



# NEWSLETTER

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**President's Address**

**From the Office of the Secretary-General**

**IUTAM Symposia 2008, 2009**

**IUTAM Summer Schools 2008 and 2009**

**International Congress, XXII ICTAM, Adelaide, August 2008**

**IUTAM Home Page:**

**<http://www.iutam.net>**

**or: <http://www.iutam.org> or: <http://www.iutam.info>**

**International Union of Theoretical and Applied Mechanics**

**N-2008-1**

**June 2008**



## **President's Address**

Dear Colleagues,

The approach of ICTAM 2008 in Adelaide in August prompts reflection on the role of IUTAM as an international scientific organization. The principal activities of IUTAM are organization of the quadrennial congresses, sponsorship of international symposia on a range of specific topics each year, and sponsorship of a regional summer school on a currently active topic each year. Why are these activities worthwhile and, consequently, deserving of our efforts? The motivation for these activities derives from the long term benefits of fostering free exchange of ideas across political boundaries, contributing to the development of capacity and standards for our discipline in developing regions, and promoting the application of mechanics in order to responsibly address societal needs.

The task for the General Assembly, as the central authority of IUTAM, is to collectively translate this philosophy into practice. There are several items on the agenda for the meeting of the GA in Adelaide which bear on our ability to contribute to world science in this way. One such item concerns the current relative weakness of the US dollar, the operating currency of IUTAM by statute, relative to other principal currencies in which expenses are incurred. Another item is the proposal to institute an Associate Member status to enable countries which do not yet meet all statutory requirements for regular membership to participate in Union activities. A third item is the election of a Bureau for the next four years which reflects the broad geographical distribution of the GA and which engages the interests of the younger members who embody the future of IUTAM; the Bureau serves as the executive arm of the General Assembly. We look forward to constructive debate leading up to considered decisions on these and other items before us in order to best serve the long term interests and stability of IUTAM.

Ben Freund  
President of IUTAM

## From the Office of the Secretary-General

### *IUTAM Report 2007:*

The IUTAM Report 2007 is going to be published at the end of June 2008.

### *Proposals for IUTAM Symposia and Summer Schools for 2010 and 2011:*

The call for proposals has resulted in 23 proposals for Symposia and 3 proposals for Summer Schools. These proposals are now subject to evaluation by the Symposia Panels and they will be discussed by the General Assembly in Adelaide.

### *Associate Membership*

The Committee on Associate Membership has composed a revised report in which the remarks made by the General Assembly in Providence (August 2006) are accounted for. The revised report is to be discussed by the General Assembly and its acceptance implies a change of the Statutes.

### *IUTAM Prizes for Fluid Mechanics and for Solid Mechanics*

Last year the Fluids Prize, named The Batchelor Prize for Fluid Mechanics, and the Solids Prize, named The Rodney Hill Prize in Solid Mechanics, were launched successfully. They will be awarded during ICTAM-2008 in Adelaide.

### *Application to 2008 ICSU Grants Programme awarded*

At the end of February 2008 IUTAM submitted an application to the 2008 ICSU Grants Programme, entitled: "Fluid Mechanics and Geophysics of Environmental Hazards". In May 2008 ICSU awarded the full application. The main activity to be financed by the ICSU Grant is a two-week Summer School in Singapore in the period April/May 2009 in co-operation with the sister scientific union IUGG. This Summer School is expected to increase the visibility of IUTAM in South-East Asia.

Dick van Campen  
Secretary-General of IUTAM

## IUTAM Symposia 2008

### **08-1 = GA.06-15 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](mailto:daya.reddy@uct.ac.za)

IUTAM Representative on Scientific Committee: Prof. G. Maier

### **08-2 = GA.06-07 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](mailto:rp@ime.aau.dk)

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

### **08-3 = GA.06-12 IUTAM Symposium on Cellular, Molecular and Tissue Mechanics**

Place: **Woods Hole, Cape God, 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](mailto: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

**08-4 = GA.06-14 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, Lehrstuhl fuer Allgemeine  
Mechanik, 44780 Bochum, Germany,  
**email:** Klaus.Hackl@rub.de

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

**08-5 = GA.06-01 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

**08-6 = GA.06-11 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

**08-7 = GA.06-02 IUTAM Symposium on Turbulence in the Atmosphere and Oceans**

Place: **Cambridge, UK**  
Date: **December 08-12, 2008**  
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

**08-8 = GA.06-10 IUTAM Symposium on Multi Functional Material Structures and Systems**

Place: **Bangalore, India**  
Date: **December 10-13, 2008**  
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.06-09 (=S.4) IUTAM Symposium on Emerging Trends in Rotor Dynamics**

Place: **New Delhi, India**  
Date: **2009, March 23-26, 2009**  
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](mailto:kgupta@mech.iitd.ernet.in)

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

### **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](mailto: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](mailto:henning@mech.kth.se)

IUTAM Representative on Scientific Committee: Prof. P. Huerre



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

Place: **St. Petersburg, Russia**  
Date: **July 06-10, 2009**  
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.06-03 (=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.06-16 (=S.14) IUTAM Symposium on Multiscale Modelling of Fatigue, Damage and Fracture in Smart Materials Systems**

Place: **Freiberg, Germany**  
Date: **September 01-04, 2009**  
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

**GA.06-05 (=F/S.2) IUTAM-ISIMM Symposium on Mathematical Modeling and Physical Instances of Granular Flows**

Place: **Reggio Calabria, Italy**  
Date: **September 13-17, 2009**  
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.06-13 (=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

**IUTAM Summer Schools 2008 and 2009****2008**                    **IUTAM - CISM Summer School on Advanced  
Integral Equation Methods in Computational  
Mechanics**Place:                    **Udine, Italy**Date:                    **July 07-11, 2008**Coordinator:           **Prof. M. (Marc) Bonnet**CNRS et Ecole Polytechnique, Laboratoire de  
Mecanique des Solides, 91128 Palaiseau cedex, France**Email:** bonnet@lms.polytechnique.fr**2009**                    **IUTAM Summer School on Mechanics in  
Microfluidics**Place:                    **Beijing, China**Date:                    **2009**, no exact dates available yetCoordinator:           **Prof. C.-M. (Chih-Ming) Ho**University of California, Los Angeles, School of  
Engineering and Applied Science, Los Angeles, CA  
90095-1597, USA**Email:** chihming@ucla.edu

**XXII International Congress of  
Theoretical and Applied Mechanics  
24 – 30 August 2008, Adelaide, Australia**

(Home Page, <http://ictam2008.adelaide.edu.au> )

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 final 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. Mechatronics*

Co-chairs:

Professor K. Hedrick (USA)

Professor H. Ulbrich (Germany)

*MS 04 Mechanics of colloidal Systems*

Co-chairs:

Dr. D. Langevin (France)

Professor P. Pusey (UK)

*MS 05. Classical and quantum vortex rings*

Co-chairs:

Professor H. Aref (USA)

Professor C. Barenghi (UK)

*MS 06 Fluid dynamics of animal swimming and flying*

Co-chairs:

Professor J. Blake (UK)

Dr. J. Wang (USA)

**Pre-Nominated Sessions****Fluid Mechanics**

- FM01** Boundary Layers
- FM02** Combustion and flames
- FM03** Complex and smart fluids
- FM04** Compressible flow
- FM05** Computational fluid dynamics
- FM06** Convection
- FM07** Drops, bubbles and multiphase flows

**Solid Mechanics**

- SM01** Computational solid mechanics
- SM02** Contact and friction mechanics
- SM03** Control of structures
- SM04** Damage mechanics and fatigue
- SM05** Elasticity
- SM06** Experimental methods in solid mechanics
- SM07** Fracture and crack mechanics

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<b>FM08</b>	Experimental methods in fluid mechanics	<b>SM08</b>	Geophysics and geomechanics
<b>FM09</b>	Flow Control	<b>SM09</b>	Impact and wave propagation
<b>FM10</b>	Flow instability and transition	<b>SM10</b>	Material instabilities
<b>FM11</b>	Flow in thin films	<b>SM11</b>	Mechanics of composites
<b>FM12</b>	Geophysical and environmental fluid dynamics	<b>SM12</b>	Mechanics of phase transitions (jointly with IACM)
<b>FM13</b>	Low-Reynolds-number flow		
<b>FM14</b>	Magneto hydrodynamics	<b>SM14</b>	Multibody and vehicle dynamics
<b>FM15</b>	Microfluidics	<b>SM15</b>	Nanostructures and MEMS
<b>FM16</b>	Microgravity fluid mechanics	<b>SM16</b>	Plasticity and viscoplasticity
<b>FM17</b>	Solification and crystal growth	<b>SM17</b>	Stability of structures
<b>FM18</b>	Stirring and mixing	<b>SM18</b>	Structural optimization
<b>FM19</b>	Turbulence	<b>SM19</b>	Structural vibrations
<b>FM20</b>	Waves	<b>SM20</b>	Viscoelasticity and creep
<b>FM21</b>	Foams		

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

<b>FSM01</b>	Acoustics
<b>FSM02</b>	Biomechanics
<b>FSM03</b>	Chaos and pattern formation in fluid and solid mechanics
<b>FSM04</b>	Fluid-structure interaction
<b>FSM05</b>	Granular materials and flows
<b>FSM06</b>	Mechanics of materials processing
<b>FSM07</b>	Porous media
<b>FSM08</b>	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.

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