



NEWSLETTER

President's Address

From the Office of the Secretary-General

IUTAM Symposia 2007, 2008, 2009

IUTAM Summer Schools 2007, 2008 and 2009

Co-sponsored events 2007 and 2008

International Congress, XXII ICTAM, Adelaide, August 2008

IUTAM Home Page:

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International Union of Theoretical and Applied Mechanics

N-2007-1

June 2007

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

IUTAM Symposia 2007**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.ccnyc.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 Poromechanics**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@Incc.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, Lehrstuhk 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:** rs121@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 Comossiong**, Trinidad and Tobago
Email: dcomissiong@fsa.uwi.tt

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

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

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.

**For further information see ICTAM Home Page,
<http://prandtl.maths.adelaide.edu.au/ictam2008/>**

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**Fluid Mechanics**

FM1	Boundary Layers
FM2	Combustion and flames
FM3	Complex and smart fluids
FM4	Compressible flow
FM5	Computational fluid dynamics
FM6	Convection
FM7	Drops, bubbles and multiphase flows

Solid Mechanics

SM1	Computational solid mechanics
SM2	Contact and friction mechanics
SM3	Control of structures
SM4	Damage mechanics and fatigue
SM5	Elasticity
SM6	Experimental methods in solid mechanics
SM7	Fracture and crack mechanics

FM8	Experimental methods in fluid mechanics	SM8	Geophysics and geomechanics
FM9	Flow Control	SM9	Impact and wave propagation
FM10	Flow instability and transition	SM10	Material instabilities
FM11	Flow in thin films	SM11	Mechanics of composites
FM12	Geophysical and environmental fluid dynamics	SM12	Mechanics of phase transformations (jointly with IACM)
FM13	Low-Reynolds-number flow	SM13	Mechatronics
FM14	Magneto hydrodynamics	SM14	Multibody and vehicle dynamic
FM15	Microfluidics	SM15	Nanostructures and MEMS
FM16	Solidification and crystal growth	SM16	Plasticity and viscoplasticity
FM17	Stirring and mixing	SM17	Stability of structures
FM18	Turbulence	SM18	Structural optimization
FM19	Waves	SM19	Structural vibrations
		SM20	Viscoelasticity and creep

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.

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