



NEWSLETTER

IUTAM Website Developments
IUTAM Working Parties
IUTAM Symposia 2003, 2004 and 2005
IUTAM Summer Schools 2003 and 2004
Co-sponsored event 2003

International Congress, XXI ICTAM, Warsaw, August 2004

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-2003-1 **May 2003**

IUTAM Website developments

As of 1 April 2003 the domain name iutam.org has moved to the IUTAM Secretariat. IUTAM is greatly indebted to Prof. Hassan Aref, Prof. Jim Phillips and their staff from UIUC for their support and help in enabling this transition. From now on, the IUTAM website can be reached directly at either of the following Internet addresses:

<http://www.iutam.net>

<http://www.iutam.org>

<http://www.iutam.info>

In the section on Organization of the IUTAM website new pages have been opened on Working Parties and Members-at-Large, while the page on General Assembly has been restructured, thereby distinguishing more clearly between voting members and observers.

In the section on Publications a new page has been opened on Newsletters.

The section on Events Calendars of the IUTAM website has been restructured to a considerable extent.

A new integrated Calendar of Upcoming Events has been opened of IUTAM and organizations linked to IUTAM. These latter organizations are mainly the Affiliated Organizations of IUTAM. In each of the Affiliated Organizations a contact person has been authorized to keep the information on the events of that organization up to date. The integrated Calendar of Upcoming Events contains information about Congresses, Symposia, Colloquia, Summer Schools, Co-Sponsored Events and General Assembly meetings.

The calendars on IUTAM symposia, IUTAM Summer Schools and IUTAM Co-Sponsored Events are also repeated on separate pages.

Finally, a direct link is provided to the Mechanics-on-Line Calendar, developed and maintained at UIUC under the responsibility of Prof. Hassan Aref.

Dick van Campen

IUTAM Working Parties

Based on the assessment of IUTAM, the General Assembly in Cambridge, UK (August 2002) agreed to establish nine Working Parties. A Working Party in a certain subfield of the mechanics is meant to structure the overlapping activities between IUTAM on the one hand and the relevant Affiliated Organizations and sister International Unions on the other. Also, Working Parties should identify important growth areas of the field.

More detailed background information on Working Parties, including their Terms of Reference, is given in the IUTAM Report on Working Parties, whose latest revision is dated March 2003. A pdf version of the report can be downloaded from the IUTAM website.

A listing of the Working Parties and their current membership is given below.

WP-1 : Non-Newtonian Fluid Mechanics and Rheology

Members: Prof. J. R. A. Pearson, UK (chair); Prof. L.G. Leal, USA;
Prof. D.V. Boger, Australia; Prof. R. Keunings, Belgium

WP-2 : Dynamical Systems and Mechatronics

Members: Prof. R. S. Sharp, UK (chair), Prof. F.L. Chernousko, Russia;
Prof. F. Pfeiffer, Germany; Prof. M. Tomizuka, USA

WP-3 : Mechanics of Materials

Members: Prof. S. R. Bodner, Israel (chair); Prof. C.T. Herakovich, USA;
Prof. T. Inoue, Japan; Prof. J.B. Leblond, France

WP-4 : Materials Processing

Members: Prof. R. Moreau, France (chair); Prof. R.M. McMeeking, USA;
Prof. S. Asai, Japan; Prof. C.W. Macosko, USA

WP-5 : Computational Fluid and Solid Mechanics

(this WP acts as link between IUTAM and IACM)

Members: Prof. E. R. de Arantes e Oliveira, Portugal (chair);
Prof. J. T. Oden , USA; Prof. T. Belytschko, USA;
Prof. Y.K. Cheung, China-Hong Kong;
Dr. S. R. Idelsohn, Argentina

WP-6 : Biomechanics

Members: Prof. D. Barthès-Biesel, France (chair);
Dr. G.A. Holzapfel, Austria; Prof. J.E. Bechtold, USA;
Prof. K. Tanishita, Japan

WP-7 : Nano- and Micro-Scale Phenomena in Mechanics

Members: Prof. W. Yang, China (chair); Dr. M.G. Worster, UK;
Prof. F. Ellyin, Canada; Prof. Y. Huang, USA

WP-8 : Geophysical and Environmental Mechanics

Membership: Yet to be decided

WP-9 : Education in Mechanics and Capacity Building

Members: Prof. B.L. Karihaloo, UK (chair); Prof. H. Aref, USA;
Prof. Y. Bai, China; Prof. M.H.A. Hassan, Sudan

IUTAM Symposia 2003

03-1 IUTAM Symposium on Mechanics of Physiochemical and Electromechanical Interactions in Porous Media

Place: **Eindhoven, The Netherlands**
Date: **May 18 - 23, 2003**
Chairman: **Dr. J.M. Huyghe**
Eindhoven University of Technology
Department of Mechanical Engineering
PO Box 513, 5600 MB Eindhoven, Netherlands
Fax: +31 40 2447355
Email: J.M.R.Huyghe@tue.nl

Co-Chairman: **Prof. S.C. Cowin**
The City University of New York, School of Engineering
New York Center for Biomedical Engineering
2166 Broadway, apartment 12D
New York, NY 10031-9198, USA
Fax: +1 212 650 8013
Email: scccc@cunyvm.cuny.edu

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

03-2 IUTAM Symposium on Integrated Modelling of Fully Coupled Fluid-Structure Interactions

Place: **Rutgers, N.J., USA**
Date: **June 2 - 6, 2003**
Chairman: **Prof. H. Benaroya**
Rutgers University
Department of Mech. and Aerospace Engineering
98 Brett Road
NJ 08854-8 Piscataway, USA
Fax: +1 732 445 3124
Email: benaroya@rci.rutgers.edu

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

03-3 IUTAM Symposium on Chaotic Dynamics and Control of Systems and Processes in Mechanics

Place: **Rome, Italy**
Date: **June 8 - 13, 2003**
Chairman: **Prof. G. Rega**
Universita di Roma La Sapienza
Dipartimento di Ingegneria Strutturale e Geotecnica
Via Antonio Gramsci 53
I 00197 Roma, Italy
Fax: +39 06 322 1449
Email: giuseppe.rega@uniroma1.it

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

03-4 IUTAM Symposium on Mesoscopic Dynamics of Fracture Process and Materials Strength

Place: **Osaka, Japan**
Date: **July 6 – July 11, 2003**
Chairman: **Prof. H. Kitagawa**
Osaka University, Graduate School of Engineering
Department of Adaptive Machine Systems
2-1 Yamada-oka, Suita
Osaka, 565-0871, Japan
Fax: +81 6 6879-7247
Email: kitagawa@ams.eng.osaka-u.ac.jp
Co-Chairman: **Prof. Y. Shibutani**
Osaka University, Graduate School of Engineering
Department of Mechanical Engineering and Systems
2-1 Yamada-Oka, Suita
Osaka, 565-0871, Japan
Fax: +81 6 6879-7247
Email: sicutani@mech.eng.osaka-u.ac.jp

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

03-5 IUTAM Symposium on Mechanics and Rheology of Aqueous Foam

Place: **Boston, USA**
Date: **October 6 – 9, 2003**
Chairman: **Prof. R.G. Holt**
Boston University
Dept. of Aerospace and Mechanical Engineering
110 Cummington St.
MA 02215 Boston, USA
Fax: +1 617 353 5866
Email: rgholt@bu.edu

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

IUTAM Symposia 2004

GA.02-11 IUTAM Symposium on Mechanics of Biological Tissue

Place: **Graz, Austria**
Date: **June 27-July 2, 2004**
Chairman: **Prof. G. Holzapfel**
Institute for Structural Analysis, Computational
Biomechanics, Schiesstattgasse 14/B, A-8010 Graz,
Austria
Email: gh@biomech.tu-graz.ac.at

Co-Chairman: **Prof. R.W. Ogden**
University of Glasgow, Department of Mathematics,
Glasgow G12 8QW, UK,
Email: rwo@maths.gla.ac.uk

IUTAM Representative on Scientific Committee: Prof. J. Engelbrecht

GA.02-04 IUTAM Symposium on Non-Uniqueness of Solutions to the Navier-Stokes Equations and their Connection with Laminar-Turbulent Transition

Place: **Manchester, UK**
Date: **August 9 – 11, 2004**
Chairman: **Prof. T. Mullin**
Manchester University, Department of Physics,
Manchester M13 9PL, UK
Email: tom@reynolds.ph.man.ac.uk

IUTAM Representative on Scientific Committee: Prof. W. Schiehlen

GA.02-01 IUTAM Symposium on Elementary Vortices and Coherent Structures: Significance in Turbulence Dynamics

Place: **Kyoto, Japan**
Date: **October 26-28, 2004**
Chairman: **Prof. S. Kida**
Theory and Computer Simulation Center, National
Institute for Fusion Science, Oroshi-cho 322-6, Toki,
509-5292, Japan
Email: Kida@toki.theory.nifs.ac.jp

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

GA.02-05 IUTAM Symposium on Laminar-Turbulent Transition

Place: **Bangalore, India**
Date: **December 3–17, 2004**
Chairman: **Dr. R. Govindarajan**
Jawaharlal Nehru Centre for Advanced Scientific
Research, Fluid Dynamics Unit, Jakkur, Bangalore 560
064, India
Email: rama@jncasr.ac.in

IUTAM Representative on Scientific Committee: Prof. R. Narasimha

GA.02-02 IUTAM Symposium on One Hundred Years of Boundary Layer Research

Place: **Göttingen, Germany**
Date: **no dates available yet**
Chairman: **Prof. G.E.A. Meier**
Institute of Aerodynamics and Flow, DLR Aerospace
Center, Bunsenstrasse 10, 37073 Göttingen, Germany
Email: g.e.a.meier@dlr.de

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

GA.02-06 IUTAM Symposium on Recent advances in Disperse Multiphase Flow Simulation

Place: **Urbana-Champaign, IL, USA**

Date: **no dates available yet**

Chairman: **Prof. S. Balachandar**

University of Illinois at Urbana-Champaign, Department of Theoretical and Applied Mechanics, 216 Talbot Lab, Urbana, IL 61801, USA

Email: s-bala@uiuc.edu

Co-Chairman: **Prof. A. Prosperetti**

Johns Hopkins University, Department of Mechanical Engineering, 122 Latrobe Hall, 34th & Charles Streets, Baltimore, MD 21218, USA,

Email: Prosperetti@jhu.edu

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

GA.02-07 IUTAM Symposium on Elastohydrodynamics of Rough Surfaces

Place: **Cardiff, UK**

Date: **no dates available yet**

Chairman: **Prof. R.W. Snidle**

Cardiff University, School of Engineering, Cardiff CF 24 0YF, UK

Email: snidler@cf.ac.uk

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

GA.02-12 IUTAM Symposium on Size effects on Material and Structural Behavior at Micron- and Nanometer-Scales

Place: **Hong Kong, China**
Date: **no dates available yet**
Chairman: **Prof. P. Tong**
Hong Kong University of Science & Technology,
Department of Mechanical Engineering, Clear Water
Bay, Hong Kong
Email: pintong@ust.hk

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

GA.02-14 IUTAM Symposium on Mechanics and Reliability of Actuating Materials

Place: **Beijing, China**
Date: **no dates available yet**
Chairman: **Prof. W. Yang**
Tsinghua University, Department of Engineering
Mechanics, Beijing 100084, China
Email: yw-dem@tsinghua.edu.cn

IUTAM Representative on Scientific Committee: Prof. J. Salençon

IUTAM Symposia 2005

GA.02-03 IUTAM Symposium on Flow Control with Mems

Place: **London, UK**
Date: **no dates available yet**
Chairman: **Dr. J.F. Morrison**
Department of Aeronautics, Imperial College, London
SW7 2BY, UK
Email: j.morrison@ic.ac.uk

IUTAM Representative on Scientific Committee: Prof. C. Cercignani

GA.02-08 IUTAM Symposium on Mechanical Behavior and Micro-mechanics of Nanostructured Materials

Place: **Beijing, China**
Date: **no dates available yet**
Chairman: **Prof. Y. Bai**
Chinese Academy of Sciences, Institute of Mechanics,
Beijing 100080, China
Email: Baiy1@lnm.imech.ac.cn

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

GA.02-09 IUTAM Symposium on Multiscale Problems in Multibody System Contacts

Place: **Stuttgart, Germany**
Date: **no dates available yet**
Chairman: **Prof. P. Eberhard**
University of Stuttgart, Institute B of Mechanics,
Stuttgart, Germany
Email: eberhard@ltm.uni-erlangen.de

IUTAM Representative on Scientific Committee: Prof. W. Schiehlen

**GA.02-10 IUTAM Symposium on Impact Biomechanics-from
Fundamental Insights to Applications**

Place: **Dublin, Ireland (Co-sponsored by IACM)**
Date: **no dates available yet**
Chairman: **Dr. M. Gilchrist**
National University of Ireland - Dublin, Department of
Mechanical Engineering, Belfield, Dublin 4, Ireland
Email: Michael.Gilchrist@ucd.ie

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

**GA.02-13 IUTAM Symposium on Vibration Control of Nonlinear
Mechanisms and Structures**

Place: **Munich, Germany**
Date: **no dates available yet**
Chairman: **Prof. H. Ulbrich**
TU München, Lehrstuhl Angewandte Mechanik,
Boltzmannstrasse 15, 85748 Garching, Germany
Email: ulbrich@amm.tu-muenchen.de

IUTAM Representative on Scientific Committee: Prof. W. Schiehlen

**GA.02-15 IUTAM Symposium on Topological Design Optimization of
Structures, Machines and Materials - Status and
Perspectives**

Place: **Aalborg and Lyngby, Denmark**
Date: **no dates available yet**
Chairman: **Prof. M.P. Bendsoe**
Technical University of Denmark, Department of
Mathematics, Building 303, DK-2800 Lyngby, Denmark
Email: M.P.Bendsoe@mat.dtu.dk

Co-Chairman: **Prof. N. Olhoff**
Aalborg University, Institute of Mechanical Engineering
Pontoppidanstraede 101, DK-9220 Aalborg East,
Denmark

Email: no@ime.auc.dk

Co-Chairman: **Prof. O. Sigmund**
Technical University of Denmark, Department of
Mechanical Engineering, Section of Solid Mechanics,
Building 404, DK-2800 Lyngby, Denmark

Email: sigmund@mek.dtu.dk

IUTAM Representative on Scientific Committee: Prof. N. Olhoff

IUTAM Summer Schools

2003 IUTAM-CISM Summer School on Mechanics of Microstructured Materials

Place: Udine, Italy
Date: 7 – 11 July 2003
Coordinator: Prof. M. G. Velarde
CISM, Palazzo del Torso, Piazza Garibaldi, 18, 331000
Udine, Italy
Email: cism@cism.it

2004 IUTAM Summer School on Biomechanics and Molecular

Place: Beijing, China
Date: not available yet
Coordinator: Prof. J. Fang, Beijing University, Department of
Mechanics & Engineering Science, Beijing 100871, PR
China
Email: jfang@pku.edu.cn

Co-sponsored event 2003

International Conference on Physics and Control (PhysCon 2003)

Place: St. Petersburg, Russia
Date: 20-22 August 2003
Organizer: Prof. A.L. Fradkov, Institute for Problems of
Mechanical Engineering, 61 Bolshoy Ave. V.O.,
199178, St. Petersburg, Russia
Email: info@physcon.ru

IUTAM Representative: Prof. J. Engelbrecht

**XXI International Congress of Theoretical and
Applied Mechanics**
15 – 21 August 2004, Warsaw, Poland
(Home Page, <http://ictam04.ippt.gov.pl>)

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://ictam04.ippt.gov.pl>**

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 L. van Wijngaarden (The Netherlands)

Closing Lecturer: Professor K. Sobczyk (Poland)

Mini Symposia

MS1 Smart materials and structures

Professor N. Sottos (USA), chair

Professor J. Holnicki-Szulc (Poland), co-chair

Sectional lecturer: Professor A. Preumont (Belgium)

MS2 Tissue, cellular and molecular biomechanics

Professor P. Janmey (USA), chair

Professor D. Barthès-Biesel (France), co-chair

Professor A. Hoger (USA), co-chair

Sectional lecturer: Professor E. Sackmann (Germany)

MS3 Mechanics of thin films and nanostructures

Professor K.S. Kim (USA), chair

Professor Z. Suo (USA), co-chair

Professor H.M. Jensen (Denmark), co-chair

Sectional lecturer: Professor E. Arzt (Germany)

MS4 Microfluidics

Professor P. Tabeling (France), chair

Professor R.J. Adrian (USA), co-chair

Professor J. Santiago (USA), co-chair

Sectional lecturer: Professor J. Israelachvili (USA)

MS5 Microgravity flow phenomena

Professor J.C. Legros (Belgium), chair
 Professor P. Neitzel (USA), co-chair
 Professor J.I.D. Alexander (USA), co-chair
 Sectional lecturer: Professor D. Beysens (France)

MS6 Atmosphere and ocean dynamics

Professor J. Sommeria (France), chair
 Professor M.E. McIntyre (UK), co-chair
 Sectional lecturer: Professor P.B. Rhines (USA)

Pre-Nominated Sessions

Fluid Mechanics

Biological fluid dynamics	Flow in thin films
Boundary layers	Fluid mechanics of materials processing
Combustion and flames	Granular flows
Complex and smart fluids	Low-Reynolds-number flow
Compressible flow	Magnetohydrodynamics
Computational fluid dynamics (jointly with IACM)	Multiphase flows
Convective phenomena	Solidification and crystal growth
Drops and bubbles	Stirring and mixing
Environmental fluid mechanics	Fluid mechanics of suspensions
Experimental methods in fluid mechanics	Topological fluid mechanics
Flow control	Turbulence
Flow in porous media	Vortex dynamics
Flow instability and transition	Waves

Solid Mechanics

Computational solid mechanics (jointly with IACM)	Mechanics of composites
Contact and friction problems (jointly with IAVSD)	Mechanics of phase transformations (jointly with IACM)
Control of multibody systems	Mechanics of porous materials
Control of structures	Multibody dynamics
Damage mechanics	Plasticity and viscoplasticity
Dynamic plasticity of structures	Plates and shells (jointly with IACM)

Elasticity	Rock mechanics and geomechanics
Experimental methods in solid mechanics	Solid mechanics in manufacturing
Fatigue stability of structures	Stochastic micromechanics
Fracture and crack mechanics (jointly with ICF)	Structural optimization (jointly with ISSMO)
Functionally graded materials	Structural vibrations
Impact and wave propagation	Viscoelasticity and creep
Material instabilities	

Topics involving both fluid mechanics and solid mechanics

Acoustics

Fluid-structure interaction

Chaos in fluid and solid mechanics

Mechanics of foams and cellular materials

Continuum mechanics

Multiscale phenomena 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 from January 1996, Kluwer Academic Publisher is the preferred 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.

Prior to the publication by Kluwer, a short report of an IUTAM symposium may be found on the IUTAM website, as published in the IUTAM Annual Reports (<http://www.iutam.net/iutam/Publications/index.php/3>).

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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<http://www.iutam.net>

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