, no exact dates available yet
Chairman: Prof. K. Ravi-Chandar
The University of Texas at Austin, Center for Mechanics of Solids, Structures and Materials, 210 E. 24th Street, WRW 117B, 1 University Station, C0600, Austin, Texas 78712-0235, USA, email: kravi@mail.utexas.edu

IUTAM Representative on Scientific Committee: Prof. L.B. (Ben) Freund

GA.06-16 (=S.14)  IUTAM Symposium on Multiscale Modelling of Fatigue, Damage and Fracture in Smart Materials Systems

Place: Freiberg, Germany
Date: 2009, no exact dates available yet
Chairman: Prof. M. Kuna
Technische Universitaet Bergakademie Freiberg, Institute of Mechanics and Fluid Dynamics, 09596 Freiberg, Germany, email: Meinhard.Kuna@imfd.tu-freiberg.de

IUTAM Representative on Scientific Committee: Prof. W. (Wei) Yang
IUTAM Summer Schools

2007  IUTAM - CISM Summer School on Bone Cell and Tissue Mechanics

Place: Udine, Italy
Date: July 16-20, 2007
Coordinator: Prof. Stephen Cowin, New York, NY, USA
            Email: scowin@earthlink.net

2008  IUTAM - CISM Summer School on Advanced Integral Equation Methods in Computational Mechanics

Place: Udine, Italy
Date: 2008, no exact dates available yet
Coordinator: Prof. M. (Marc) Bonnet

2009  IUTAM Summer School on Mechanics in Microfluidics

Place: Beijing, China
Date: 2009, no exact dates available yet
Coordinator: Prof. C.-M. (Chih-Ming) Ho
Co-sponsored events 2007

Fifth International Conference on Nonlinear Mechanics (ICNM-V)

Place: Shanghai, China  
Date: June 11-14, 2007  
Organizer: Prof. Z.-W. Zhou, Shanghai University, P.O. Box 189, 149 Yanchang Road, Shanghai, China  
Email: icnm5@mail.shu.edu.cn

Euler Equations: 250 Years On

Place: Aussois, France  
Date: June 18-23, 2007  
Organizer: Prof. U. Frisch, Nice, France  
Email: Uriel.Frisch@obs-nice.fr

International Summer School on Sea Ice

Place: Spitzbergen, Norway  
Date: July 2-13, 2007  
Organizer: Dr. Dirk Notz, Max-Planck Institute for Meteorology, Hamburg, Germany  
Email: notz@dkrz.de

Co-sponsored event 2008

First Latin American and Caribbean Congress of Theoretical and Applied Mechanics

Place: Trinidad and Tobago  
Date: February 6-7, 2008  
Organizer: Dr. Donna Comissiong, Trinidad and Tobago  
Email: dcomissiong@fsa.uwi.tt
XXII International Congress of 
Theoretical and Applied Mechanics 
24 – 30 August 2008, Adelaide, Australia


The International Congresses on Theoretical and Applied Mechanics (ICTAM), organized every four years by IUTAM, bring together scientists from all over the world for the purpose of exchanging information about recent developments in the field. Participation is unrestricted.


Below, the current state of affairs is given with respect to the opening and closing lectures, the mini symposia and the pre-nominated sessions.

Opening and Closing Lecturers

Opening Lecturer:  Professor J.W. Hutchinson (USA) 
Closing Lecturer:  Professor J. Imberger (Australia)

Mini Symposia

MS 01. Cohesive zone models of fracture and failure 
Co-chairs: 
Professor A. Carpintieri (Italy) 
Professor T. Siegmund (USA)

MS 02. Multi-component modeling on different scales 
Co-chairs: 
Professor H. Petryk (Poland) 
Professor F. Rose (Australia)
MS 03. Dynamics and control of walking  
Co-chairs:  
Professor F. Pfeiffer  
Professor H. Yabuno (Japan)

MS 04. Classical and quantum vortex rings  
Co-chairs:  
Professor H. Aref (USA)  
Professor C. Barenghi (UK)

MS 05 Fluid dynamics of animal swimming and flying  
Co-chairs:  
Professor J. Blake (UK)  
Dr. J. Wang (USA)

MS 06 Mechanics of colloidal Systems  
Co-chairs:  
Dr. D. Langevin (France)  
Professor P. Pusey (UK)

Pre-Nominated Sessions

<table>
<thead>
<tr>
<th>Fluid Mechanics</th>
<th>Solid Mechanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM1 Boundary Layers</td>
<td>SM1 Computational solid mechanics</td>
</tr>
<tr>
<td>FM2 Combustion and flames</td>
<td>SM2 Contact and friction mechanics</td>
</tr>
<tr>
<td>FM3 Complex and smart fluids</td>
<td>SM3 Control of structures</td>
</tr>
<tr>
<td>FM4 Compressible flow</td>
<td>SM4 Damage mechanics and fatigue</td>
</tr>
<tr>
<td>FM5 Computational fluid dynamics</td>
<td>SM5 Elasticity</td>
</tr>
<tr>
<td>FM6 Convection</td>
<td>SM6 Experimental methods in solid mechanics</td>
</tr>
<tr>
<td>FM7 Drops, bubbles and multiphase flows</td>
<td>SM7 Fracture and crack mechanics</td>
</tr>
<tr>
<td>FM8</td>
<td>Experimental methods in fluid mechanics</td>
</tr>
<tr>
<td>FM9</td>
<td>Flow Control</td>
</tr>
<tr>
<td>FM10</td>
<td>Flow instability and transition</td>
</tr>
<tr>
<td>FM11</td>
<td>Flow in thin films</td>
</tr>
<tr>
<td>FM12</td>
<td>Geophysical and environmental fluid dynamics</td>
</tr>
<tr>
<td>FM13</td>
<td>Low-Reynolds-number flow</td>
</tr>
<tr>
<td>FM14</td>
<td>Magnetohydrodynamics</td>
</tr>
<tr>
<td>FM15</td>
<td>Microfluidics</td>
</tr>
<tr>
<td>FM16</td>
<td>Solidification and crystal growth</td>
</tr>
<tr>
<td>FM17</td>
<td>Stirring and mixing</td>
</tr>
<tr>
<td>FM18</td>
<td>Turbulence</td>
</tr>
<tr>
<td>FM19</td>
<td>Waves</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Topics involving both fluid mechanics and solid mechanics**

| FSM1 | Acoustics          |
| FSM2 | Biomechanics       |
| FSM3 | Chaos and pattern formation in fluid and solid mechanics |
| FSM4 | Fluid-structure interaction |
| FSM5 | Granular materials and flows |
| FSM6 | Mechanics in microgravity |
| FSM7 | Mechanics of material processing |
| FSM8 | Porous media       |
| FSM9 | Education in mechanics |
Notice on IUTAM Symposia

The IUTAM Symposia are reserved to invited participants. Those wishing to participate in an IUTAM Symposium are therefore advised to please contact the Chairman of the Scientific Committee in due time in advance of the meeting.

As of January 1996 Springer Science and Business Media (named Kluwer Academic Publishers until 2004) is the official designated publisher of the refereed Proceedings of the IUTAM Symposia. (in rare cases the Proceedings are published as special issues of appropriate journals).

A listing of all the published volumes may be found on the IUTAM website (see http://www.iutam.net/iutam/Publications/index.php/3).

Prior to the publication by Springer, a short report of an IUTAM symposium may be found on the IUTAM website, as published in the IUTAM Annual Reports.
IUTAM is a member of ICSU

Notice on availability of IUTAM Newsletter

The IUTAM Newsletter is available (free of charge) to whom it concern upon request from the IUTAM Secretary-General.

IUTAM Home Page:

http://www.iutam.net

or: http://www.iutam.org or: http://www.iutam.info