

REPORT 2007

INTERNATIONAL UNION OF THEORETICAL AND
APPLIED MECHANICS

REPORT 2007



Eindhoven University of Technology
THE NETHERLANDS

Edited by D.H. van Campen and W.P.J.M. van den Oever
Printed in The Netherlands by
Printing Office, Eindhoven University of Technology

ISBN-978-90-386- 1330-7

Contents

Bureau: Officers and Members	1
Secretariat	1
Past Officers	1
Past Congress Presidents	2
Adhering Organizations	3
Affiliated Organizations	13
Members of the General Assembly	18
Observers to the General Assembly	21
Members of the Congress Committee	22
Members of the Symposia Panels	23
Members of the Working Parties	23
Donations in 2007	25
IUTAM Representation in ICSU and its Scientific Committees	25
Reports of IUTAM Symposia held in 2007	26
07-1 IUTAM Symposium on Relation of Shell, Plate, Beam and 3D Models.....	26
07-2 IUTAM Symposium on Recent Advances in Multiphase Flows:.....	29
Numerical and Experimental	29
07-3 IUTAM Symposium on Unsteady Separated Flows and their Control.....	34
07-4 IUTAM Symposium on Scaling in Solid Mechanics	43
07-5 IUTAM Symposium on Fluid-Structure Interaction in Ocean Engineering	47
07-6 IUTAM Symposium on Swelling and Shrinking of Porous Materials: From Colloid Science to Pro-Mechanics	50
07-7 IUTAM Symposium on Advances in Micro- and Nanofluidics	54
07-8 IUTAM Symposium on Mechanical properties of Cellular Materials.....	58
07-9 IUTAM Symposium on Multi-Scale Plasticity of Crystalline Materials	61
Report of the IUTAM Summer School held in 2007	65
Report on the IUTAM - CISM Summer School on Bone Cell and Tissue Mechanics ...	65
Reports of the IUTAM Working Parties	68
WP-1 - Non-Newtonian Fluid Mechanics and Rheology.....	68
WP-2 - Dynamical Systems and Mechatronics.....	68
WP-3 - Mechanics of Materials	68
WP-4 - Materials Processing.....	69
WP-5 - Computational Fluid and Solid Mechanics.....	70
WP-6 - Biomechanics	71
WP-7 - Nano- and Micro-Scale Phenomena in Mechanics	75
WP-8 - Geophysical and Environmental Mechanics.....	75
WP-9 - Education in Mechanics and Capacity Building.....	76
2007 Treasurer's Report	77
Reports on Affiliated Organizations	83

Reports on Affiliated Organizations	83
AFMC (Asian Fluid Mechanics Committee).....	83
CACOFD (Caribbean Congress of Fluid Dynamics)	83
CISM (International Centre for Mechanical Sciences).....	83
EUROMECH (European Mechanics Society).....	85
HYDROMAG (International Association for Hydromagnetic Phenomena and Applications)	87
IABEM (International Association for Boundary Element Methods)	88
IACM (International Association for Computational Mechanics).....	88
IAVSD (International Association for Vehicle Systems Dynamics)	88
ICA (International Commission for Acoustics).....	88
ICF (International Congress on Fracture).....	90
ICHMT (International Centre for Heat and Mass Transfer)	90
ICM (International Congress on the Mechanical Behaviour of Materials).....	90
ICR (International Committee on Rheology)	91
ICTS (International Congresses on Thermal Stresses)	91
IHAV (International Institute of Acoustics and Vibration).....	93
ISIMM (International Society for the Interaction of Mechanics and Mathematics)	94
ISSMO (International Society for Structural and Multidisciplinary Optimization).....	97
Reports on ICSU and its Scientific Committees.....	99
ICSU (International Council for Science).....	99
COSPAR (Committee on Space Research)	100
SCOPE (Scientific Committee on Problems of the Environment)	101
SCOR (Scientific Committee on Oceanic Research).....	101
Agreement by and between IUTAM and Springer Science and Business Media	
B.V.....	104
Statutes	108
Statuts de l'Union Internationale de Mécanique Théorique et Appliquée	108
Règles de fonctionnement du Comité des Congrès de l'Union	112
Procédés pour l'élection du Bureau de l'IUTAM *****	113
Procédure pour l'élection de membres cooptés par l'Assemblée Générale*****	114
Statutes of the International Union of Theoretical and Applied Mechanics	115
Rules of procedure for the Congress Committee of IUTAM.....	119
Procedure for election of the Bureau of IUTAM*****	120
Procedure for electing Members-at-Large of the General Assembly*****	121
List of Publications	122
Proceedings of IUTAM Symposia.....	123
Proceedings of the International Congresses on Theoretical and Applied Mechanics (ICTAM)	139
Publications on the history of IUTAM	142
List of Addresses	143

Bureau: Officers and Members

The following members of the Bureau of IUTAM have been elected for the period 1 November 2004 to 31 October 2008:

Officers

Professor L.B.Freund (USA)	President
Professor H.K. Moffatt (UK)	Vice-President
Professor J. Engelbrecht (Estonia)	Treasurer
Professor D.H. van Campen (Netherlands)	Secretary-General

Members

Professor T. Kambe (Japan)	(elected 2004)
Professor A. Kluwick (Austria)	(elected 2004)
Professor N. Olhoff (Denmark)	(elected 2004)
Professor Z. Zheng (China)	(elected 2004)

Secretariat

IUTAM-Secretariat, Department of Mechanical Engineering,
Eindhoven University of Technology, 5600 MB Eindhoven, The Netherlands

Telephone: +31 40 247 2710, Telefax: +31 40 243 7175

E-mail: sg@iutam.net

Internet: <http://www.iutam.net> or <http://www.iutam.org> or <http://www.iutam.info>

Past Officers

<i>Elected</i>	<i>President</i>	<i>Vice-President</i>	<i>Treasurer</i>	<i>Secretary</i>
1948	J. Péres (France)	R.V. Southwell (UK)	H.L. Dryden (USA)	J.M. Burgers (Netherlands)
1952	H.L. Dryden (USA)	J. Péres (France)	G. Temple (UK)	F.A. v. d. Dungen (Belgium)
1956	F.K.G. Odqvist (Sweden)	H.L. Dryden (USA)	G. Temple (UK)	M. Roy (France)
1960	G. Temple (UK)	F.K.G. Odqvist (Sweden)	W.T. Koiter (Netherlands)	M. Roy (France)
1964	M. Roy (France)	G. Temple (UK)	W.T. Koiter (Netherlands)	H. Görtler (Germany)
1968	W.T. Koiter (Netherlands)	M. Roy (France)	H. Görtler (Germany)	F.I. Niordson (Denmark)
1972	H. Görtler (Germany)	W.T. Koiter (Netherlands)	D.C. Drucker (USA)	F.I. Niordson (Denmark)

1976	F.I. Niordson (Denmark)	H. Görtler (Germany)	D.C. Drucker (USA)	J. Hult (Sweden)
1980	D.C. Drucker (USA)	F.I. Niordson (Denmark)	E. Becker (Germany)	J. Hult (Sweden)
1984	J. Lighthill (UK)	D.C. Drucker (USA)	L.v. Wijngaarden (Netherlands)	W. Schiehlen (Germany)
1988	P. Germain (France)	J. Lighthill (UK)	L.v. Wijngaarden (Netherlands)	W. Schiehlen (Germany)
1992	L.v. Wijngaarden (Netherlands)	P. Germain (France)	B.A. Boley (USA)	F. Ziegler (Austria)
1996	W. Schiehlen (Germany)	L.v. Wijngaarden (Netherlands)	L.B. Freund (USA)	M.A. Hayes (Ireland)
2000	H.K. Moffatt (UK)	W. Schiehlen (Germany)	L.B. Freund (USA)	D.H. van Campen (Netherlands)
2004	L.B. Freund (USA)	H.K. Moffatt (UK)	J. Engelbrecht (Estonia)	D.H. van Campen (Netherlands)

Past Congress Presidents

<i>Nr.</i>	<i>Year</i>	<i>Place</i>	<i>Congress-President</i>
1	1924	Delft, The Netherlands	C.B. Biezeno
2	1926	Zürich, Switzerland	E. Meissner
3	1930	Stockholm, Sweden	A.F. Enström
4	1934	Cambridge, UK	C.E. Inglis
5	1938	Cambridge, USA	K.T. Compton
6	1946	Paris, France	H. Villat
7	1948	London, UK	R.V. Southwell
8	1952	Istanbul, Turkey	K. Erim
9	1956	Brussels, Belgium	F.H. van den Dungen
10	1960	Stresa, Italy	G. Colonnetti
11	1964	Munich, Germany	H. Görtler
12	1968	Stanford, USA	N.J. Hoff
13	1972	Moscow, USSR	N.I. Muskhelishvili
14	1976	Delft, The Netherlands	W.T. Koiter
15	1980	Toronto, Canada	F.P.J. Rimrott
16	1984	Lyngby, Denmark	F. Niordson
17	1988	Grenoble, France	P. Germain and M. Piau
18	1992	Haifa, Israel	J. Singer
19	1996	Kyoto, Japan	T. Tatsumi
20	2000	Chicago, USA	H. Aref
21	2004	Warsaw, Poland	W. Gutkowski

Adhering Organizations

Argentina (1959)

Asociación Argentina de Mecánica Computacional
Güemes 3450, 3000 Santa Fe
President/Chair: Dr. S. R. (Sergio) Idelsohn
Contact: Dr. S. R. (Sergio) Idelsohn
Representatives in IUTAM: Dr. S. R. (Sergio) Idelsohn

Australia (1964)

The Australian National Committee for Mechanical Sciences of the Australian Academy of Sciences
GPO Box 783, Canberra City, ACT 2601
President/Chair: Dr. F. (Francis) Rose
Contact: Dr. J.P. (Jim) Denier
Representatives in IUTAM: Dr. J.P. (Jim) Denier, Prof. E.O. (Ernie) Tuck

Austria (1951)

Austrian National Committee for Theoretical and Applied Mechanics of the Austrian Academy of Sciences
Dr.-Ignaz-Seipel-Platz 2, A-1010 Wien
President/Chair: Prof. H. (Hans) Troger
Contact: Prof. A. (Alfred) Kluwick
Representatives in IUTAM: Prof. A. (Alfred) Kluwick

Belgium (1949)

The National Committee for Theoretical and Applied Mechanics of the Royal Academies for Science and Arts of Belgium
Hertogsstraat 1, B-1000 Brussels
Secretary: Prof. Roland Decuypere
President/Chair: Prof. P. (Philippe) Boulanger
Contact: Prof. R. (Roland) Keunings
Representatives in IUTAM: Prof. P. (Philippe) Boulanger, Prof. E. (Erik) Dick, Prof. D.V.H. (Dirk) Vandepitte

Brazil (1982)

Associação Brasileira de Engenharia e Ciências Mecânicas – ABCM
Avenida Rio Branco 124/18° andar, 20040-001 Rio de Janeiro
President/Chair: Prof. V. (Valder) Steffen Jr.
Contact: Prof. L. (Luiz) Bevilacqua
Representatives in IUTAM: Prof. J.A.P. (José) Aranha, Prof. L. (Luiz) Bevilacqua

Bulgaria (1969)

Bulgarian National Committee on Theoretical and Applied Mechanics of the Bulgarian Academy of Sciences

1, 15 novembre str., BG-1040 Sofia

President/Chair: Prof. A. (Anguel) Baltov

Secretary: Dr. E. (Evtim) Ttoshev

Contact: Prof. A. (Anguel) Baltov

Representatives in IUTAM: Prof. A. (Anguel) Baltov

Canada (1963)

The National Research Council of Canada,

Montreal Road, Ottawa, Canada K1A 0R6

National Committee for IUTAM

President/Chair: Prof. S.B. (Stuart) Savage

Contact: Prof. S.B. (Stuart) Savage

Representatives in IUTAM: Prof. J.S. (Jorn) Hansen, Prof. S.B. (Stuart) Savage,

Prof. S. (Suresh) Shrivastava, Prof. J.W. (Jean) Zu

Chile (1996)

The Chile National Committee on Theoretical and Applied Mechanics Academia Chilena de Ciencias

Almirante Montt 454, Santiago, Chile

President/Chair: Dr. F. (Francisco) Rothhammer Engel

Secretary: Dr. T. (Tito) Ureta Aravena

Contact: Prof. F. (Fernando) Lund

Representatives in IUTAM: Prof. F. (Fernando) Lund

China (1980)

The Chinese Society of Theoretical and Applied Mechanics

15 Zhong Guan Cun Road, Beijing 100080

President/Chair: Prof. J (Jiachun) Li

Secretary: Prof. J.-X. (Jianxiang) Wang

Contact: Prof. J.-X. (Jianxiang) Wang

Representatives in IUTAM: Prof. Y. (Yi-long) Bai, Prof. J (Jiachun) Li,

Prof. W. (Wei) Yang, Prof. Z. (Zhemin) Zheng

China-Hong Kong (1996)

The Hong Kong Society of Theoretical and Applied Mechanics (HKSTAM)

Department of Mechanical Engineering, Hong Kong University of Science and Technology, Kowloon, HK

President/Chair: Prof. A.K. Soh

Secretary: Dr. C.O. Ng

Contact: Dr. C.O. Ng

Representatives in IUTAM: Prof. T.X. (Tongxi) Yu

China-Taipei (1980)

The Society of Theoretical and Applied Mechanics
Institute of Aeronautics and Astronautics, National Cheng Kung University,
Tainan 70101, Taiwan (R.O.C.)
President/Chair: Prof. C.-B. (Chyanbin) Hwu
Secretary: Prof. C.-H. (Chin-Hsiang) Cheng
Contact: Prof. C.-H. (Chin-Hsiang) Cheng
Representatives in IUTAM: Prof. C.-C. (Chien-Ching) Ma,
Prof. W.-C. (Wei-Chung) Wang

Croatia (1994)

Croatian Society of Mechanics
Ivana Lucica 5, HR-10000 Zagreb, Croatia.
President/Chair: Prof. F. (Franjo) Matejcek
Contact: Prof. G. (Goran) Turkalj
Representatives in IUTAM: Prof. G. (Goran) Turkalj

Czech Republic (1993/1949)

The National Committee of Theoretical and Applied Mechanics
Academy of Sciences of the Czech Republic, Institute of Thermomechanics,
Dolejšková 5, CZ-18200 Prague 8
President/Chair: Prof. M. (Miloslav) Okrouhlik
Secretary: Dr. J. (Jiri) Naprstek
Contact: Prof. M. (Miloslav) Okrouhlik
Representatives in IUTAM: Prof. M. (Miloslav) Okrouhlik

Denmark (1949)

National Committee for Theoretical & Applied Mechanics,
The Royal Danish Academy of Sciences and Letters, H.C. Andersens Boulevard 35,
DK-1553 Copenhagen V.
President/Chair: Prof. T. (Tom) Fenchel
Secretary: Prof. H. (Henrik) Breuning-Madsen
Contact: Prof. N. (Niels) Olhoff
Representatives in IUTAM: Prof. N. (Niels) Olhoff, Prof. J.N. (Jens Nørkær) Sørensen

Egypt (1976)

Academy of Scientific Research and Technology
Egyptian Committee of Theoretical and Applied Mechanics 101 Kasr El Eini Street,
Cairo, Egypt.
Secretary General: Prof. Z.Z. Momeh
President/Chair: Prof. M.K. (Mohamed) Ismail
Contact: Prof. M.K. (Mohamed) Ismail
Representatives in IUTAM: Prof. M.K. (Mohamed) Ismail

Estonia (1992)

Estonian Committee for Mechanics,
Akadeemia tee 21, EE-12618 Tallinn
President/Chair: Prof. J. (Juri) Engelbrecht
Contact: Prof. J. (Juri) Engelbrecht
Representatives in IUTAM: Prof. J. (Juri) Engelbrecht

Finland (1952)

The Finnish National Committee on Mechanics
Helsinki University of Technology, Attent. Prof. Mauri Määttänen, P.O.Box 4300,
FIN-02015 TKK, Finland
President/Chair: Prof. M. (Mauri) Määttänen
Secretary: Prof. J. (Juha) Paavola
Contact: Prof. M. (Mauri) Määttänen
Representatives in IUTAM: Prof. M. (Mauri) Määttänen, Prof. J. (Juha) Paavola

France (1949)

Comité National Français de Mécanique, Académie des Sciences
23, quai Conti, F-75006 Paris
President/Chair: Prof. S. (Sébastien) Candel
Secretary: Prof. L. (Frederic) Dias
Contact: Prof. S. (Sébastien) Candel
Representatives in IUTAM: Prof. A. (Ahmed) Benallal, Prof. L. (Frederic) Dias,
Prof. S. (Stéphane) Zaleski, Prof. A. (André) Zaoui

Georgia (2000)

National Committee of Theoretical and Applied Mechanics
I. Vekua Institute of Applied Mathematics of Tbilisi State University, 2 University Str.,
Tbilisi 0143
Co-Chairman: Prof. G. (George) Jaiani, Prof. D. (Demuri) Danelia
Secretary-General: Prof. G. (Gela) Kipiani
President/Chair: Prof. G. (George) Jaiani
Contact: Prof. G. (George) Jaiani
Representatives in IUTAM: Prof. G. (George) Jaiani

Germany (1950)

Deutsches Komitee für Mechanik (DEKOMECH)
Hamburg University of Technology, Institute of Modelling and Computation,
Denickestraße 17, D-21073 Hamburg
President/Chair: Prof. P. (Paul) Steinmann
Secretary: Prof. O. (Otto) von Estorff
Contact: Prof. O. (Otto) von Estorff
Representatives in IUTAM: Prof. P. (Peter) Eberhard, Prof. C. (Christian) Miehe,
Prof. W. (Wolfgang) Schröder, Prof. A. (André) Thess

Greece (1979)

Hellenic Society for Theoretical and Applied Mechanics

National Technical University of Athens, Mechanics Division, Zographou, GR-15773, Greece

President/Chair: Prof. J.T. (John) Katsikadelis

Secretary: Prof. H.G. (Haralambos) Georgiadis

Contact: Prof. H.G. (Haralambos) Georgiadis

Representatives in IUTAM: Prof. J.T. (John) Katsikadelis

Hungary (1948)

Hungarian National Committee for IUTAM

Department of Structural Mechanics, Budapest University of Technology and Economics, Műegyetem rkp. 3, H-1521 Budapest

President/Chair: Prof. S. (Sandor) Kaliszky

Secretary: Prof. G. (Gábor) Stépán

Contact: Prof. S. (Sandor) Kaliszky

Representatives in IUTAM: Prof. S. (Sandor) Kaliszky

India (1950)

National Committee for Theoretical and Applied Mechanics of the Indian National Science Academy

Bahadur Shah Zafar Marg, New Delhi - 110 002

President/Chair: Prof. D.V. Singh

Contact: Prof. N.K. (Narinder) Gupta

Representatives in IUTAM: Prof. G. (Gautam) Biswas, Prof. S.M. (Suresh) Deshpande, Prof. N.K. (Narinder) Gupta

Ireland (1984)

Irish National Committee for Mathematical Sciences

Royal Irish Academy, 19 Dawson Street, Dublin 2

President/Chair: Dr. R. (Richard) Watson

Secretary: Dr. A. (Ann) O'Shea

Contact: Prof. P.E. (Padraic) O-Donoghue

Representatives in IUTAM: Prof. P.E. (Padraic) O-Donoghue

Israel (1950)

The Israel Society of Theoretical and Applied Mechanics

Faculty of Mechanical Engineering, Technion-Israel Institute of Technology, Haifa 32000

President/Chair: Prof. M.B. (Miles) Rubin

Contact: Prof. M.B. (Miles) Rubin

Representatives in IUTAM: Prof. I. (Isaac) Goldhirsch, Prof. M.B. (Miles) Rubin

Italy (1949)

Associazione Italiana di Meccanica Teorica ed Applicata

Piazza Leonardo da Vinci 32, I-20133 Milano

President/Chair: Prof. G. (Giuseppe) Rega

Secretary: Prof. A. (Angelo) Morro

Contact: Prof. A. (Angelo) Morro

Representatives in IUTAM: Prof. G. (Giulio) Maier, Prof. A. (Angelo) Morro,

Prof. P. (Paolo) Podio-Guidugli, Prof. F. (Furio) Vatta

Japan (1951)

The National Committee for Theoretical and Applied Mechanics

Science Council of Japan, 7- 22-34 Roppongi, Minato-ku, Tokyo 106-8555

President/Chair: Prof. T. (Toshio) Kobayashi

Contact: Prof. T. (Tsutomu) Kambe

Representatives in IUTAM: Prof. T. (Tsutomu) Kambe, Prof. T. (Toshio) Kobayashi,

Prof. K. (Koji) Uetani, Prof. E. (Eiichi) Watanabe

Korea, Republic of (1989)

Korean Society of Theoretical and Applied Mechanics

Department of Aerospace Engineering, Seoul National University, Seoul 151-742

President/Chair: Prof. J.Y. (Jung Yul) Yoo

Secretary: Prof. S.J. (Seung Jo) Kim

Contact: Prof. S.J. (Seung Jo) Kim

Representatives in IUTAM: Prof. J.Y. (Jung Yul) Yoo

Latvia (1992)

Latvian National Committee for Mechanics

Latvian Academy of Sciences, Akademijas laukums 1, Riga LV-1524

President/Chair: Prof. V. (Vitauts) Tamuzs

Contact: Prof. V. (Vitauts) Tamuzs

Representatives in IUTAM: Prof. V. (Vitauts) Tamuzs

Netherlands (1952)

Netherlands Mechanics Committee

c/o Eindhoven University of Technology, Department of Mechanical Engineering,

P.O. Box 513, NL 5600 MB Eindhoven.

President/Chair: Prof. D.H. (Dick) van Campen

Contact: Prof. D.H. (Dick) van Campen

Representatives in IUTAM: Prof. R (René) de Borst, Prof. D.H. (Dick) van Campen,

Prof. A.A. (Anton) van Steenhoven

New Zealand (1979)

The Royal Society of New Zealand, Committee on Mathematical & Information Sciences

P.O. Box 598, Wellington

President: Dr Neville Jordan

Chief Executive Officer: Dr Di McCarthy

Contact: Dr. G. (Graham) Weir

Representatives in IUTAM: Dr. G. (Graham) Weir

Norway (1949)

National Committee on Theoretical and Applied Mechanics

Norwegian Acad. Sciences and Letters, Dept. of Maths, University of Oslo,

P.O.Box 1053, Blindern, N-0316 Oslo 3

President/Chair: Prof. J. (John) Grue

Contact: Prof. J. (John) Grue

Representatives in IUTAM: Prof. J. (John) Grue

Poland (1952)

Committee for Mechanics of the Polish Academy of Sciences

ul. Swietokrzyska 21, PL-00 049 Warszawa

President/Chair: Prof. W. (Witold) Gutkowski

Contact: Prof. W. (Witold) Gutkowski

Representatives in IUTAM: Prof. W. (Witold) Gutkowski, Prof. G. (Gwidon) Szefer

Portugal (1968)

Portuguese Society of Theoretical, Applied and Computational Mechanics

Laboratorio Nacional de Engenharia Civil, Avenida do Brasil 101, 1700-066 Lisboa

President/Chair: Prof. C.A. (Carlos) Mota Soares

Contact: Prof. J. A. C. (João) Martins

Representatives in IUTAM: Prof. J. A. C. (João) Martins

Romania (1956)

Romanian Academy, Department of Mathematics, Romanian National Committee of Theoretical and Applied Mechanics

Calea Victoriei 125, 71102 Bucharest, Romania

President/Chair: Prof. N.D. (Nicolai) Cristescu

Secretary: Dr. G. (Gabriela) Marinoschi

Contact: Prof. N.D. (Nicolai) Cristescu

Representatives in IUTAM: Prof. N.D. (Nicolai) Cristescu

Russia (1992/1956)

Russian National Committee on Theoretical and Applied Mechanics

Prospekt Vernadskogo 101 : 1 , Moscow 119526

President/Chair: Prof. G.G. (Gorimir) Chernyi

Secretary: Prof. G.K. (Gleb) Mikhailov

Contact: Prof. G.K. (Gleb) Mikhailov

Representatives in IUTAM: Prof. F.L. (Felix) Chernousko, Prof. G.G. (Gorimir)

Chernyi, Prof. G.K. (Gleb) Mikhailov, Prof. N.F. (Nikita) Morozov

Saudi Arabia (1988)

King Abdullaziz City for Science and Technology

Directorate of Technology and International Cooperation, P.O. Box 6086, Riyadh 11442

President/Chair: Dr. M.I. (Mohammed ibn Ibrahim) Al-Suwaiyel

Contact: Mr. F.S. (Fahad) Huraib

Representatives in IUTAM: Dr. M.I. (Mohammed ibn Ibrahim) Al-Suwaiyel

Serbia (2006/1952)

Serbian Society of Mechanics

Kneza Milosa 9/1, 11000 Belgrade

President/Chair: Prof. D.M. (Dragoslav) Sumarac

Secretary: Prof. D.S. (Dragoslav) Kuzmanovic

Contact: Prof. D.D. (Dobroslav) Ruzic

Representatives in IUTAM: Prof. D.M. (Dragoslav) Sumarac

Slovakia (1993)

The Slovak Society for Mechanics

Council of Scientific Societies, Stefánikova 49, SK-811 04 Bratislava

President/Chair: Prof. J. (Jan) Sladek

Contact: Prof. J. (Jan) Sladek

Representatives in IUTAM: Prof. J. (Jan) Sladek

Slovenia (1994)

Slovene Mechanics Society, Faculty of Mechanical Engineering

University of Maribor, Smetanova 17, 2000 Maribor

President/Chair: Prof. L. (Leopold) Skerget

Secretary: Prof. J. (Jure) Marn

Contact: Prof. J. (Jure) Marn

Representatives in IUTAM: Prof. L. (Leopold) Skerget

South Africa (1994)

National Research Foundation (NRF), South African Association for Theoretical and Applied Mechanics (SAAM)

South African ICSU Secretariat, P.O. Box 2600, Pretoria 0001

President/Chair: Dr. I. M. A. (Igle) Gledhill

Contact: Prof. C.G. (Charl) du Toit

Representatives in IUTAM: Prof. C.G. (Charl) du Toit

Spain (1950)

Instituto Nacional de Tecnica Aeroespacial

Carretera de Ajalvir km. 4,00, Torrejón de Ardoz, 28850 Madrid

Contact: Mr. A. (Angel) Moratilla

Representatives in IUTAM: Mr. A. (Angel) Moratilla

Sweden (1950)

Swedish National Committee for Mechanics

Malmö University, SE-205 06 Malmö

President/Chair: Prof. P. (Per) Ståhle

Secretary: Prof. S. (Staffan) Lundström

Contact: Prof. S. (Staffan) Lundström

Representatives in IUTAM: Prof. A. (Anders) Boström, Prof. D. (Dan) Henningson,
Prof. B. (Bengt) Lundberg

Switzerland (1950)

Board of the Federal Institutes of Technology

(Rat der Eidgenössischen Technischen Hochschulen)

ETH-Zentrum, CH-8092 Zürich

President/Chair: Dr. F. (Fritz) Schiesser

Contact: Prof. P.A. (Peter) Monkewitz

Representatives in IUTAM: Prof. J. (Jürg) Dual, Prof. P.A. (Peter) Monkewitz

Turkey (1977)

Turkish National Committee of Theoretical and Applied Mechanics

Istanbul Teknik Üniversitesi, Fen-Edebiyat Fakültesi, Maslak 80626 Istanbul

President/Chair: Prof. Y. (Yalcin) Aköz

Secretary: Prof. M.A. (Mehmet Ali) Tasdemir

Contact: Prof. M.A. (Mehmet Ali) Tasdemir

Representatives in IUTAM: Prof. E.S. (Erdogan) Suhubi

UK (1948)

The Royal Society, UK Panel for IUTAM

6 Carlton House Terrace, London SW1Y 5AG

President/Chair: Prof. B.L. (Bhushan) Karihaloo

Secretary: Prof. N. (Nigel) Peake

Contact: Prof. N. (Nigel) Peake

Representatives in IUTAM: Prof. N.A. (Norman) Fleck, Prof. B.L. (Bhushan) Karihaloo,
Prof. N. (Nigel) Peake, Prof. T.J. (Timothy) Pedley

Ukraine (1995)

National Committee of Ukraine on Theoretical and Applied Mechanics

S.P.Timoshenko Institute of Mechanics, 3 Nesterov Str., Kyiv 03680

President/Chair: Prof. A.N. (Alexandr) Guz

Secretary: Prof. J.J. (Jeremiah) Rushchitsky

Contact: Prof. J.J. (Jeremiah) Rushchitsky

Representatives in IUTAM: Prof. A.N. (Alexandr) Guz

USA (1949)

The U.S. National Committee on Theoretical and Applied Mechanics

The National Academies, 500 Fifth Street NW, Washington, DC 20001

President/Chair: Prof. N. (Nadine) Aubry

Secretary: Prof. C.T. (Carl) Herakovich

Contact: Prof. C.T. (Carl) Herakovich

Representatives in IUTAM: Prof. H. (Hassan) Aref, Prof. N. (Nadine) Aubry,
Prof. C.T. (Carl) Herakovich, Prof. L.G. (Gary) Leal, Prof. Z. (Zhigang) Suo

Viet Nam (1990)

Vietnamese Association of Mechanics (VAM)

Hoi Co Hoc Vietnam, 264 Doi Can, Hanoi

Secretary: Prof. Do Sanh

Contact: Prof. N. (Nguyen) Van Diep

Representatives in IUTAM: Prof. N. (Nguyen) Van Diep

Affiliated Organizations

CISM (1970)

International Centre for Mechanical Sciences
Palazzo del Torso, Piazza Garibaldi, I-33100 Udine, Italy
Rectors of CISM: Prof. Giulio Maier (Resident Rector),
Prof. Jean Salençon and Prof. Wilhelm Schneider
President/Chair: Prof. A.V. (Vinicio) Turello
Secretary: Prof. B.A. (Bernhard) Schrefler
Contact: Prof. B.A. (Bernhard) Schrefler
Representative of CISM in IUTAM: Prof. B.A. (Bernhard) Schrefler
Representative of IUTAM in CISM: Prof. H.K. (Keith) Moffatt
Representative of CISM in IUTAM-CC: Prof. B.A. (Bernhard) Schrefler

ICHMT (1972)

International Centre for Heat and Mass Transfer
Mechanical Engineering Dept., Middle East Technical University,
06531 Ankara, Turkey
President/Chair: G.F. (Geoffrey) Hewitt
Secretary: Prof. F. (Faruk) Arinc
Contact: Prof. F. (Faruk) Arinc
Representative of ICHMT in IUTAM: Prof. F. (Faruk) Arinc
Representative of IUTAM in ICHMT: Dr. R. (Rudolf) Dvorák

ICR (1974)

International Committee on Rheology
President/Chair: Prof. J.C. (Jae Chun) Hyun
Secretary: Prof. M.H. (Manfred) Wagner
Contact: Prof. M.H. (Manfred) Wagner
Representative of ICR in IUTAM: Prof. L.G. (Gary) Leal
Representative of IUTAM in ICR: Prof. F. (Frithiof) Niordson
Representative of ICR in IUTAM-CC: Prof. L.G. (Gary) Leal

IAVSD (1977)

International Association for Vehicle System Dynamics
Prof. Michael Valásek, Department of Mechanics, Faculty of Mechanical Engineering,
Czech International University in Prague, Kalovo Nanesti 13,
121 35 Praha 2, Czech Republic
President/Chair: Prof. H. (Hans) True
Secretary: Prof. M. (Michael) Valásek
Contact: Prof. M. (Michael) Valásek
Representative of IAVSD in IUTAM: Prof. P. (Peter) Lugner
Representative of IUTAM in IAVSD: Prof. W. (Werner) Schiehlen

EUROMECH (1978)

European Mechanics Society

University of Padova, Faculty of Engineering, Dipartimento di Costruzioni e Trasporti,
35131 Padova, Italy

President/Chair: Prof. P. (Patrick) Huerre

Secretary: Prof. B.A. (Bernhard) Schrefler

Contact: Prof. B.A. (Bernhard) Schrefler

Representative of EUROMECH in IUTAM: Prof. P. (Patrick) Huerre

Representative of IUTAM in EUROMECH: Prof. T.J. (Timothy) Pedley

ISIMM (1978)

International Society for the Interaction of Mechanics and Mathematics

Prof. A. (Adriano) Montanaro Università degli Studi di Padova

Via Belzoni 7 35131 Padova Italy

President/Chair: Prof. L. (Lev) Truskinovsky

Secretary: Prof. D. (Davide) Bigoni

Contact: Prof. A. (Adriano) Montanaro

Representative of ISIMM in IUTAM: Prof. M.A. (Michael) Hayes

Representative of IUTAM in ISIMM: Prof. G. (Gérard) Itoos

Representative of ISIMM in IUTAM-CC: Prof. M.A. (Michael) Hayes

ICF (1978)

International Congress on Fracture

Prof. T. Yokobori, School of Science and Engineering, Teikyo University,
Toyosatodai 1-1, Utsunomiya, 320, Japan

President/Chair: Prof. K. (Krishnaswamy) Ravi-Chandar

Secretary: Prof. A.T. (A.T.) Yokobori Jr.

Contact: Prof. R.M. (Robert) McMeeking

Representative of ICF in IUTAM: Prof. R.M. (Robert) McMeeking

Representative of IUTAM in ICF: Prof. J.B. (Jean-Baptiste) Leblond

Representative of ICF in IUTAM-CC: Prof. B.L. (Bhushan) Karihaloo

ICM (1982)

International Congress on Mechanical Behaviour of Materials,

Prof. F. Ellyin, Dept. of Mechanical Engineering, University of Alberta,
Edmonton, Canada T6G 2G8

President/Chair: Prof. S.W. (Soo Woo) Nam

Secretary: Prof. T. (Toshihiko) Hoshide

Contact: Prof. S.W. (Soo Woo) Nam

Representative of ICM in IUTAM: Prof. S.W. (Soo Woo) Nam

Representative of IUTAM in ICM: Prof. S.R. (Sol) Bodner

Representative of ICM in IUTAM-CC: Prof. F. (Fernand) Ellyin

AFMC (1982)

Asian Fluid Mechanics Committee
Institute of Mechanics, Chinese Academy of Sciences, No. 15,
North Sihuanxi Rd, Beijing, 100080, China
President/Chair: Prof. J (Jiachun) Li
Contact: Prof. J (Jiachun) Li
Representative of AFMC in IUTAM: Prof. J (Jiachun) Li
Representative of IUTAM in AFMC: Prof. H. (Heng) Zhou

IACM (1984)

International Association for Computational Mechanics
Prof. E. Oñate, International Center for Numerical Methods in Engineering,
Edificio C-1, Gran Capitán s/n, E-08034 Barcelona, Spain
President/Chair: Prof. E. (Eugenio) Oñate
Secretary: Dr. S. R. (Sergio) Idelsohn
Contact: Dr. S. R. (Sergio) Idelsohn
Representative of IACM in IUTAM: Prof. J.T. (John Tinsley) Oden
Representative of IUTAM in IACM: Prof. R. (Eduardo) de Arantes e Oliveira
Representative of IACM in IUTAM-CC: Prof. T. (Ted) Belytschko

CACOFD (1992)

Caribbean Congress of Fluid Dynamics
c/o The Department of Math and Computer Science, The University of the West Indies,
St. Augustine, Trinidad, West Indies
President/Chair: Prof. F. (F.) Malpica
Secretary: Dr. D. M. G. (Donna) Comissiong
Contact: Prof. H. (Harold) Ramkissoon
Representative of CACOFD in IUTAM: Prof. H. (Harold) Ramkissoon
Representative of IUTAM in CACOFD: Prof. D.D. (Daniel) Joseph

IABEM (1994)

International Association for Boundary Element Methods
Prof. M. Bonnet, CNRS et Ecole Polytechnique, Laboratoire de Mecanique des Solides,
Ecole Polytechnique, 91128 Palaiseau cedex, France
Secretary: Prof. R. Callego
President/Chair: Prof. M. (Marc) Bonnet
Contact: Prof. M. (Marc) Bonnet
Representative of IABEM in IUTAM: Prof. M. (Marc) Bonnet
Representative of IUTAM in IABEM: Prof. G.R. (Günther) Kuhn

ISSMO (1996)

International Society for Structural and Multidisciplinary Optimization

Prof. G. Rozvany, Department of Structural Mechanics,

Budapest University of Technology and Economics,

Muegyetem rkp. 3, Kmf 35, H-1521 Budapest, Hungary

President/Chair: Prof. K.K. (Kyung) Choi

Secretary: Prof. B.M. (Byung) Kwak

Contact: Prof. N. (Niels) Olhoff

Representative of ISSMO in IUTAM: Prof. G. (George) Rozvany

Representative of IUTAM in ISSMO: Prof. N. (Niels) Olhoff

Representative of ISSMO in IUTAM-CC: Prof. M.P (Martin) Bendsøe

HYDROMAG (1996)

International Association for Hydromagnetic Phenomena and Applications

Prof. S. Asai, Dept of Mat. Sciences, University of Nagoya,

Furo-cho, Chikusa-ku, Nagoya 464-0, Japan

President/Chair: Prof. R. (René) Moreau

Secretary: Prof. A. (André) Thess

Contact: Prof. A. (André) Thess

Representative of HYDROMAG in IUTAM: Prof. R. (René) Moreau

Representative of IUTAM in HYDROMAG: Prof. H.K. (Keith) Moffatt

Representative of HYDROMAG in IUTAM-CC: Prof. R. (René) Moreau

IHAV (1997)

International Institute of Acoustics and Vibration

Prof M. J. Crocker. Dept. of Mechanical Engineering, Auburn University,

201 Ross Hall, Auburn, AL 36849 USA

President/Chair: Prof. F. (Franz) Ziegler

Secretary: N.J. (Nicole) Kessissoglou

Contact: Prof. M.J. (Malcolm) Crocker

Representative of IHAV in IUTAM: Prof. M.J. (Malcolm) Crocker

Representative of IUTAM in IHAV: Prof. J.D. (Jan) Achenbach

ICA (1998)

International Commission for Acoustics

President/Chair: Prof. S.N.Y. (Samir) Gerges

Secretary: Mrs. M. (Marion) Burgess

Contact: Mrs. M. (Marion) Burgess

Representative of ICA in IUTAM: Prof. S.N.Y. (Samir) Gerges

Representative of IUTAM in ICA: Prof. A. (Anders) Boström

ICTS (2002)

International Congresses on Thermal Stresses

Prof. Richard B. Hetnarski, St. Raphael, Apt. 1209, 7117 Pelican Bay Blvd.,
Naples, Fl 34108, USA

President/Chair: Prof. R.B. (Richard) Hetnarski

Secretary: Prof. T.R. (Theodore) Tauchert

Contact: Prof. R.B. (Richard) Hetnarski

Representative of ICTS in IUTAM: Prof. R.B. (Richard) Hetnarski

Representative of IUTAM in ICTS: Prof. M. (Masato) Abe

Members of the General Assembly

<i>Member</i>	<i>Representative of</i>	<i>Remarks</i>
Prof. A. (Andreas) Acrivos		Member-at-Large
Dr. M.I. (Mohammed ibn Ibrahim) Al-Suwaiyel	Saudi Arabia	
Prof. J.A.P. (José) Aranha	Brazil	
Prof. H. (Hassan) Aref	USA	Chair WP-9
Prof. N. (Nadine) Aubry	USA	
Prof. Y. (Yi-long) Bai	China	
Prof. A. (Anguel) Baltov	Bulgaria	
Prof. A. (Ahmed) Benallal	France	
Prof. L. (Luiz) Bevilacqua	Brazil	
Prof. G. (Gautam) Biswas	India	
Prof. S.R. (Sol) Bodner		Member-at-Large Representative in ICM
Prof. B. (Bruno) Boley		Member-at-Large
Prof. R. (René) de Borst	Netherlands	
Prof. A. (Anders) Boström	Sweden	Representative in ICA
Prof. P. (Philippe) Boulanger	Belgium	
Prof. D.H. (Dick) van Campen	Netherlands	Bureau member
Prof. F.L. (Felix) Chernousko	Russia	
Prof. G.G. (Gorimir) Chernyi	Russia	
Prof. N.D. (Nicolai) Cristescu	Romania	
Dr. J.P. (Jim) Denier	Australia	
Prof. S.M. (Suresh) Deshpande	India	
Prof. L. (Frederic) Dias	France	
Prof. E. (Erik) Dick	Belgium	
Prof. J. (Jürg) Dual	Switzerland	
Prof. P. (Peter) Eberhard	Germany	
Prof. J. (Juri) Engelbrecht	Estonia	Bureau member
Prof. N.A. (Norman) Fleck	UK	
Prof. L.B. (Ben) Freund		Bureau member
Prof. P. (Paul) Germain		Member-at-Large
Prof. I. (Isaac) Goldhirsch	Israel	
Prof. J. (John) Grue	Norway	
Prof. N.K. (Narinder) Gupta	India	
Prof. W. (Witold) Gutkowski	Poland	
Prof. A.N. (Alexandr) Guz	Ukraine	
Prof. J. (Jorn) Hansen	Canada	
Prof. M.A. (Michael) Hayes		Member-at-Large Representative of ISIMM

Member	Representative of	Remarks
Prof. D. (Dan) Henningson	Sweden	
Prof. C.T. (Carl) Herakovich	USA	Chair WP-3
Prof. P.G. (Philip) Hodge		Member-at-Large
Prof. J. (Jan) Hult		Member-at-Large
Dr. S.R. (Sergio) Idelsohn	Argentina	
Prof. M.K. (Mohamed) Ismail	Egypt	
Prof. G. (George) Jaiani	Georgia	
Prof. S. (Sandor) Kaliszky	Hungary	
Prof. T. (Tutomu) Kambe	Japan	Bureau member
Prof. B.L. (Bhushan) Karihaloo	UK	
Prof. J.T. (John) Katsikadelis	Greece	
Prof. A. (Alfred) Kluwick	Austria	Bureau member
Prof. T. (Toshio) Kobayashi	Japan	
Prof. L.G. (Gary) Leal	USA	Representative of ICR Chair WP-1
Prof. J. (Jiachun) Li	China	Representative of AFMC
Prof. F. (Fernando) Lund	Chile	
Prof. B. (Bengt) Lundberg	Sweden	
Prof. C.-C. Ma	China-Taipei	
Prof. G. (Giulio) Maier	Italy	
Prof. J.A.C. (João) Martins	Portugal	
Prof. C. (Christian) Miehe	Germany	
Prof. G.K. (Gleb) Mikhailov	Russia	
Prof. H.K. (Keith) Moffatt		Bureau member Representative in HYDROMAG and CISM
Prof. P.A. (Peter) Monkewitz	Switzerland	
Mr. A. (Angel) Moratilla	Spain	
Prof. N.F. (Nikita) Morozov	Russia	
Prof. A. (Angelo) Morro	Italy	
Prof. M. (Mauri) Määttänen	Finland	
Prof. F. (Frithiof) Niordson		Member-at-Large Representative in ICR
Prof. P.E. (Padraic) O'Donoghue	Ireland	
Prof. M. (Miloslav) Okrouhlik	Czech Republic	
Prof. N. (Niels) Olhoff	Denmark	Bureau member Representative in ISSMO
Prof. J. (Juha) Paavola	Finland	
Prof. N. (Nigel) Peake	UK	
Prof. T.J. (Timothy) Pedley	UK	Representative in EUROMECH
Prof. P. (Paolo) Podio-Guidugli	Italy	

<i>Member</i>	<i>Representative of</i>	<i>Remarks</i>
Prof. M.B. (Miles) Rubin	Israel	
Prof. S.B. (Stuart) Savage	Canada	
Prof. W. (Werner) Schiehlen		Representative in IAVSD Member-at-Large
Prof. W. (Wolfgang) Schröder	Germany	
Prof. S. (Suresh) Shrivastava	Canada	
Prof. L. (Leopold) Skerget	Slovenia	
Prof. J. (Jan) Sladek	Slovakia	
Prof. Z. (Zhigang) Suo	USA	
Prof. A.A.(Anton) v. Steenhoven	Netherlands	
Prof. E.S. (Erdogan) Suhubi	Turkey	
Prof. D.M. (Dragoslav) Sumarac	Serbia	
Prof. G. (Gwidon) Szefer	Poland	
Prof. J.N. (Jens Nørkær) Sørensen	Denmark	
Prof. V. (Vitauts) Tamuzs	Latvia	
Prof. T. (Tomomasa) Tatsumi		Member-at-Large
Prof. A. (André) Thess	Germany	
Prof. E.O. (Ernie) Tuck	Australia	
Prof. G. (Goran) Turkalj	Croatia	
Prof. K. (Koji) Uetani	Japan	
Prof. D.V.H. (Dirk) Vandepitte	Belgium	
Prof. N. (Nguyen) Van Diep	Viet Nam	
Prof. F. (Furio) Vatta	Italy	
Prof. W.-C. Wang	China-Taipei	
Prof. E. (Eiichi) Watanabe	Japan	
Prof. G. (Graham) Weir	New Zealand	
Prof. L. (Leen) van Wijngaarden		Member-at-Large
Prof. W. (Wei) Yang	China	Chair WP-7
Prof. J.Y. (Jung Yul) Yoo	Republic of Korea	
Prof. T.X. (Tongxi) Yu	China-Hong Kong	
Prof. S. (Stéphane) Zaleski	France	
Prof. A. (Andre) Zaoui	France	
Prof. Z. (Zhemín) Zheng	China	Bureau member
Prof. F. (Franz) Ziegler		Member-at-Large
Prof. J.W. (Jean) Zu	Canada	

Observers to the General Assembly

<i>Name</i>	<i>Country</i>	<i>Representative of</i>
Prof. J.D. (Jan) Achenbach	USA	Chair Solids Symposium Panel
Prof. F. (Faruk) Arinc	Turkey	ICHMT
Prof. M. (Marc) Bonnet	France	IABEM
Prof. M.J. (Malcolm) Crocker	USA	IIAV
Prof. S.N.Y. (Samir) Gerges	Brazil	ICA
Prof. R.B. (Richard) Hetnarski	USA	ICTS
Prof. G.A. (Gerhard) Holzapfel	Sweden	Chair WP-6
Prof. P. (Patrick) Huerre	France	EUROMECH Chair Fluids Symposium Panel
Prof. P. (Pierre) Ladevèze	France	Chair WP-5
Prof. P.F. (Paul) Linden	USA	Chair WP-8
Prof. P. (Peter) Lugner	Austria	IAVSD
Prof. R.M. (Robert) McMeeking	USA	ICF Chair WP-4
Prof. R. (René) Moreau	France	HYDROMAG
Prof. S.W. (Soo Woo) Nam	Canada	ICM
Prof. J.T. (John Tinsley) Oden	USA	IACM
Prof. F. (Friedrich) Pfeiffer	Germany	Chair WP-2
Prof. H. (Harold) Ramkissoon	West Indies	CACOFD
Prof. G. (George) Rozvany	Hungary	ISSMO
Prof. B.A. (Bernhard) Schrefler	Italy	CISM

Members of the Congress Committee

*Year indicates end of term

<i>Member</i>	<i>Country</i>	<i>Year*</i>	<i>Remarks</i>
Prof. H. (Hassan) Aref	USA	2008	Member of XCCC
Prof. N. (Nadine) Aubry	USA	2008	
Prof. D.(Dominique) Barthès-Biesel	France	2008	
Prof. M.P. (Martin) Bendsøe	Denmark	2008	Member of XCCC Representative of ISSMO
Prof. D.E. Beskos	Greece	2010	
Prof. D.H. (Dick) van Campen	Netherlands	2008	
Prof. A. (Alberto) Carpinteri	Italy	2008	
Prof. G.-D. (Gengdong) Cheng	China	2008	
Prof. D. (David) Durban	Israel	2008	
Prof. F. (Fernand) Ellyin	Canada	2010	Representative of ICM
Prof. L.B. (Ben) Freund	USA	2008	President Member of XCCC
Prof. I.G. (Irina) Goryacheva	Russia	2008	
Prof. P. (Peter) Gudmundson	Sweden	2008	
Prof. M.A. (Michael) Hayes	Ireland	2010	Representative of ISIMM
Prof. C.T. (Carl) Herakovich	USA	2010	
Prof. T. (Tutomu) Kambe	Japan	2008	
Prof. B.L. (Bhushan) Karihaloo	UK	2008	Representative of ICF
Prof. A. (Alfred) Kluwick	Austria	2010	
Prof. T.A. (Tomasz) Kowalewski	Poland	2008	Member of XCCC
Prof. E.J. (Edwin) Kreuzer	Germany	2010	
Prof. S. (Stelios) Kyriakides	USA	2008	
Prof. P. (Pierre) Ladevèze	France	2008	
Prof. L.G. (Gary) Leal	USA	2008	Representative of ICR
Prof. J.B. (Jean-Baptiste) Leblond	France	2010	
Prof. F. (Fernando) Lund	Chile	2008	
Prof. P.A. (Peter) Monkewitz	Switzerland	2008	
Prof. N.F. (Nikita) Morozov	Russia	2010	
Prof. N. (Nigel) Peake	UK	2010	
Prof. T.J. (Timothy) Pedley	UK	2008	Secretary of XCCC
Prof. B.A. (Bernhard) Schrefler	Italy	2010	Member of XCCC Representative of CISM
Prof. A. (André) Thess	Germany	2008	
Prof. E.O. (Ernie) Tuck	Australia	2010	
Prof. V. (Viggo) Tvergaard	Denmark	2008	

<i>Member</i>	<i>Country</i>	<i>Year*</i>	<i>Remarks</i>
Prof. M.G. (Manuel) Velarde	Spain	2010	
Prof. G. (Genki) Yagawa	Japan	2010	

Members of the Symposia Panels

In 1977 the Bureau of IUTAM set up two panels charged with the duty of scanning proposals made for IUTAM Symposia in the fields of fluid and solid mechanics. In 1992 that duty was extended to include scanning of proposals for IUTAM Summer Schools.

Symposia Panel for Fluid Mechanics:			
<i>Member</i>	<i>Country</i>	<i>Year*</i>	<i>Remarks</i>
Prof. P. (Patrick) Huerre	France	2008	Chair
Prof. D. (Dan) Henningson	Sweden	2008	
Prof. L.G. (Gary) Leal	USA	2008	
Prof. K. R. (Katepalli) Sreenivasan	Italy	2010	
Prof. M.A. (Michael) Stiasnie	Israel	2010	
Symposia Panel for Solid Mechanics			
<i>Member</i>	<i>Country</i>	<i>Year*</i>	<i>Remarks</i>
Prof. J.D. (Jan) Achenbach	USA	2008	Chair
Prof. W. (Wolfgang) Ehlers	Germany	2008	
Prof. G. (Gábor) Stépan	Hungary	2010	
Prof. V. (Viggo) Tvergaard	Denmark	2008	
Prof. J. (John) Willis	UK	2008	

*Year indicates end of term

Members of the Working Parties

Based on the assessment of IUTAM, the General Assembly agreed in Cambridge, UK (August 2002) 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. A pdf file of the latest

version of this report can be downloaded from the IUTAM website
(<http://www.iutam.net/iutam/Organization/index.php/12>).

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

WP-1: Non-Newtonian Fluid Mechanics and Rheology

Members: Prof. L.G. (Gary) Leal, USA (chair); Prof. A.N. (Antony) Beris;
Prof. J. R. A. (Anthony) Pearson, UK; Prof. T. (Tam) Sridhar, Australia;
Prof. D. (Dimitri) Vlassopoulos, Greece; Prof. H. (Hiroshi) Watanabe, Japan

WP-2: Dynamical Systems and Mechatronics

Members: Prof. F. (Friedrich) Pfeiffer, Germany (chair); Prof. F.L. (Felix) Chernousko,
Russia; Prof. R.S. (Robin) Sharp, UK; Prof. M. (Masayoshi) Tomizuka, USA;
Prof. H.Y. (Hiroshi) Yabuno, Japan

WP-3: Mechanics of Materials

Members: Prof. C.T. (Carl) Herakovich, USA (chair); Prof. O. (Olivier) Allix, France;
Prof. T. (Tatsuo) Inoue, Japan; Prof. S. (Stelios) Kyriakides, USA; Prof. Y. (Yulong) Li,
China

WP-4: Materials Processing

Members: Prof. R.M. (Robert) McMeeking, USA (chair); Prof. S. (Shigeo) Asai, Japan;
Prof. Y. (Yves) Brechet, France; Prof. R. (René) Moreau, France;
Prof. A. (André) Thess, Germany; Prof. C.L. (Charles) Tucker III, USA

WP-5: Computational Fluid and Solid Mechanics

(this WP acts as link between IUTAM and IACM)

Members: Prof. P. (Pierre) Ladevèze, France (chair); Prof. E. R. (Eduardo) de Arantes
e Oliveira, Portugal; Prof. J. (Jacob) Fish, USA; Dr. S. R. (Sergio) Idelsohn, Argentina;
Prof. J. T. (Tinsley) Oden, USA, Prof. M.W. (Mingwu) Yuan, China

WP-6: Biomechanics

Members: Dr. G.A. (Gerhard) Holzapfel, Austria (chair); Prof. D. (Dominique) Barthès-
Biesel, France; Prof. J.E. (Joan) Bechtold, USA; Prof. R.W. (Ray) Ogden, UK;
Prof. K. (Kazuo) Tanishita, Japan

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

Members: Prof. W. (Wei) Yang, China (chair); Prof. F. (Fernand) Ellyin, Canada;
Prof. Y. (Yonggang) Huang, USA; Dr. G. (Graham) Weir, New Zealand

WP-8: Geophysical and Environmental Mechanics

Members: Prof. P.F. (Paul) Linden, USA; Prof. H. (Hervé) Le Treut, France;
Prof. J.W. (John) Rudnicki, USA; Prof. J. Srinivasan, India; Dr. P. (Luis) Thomas,
Argentina

WP-9: Education in Mechanics and Capacity Building

Members: Prof. H. (Hassan) Aref, USA (chair); Prof. L. (Luiz) Bevilacqua, Brazil; Dr. I. (Igle) Gledhill, South Africa; Prof. H. (Haiyan) Hu, China; Prof. K.R. (Katepalli) Sreenivasan, Italy

Donations in 2007

Donations given to IUTAM Symposia are recorded under the heading “Financial Support” of the Reports of Symposia and Summer Schools held in 2007.

The following events were accepted for co-sponsorship:

- Fifth International Conference on Nonlinear Mechanics (ICNM-V) (Shanghai, China)
- Euler Equations: 250 Years on (Aussois, France)
- International Summer School on Sea Ice (Longyearbyen, Norway)

IUTAM Representation in ICSU and its Scientific Committees

<i>Acronym</i>	<i>Organization/Scientific Committee</i>	<i>Representative of IUTAM</i>
ICSU	International Council for Science	Prof. L.B. Freund
COSPAR	Committee on Space Research	Prof. G. G. Chernyi
SCOPE	Scientific Committee on Problems of the Environment	Prof. P.F. Linden
SCOR	Scientific Committee on Oceanic Research	Prof. M. Stiassnie

Reports of IUTAM Symposia held in 2007

07-1 IUTAM Symposium on Relation of Shell, Plate, Beam and 3D Models Tbilisi, Georgia, April 23 - April 28, 2007

a) Scientific Committee

Philippe G. Ciarlet (Hong Kong), Anatoly Gerasimovich Gorshkov (Russia), Jorn Hansen (Canada), George V. Jaiani (Georgia, Chair), Reinhold Kienzler (Germany), Herbert A. Mang (Austria), Paolo Podio-Guidugli (Italy), Gangan Prathap (India), Dick H. van Campen (Netherlands, IUTAM Representative)

b) Short summary of scientific progress achieved

During the sessions, the contributions of the authors were discussed in a lively, thorough but friendly atmosphere. New results were emphasized and relations to established theories were elaborated. Especially the Round Table provided a good opportunity to discuss matters in a broader context. Different approaches and different points of view to the same or similar problems were compared and evaluated. In this sense, the symposium was very successful by stimulating further research and mutual interactions.

c) Countries represented and number of participants

Austria (1), Armenia (5), Bulgaria (1), Canada (2), Georgia (20), Germany (8), Italy (4), Netherlands (1), Poland (1), Russia (1), Romania (1), Switzerland (1), Turkey (2), UK (1), Ukraine (1).

d) Publication of Proceedings of the Symposium

Twenty papers have been submitted for publication in the Proceedings.

e) Financial supports

The IUTAM grant for this symposium is gratefully acknowledged.

f) Scientific program

Monday, April 23

Opening Lecture

Bojarski Bogdan (Poland). *Life and scientific activity of Ilia Vekua*

Tuesday, April 24

- Mang, Herbert A.**; Aigner E.; Lackner R.; Eberhardsteiner J.; Piegl M.; Wistuba M.; Blab R. *Multiscale assessment of low-temperature performance of flexible pavements*
- Aghalovyan, Lenser A.** *An asymptotic method of solving three-dimensional boundary value problems of statics and dynamics of thin bodies*
- Altenbach, Holm**; Johannes, Meenen, *On the different possibilities to derive plate and shell theories*
- Bagdoev, Alexander; **Safaryan, Yuri**, *3D investigation of bending free vibrations in ferromagnetic rectangular free supported plates*
- Birsan, Mircea**, *Recent developments in the theory of Cosserat elastic shells and applications*
- Duduchava, Roland**, *Partial differential equations on hypersurfaces and shell theory*
- Chipot, Michel**, *On anisotropic singular perturbations problems*
- Hansen, Jorn S.**, *A hierarchical beam and plate modeling theory based on homogenization*
- Jaiani, George**, *Physical and mathematical moments and analysis of peculiarities of setting of boundary conditions for cusped shells and beams*

Thursday, April 26

- Belubekyan, Vagharshak**, *Stability of a rectangular plate with account of transverse shear deformations*
- Lorenzo, Freddi**, *Variational dimension reduction in non linear elasticity: a Young measure approach*
- Meunargia, Tengiz**, *The method of a small parameter for I. Vekua's nonlinear and nonshallow shell models*
- Bagdoev, Alexander**; Vardanyan, Anna; Vardanyan, Sedrak, *The analytical and numerical investigation of free bending vibrations of ferromagnetic cylindrical shell by exact space treatment*
- Chinchaladze, Natalia**, *Vibration of an elastic plate under action of an incompressible fluid*
- Gavrilova, Elena**, *Joint vibrations of a rectangular shell and gas in it*
- Kienzler, Reinhold**; Bose D. K., *Material conservation laws established within a consistent plate theory*
- Ogumanam, Donatus C.D.**; McLean C.; Hansen Jorn S., *The extension and application of the hierarchical beam theory to piezoelectrically actuated beams*
- Shavlakadze, Nugzar**, *Problems of the mathematical theory of elasticity for plates with elastic inclusions*

Friday, April 27

- Bojarski, Bogdan**, *Primary solutions of general Beltrami equations*
- Paroni, Roberto**, *Thin walled elastic beams: a rigorous justification of vlasov theory*

Schlebusch, Rainer; Zastra, Bernd, *On the simulation of textile reinforced concrete layers by a surface-related shell formulation*

Vashakmadze, Tamaz, *On basic systems of equations of continuum mechanics and some mathematical problems for anisotropic thin-walled structures*

Avalishvili, Mariam; Avalishvili, Gia; Gordeziani, David, *Hierarchical modeling of multistructures.*

Closing Lecture:

Podio-Guidugli, Paolo, *Validation of classical beam and plate models by variational convergence*

Report composed by George Jaiani

**07-2 IUTAM Symposium on Recent Advances in Multiphase Flows:
Numerical and Experimental**

Istanbul, Turkey, June 11 - June 14, 2007

a) Scientific Committee

Andreas Acrivos (USA, chair), Can F. Delale (Canada, Co-chair), John R. Blake (UK), Yoichiro Matsumoto (Japan), Andrea Prosperetti (USA), Martin Sommerfeld (Germany), Stephane Zaleski (France), Leen van Wijngaarden (Netherlands, IUTAM Representative).

b) Short summary of scientific progress achieved

The purpose of this Symposium was to bring together some of the leading researchers in the field of multiphase flow in order for them to present the results of their most recent studies as well as to suggest areas in need of additional attention. Since the subject is of course extremely broad and diverse, it was decided to focus on the flow behavior of suspensions of solid particles, drops & bubbles which occur frequently in a variety of industrial processes as well as in nature. A key objective of the Symposium was to discuss and evaluate the more recently developed experimental techniques as well as the numerous computational methods, both of which aim to probe in detail the structure of such two-phase systems under flow. The reason why such information is needed is that, at present, the design of such systems typically rests on the predictions of model equations, the reliability of which is difficult to assess and is often subject to question. But, since one of the key shortcomings of these model equations is that they rely on closure assumptions which are typically ad hoc, there exists an attractive opportunity to use sophisticated experimental measurements plus direct numerical simulations (DNS) and provide the missing information for developing reliable closure expressions and thereby constructing model equations which are robust.

Significant progress was made in this direction as a result of the presentations and the ensuing discussions among the participants.

c) Countries represented and number of participants

France (6), Germany (3), Greece (1), India (2), Israel (3), Italy (4), Japan (4), Lebanon (1), New Zealand (1), Russia (1), Netherlands (4), Turkey (2), UK (2), USA (22).

d) Publication of Proceedings of the Symposium

A Report on the Symposium will be published early in 2008 in a regular issue of the journal *Physics of Fluids*, together with selected papers from the meeting, all of which will have gone through the standard reviewing process of that journal. In addition, the extended abstracts of all the presentations can be found in the Book of Abstracts "IUTAM Symposium on Recent Advances in Multiphase Flows: Numerical and

Experimental”, edited by Andreas Acrivos and Can F. Delale, Istanbul Technical University, Istanbul, May 2007 (<http://iutam2007.itu.edu.tr>).

e) Financial supports

The following institutions have provided financial support for the Symposium:

- IUTAM (International Union of Theoretical and Applied Mechanics)
- NSF (US National Science Foundation)
- TUBITAK (The Scientific and Technological Research Council of Turkey)
- ITU (Istanbul Technical University)
- ISIK (Isik University)
- KOC (Koc University)

f) Scientific program

11 June 2007

SESSION 1: PARTICULATE FLOWS

Keynote Lecture: Andrea Prosperetti, Quan Zhang, *The Average Stress in Fluid-Particle Flows*

Nina Shapley, Tracey Moraczewski, *Concentration Distribution, Recirculation Length, and Pressure Drop for a Concentrated Suspension Flowing Through an Abrupt Contraction-Expansion*

Roger T. Bonnecaze, Jyoti Seth, Michel Cloitre, *Shear Rheology and Aging of Soft Particle Pastes*

SESSION 2: PARTICULATE FLOWS

Jason E. Butler, Jonathan Bricker, *Rheology and Structure of Concentrated Suspensions of Non-Colloidal Particles Subject to Oscillatory Shear*

Joe Goddard, *Stokesian, Symmetry - Isn't it Grand?*

Francis A. Gadala-Maria, James R. Lisk, Jr., *Rheological Characterization of Extremely Concentrated Suspensions*

Jeffrey F. Morris, Pandurang Kulkarni, *Hydrodynamics of Interacting Particles in Finite-Inertia Shear Flow*

SESSION 3: BUBBLY FLOWS

Keynote Lecture: Gretar Tryggvason, *Direct Numerical Simulations of Bubbly Channel Flows*

Detlef Lohse, *Clustering of Microbubbles and Particles in Turbulent Flow*

Dieter Mewes, Dierk Wiemann, *Numerical Based Prediction of Three-Phase Bubble Column Reactor Operation*

Günter H. Schnerr, Ismail H. Sezal, Steffen J. Schmidt, *3-D Wave Dynamics Driven By Cavitation - Equilibrium Phase Transition Versus Disperse Bubbly Non-Equilibrium Modelling*

SESSION 4: PARTICULATE FLOWS

Alfredo Soldati, Maria Vittoria Savletti, Cristian Marchioli, *From DNS To LES of Heavy Particle Dispersion in Wall-Bounded Turbulent Flows*

Jennifer Sinclair Curtis, Benjamin James, *The Role of Particle Shape on Particle-Phase Stress*

Malika Ouriemi, Pascale Aussillous, Elisabeth Guazzelli, *Erosion and Dune Formation on Particle Beds Submitted to Shearing Flows*

12 June 2007

SESSION 5: PARTICULATE FLOWS

Keynote Lecture: John F. Brady, *Simulation of Suspensions and Granular Media: Wet vs. Dry*

Cyrus K. Aidun, Mehran Parsheh, *Fiber Suspension Flow in a Converging Channel*

Michael Reeks, Yasmine Ammar, David Swailes, *Agglomeration and Breakup of Solid Particles in a Random Symmetric Shear*

SESSION 6: DROPS AND DROP FLOWS

Dominique Barthes-Biesel, Etienne Lac, *Hydrodynamic Interaction of Two Capsules in Simple Shear Flow*

Robert H. Davis, Alexander Zinchenko, *Direct Numerical Simulation of Emulsion Flow Through Porous Media*

Gary Leal, *Experimental and Theoretical Studies of the Effects of Surface Active Additives on Coalescence in Immiscible Polymer Blends*

Shintaro Takeuchi, Takeo Kajishima, Ryuichi Iwata, Yoshihiko Yuki, *Large Scale Multiphase Flow Analysis by an Immersed Boundary Technique Coupled with FEM and VOF for Incorporating Deformable Objects and Multiple Species of Fluids*

Kaichiro Mishima, *Bubble Behavior in a Molten Metal Pool*

SESSION 7: BUBBLES

Keynote Lecture: Werner Lauterborn, Philipp Koch, Robert Mettin, Thomas Kurz, *Experimental and Numerical Techniques in Acoustic Cavitation*

Jacques Magnaudet, Thomas Bonometti, *Silver Street vs. Pembroke Street: The Transition from Spherical Cap to Toroidal Bubbles*

Jean Fabre, Jean-Rémi Turnau, Jean-Baptiste Dupont, *Dynamics of Long Bubbles at Small Eötvös Number*

Morton Denn, John Singh, *Two-Dimensional Bubble and Droplet Motion in a Yield-Stress Fluid*

SESSION 8: DROPS AND DROP FLOWS

Avinoam Nir, Moshe Favelukis, Olga Lavrenteva, Dina Tsemakh, *Dynamics of Non-Newtonian Slender Drops in Viscous Flow*

Stephane Popinet, *Accurate Adaptive Volume-of-Fluid Using Gerris*

Fadl Moukalled, Marwan Darwish, *Recent Developments in Multiphase Flow Algorithms for the Numerical Simulation of Droplet Mixing and Evaporation*

Metin Muradoglu, *A Front-Tracking Method for Computation of Interfacial Flows with Soluble Surfactants*

13 June 2007

Keynote Lecture: Robert Powell, *Experimental Methods for the Study of Multiphase Materials*

SESSION 9: DROPS AND DROP FLOWS

Stephane Zaleski, *Simulations of Jet and Droplet Formation in Droplet Impacts and Atomizing Jets*

Theo Theofanous, *Interfacial Instabilities and Breakup in Intense Multiphase Interactions*

SESSION 10: BUBBLES

Michael Calvisi, Jonathan I. Iloret, John R. Blake, Andrew J. Szeri, *Shock-Bubble Interaction Near a Rigid Surface*

Rob Hagmeijer, Tim Colonius, Keita Ando, *Elements of Statistical Bubble Dynamics*

Gad Hetsroni, *Visualization and Measurements of Explosive Boiling in Micro-Channels*

Can Fuat Delale, Gretar Tryggvason, Selman Nas, *Cylindrical Bubble Dynamics : Exact and DNS Results*

14 June Thursday

SESSION 11: BUBBLY FLOWS

Keynote Lecture: Shu Takagi, Toshiyuki Ogasawara, Masato Fukuta, Yoichiro Matsumoto, *Surfactant Effect on the Lift Force Acting on a Bubble and Bubble Clustering Phenomenon*

Christian Veldhuis, Leen van Wijngaarden, *Forces and Shape Oscillations on Ellipsoidal Bubbles Rising in Water*

John Tsamopoulos, Yannis Dimakopoulos, *Steady Bubble Rise and Deformation in Newtonian and Bingham Fluids and Conditions for Their Entrapment*

SESSION 12: PARTICULATE FLOWS

Prabhu Nott, *The Collective Dynamics of Self-Propelled Particles*

Evgeny S. Asmolov, *Point-Particle Simulations of Shear-Induced Self-Diffusion in a Wall-Bounded Dilute Suspension*

Elisabeth Lemaire, Dima Merhi, *Determination of the Shear-Induced Diffusion Coefficients in a Suspension of Hard Spheres*

Marius Ungarish, Seiden Gabriel, Lipson Steve G., *The Role of Inertial Waves in The Pattern Formation of a Suspension in a Cylinder Rotating about a Horizontal Axis at Small Ekman and Rossby Numbers*

Arie Biesheuvel, Christian Veldhuis, *An Experimental Study of the Regimes of Motion of Spheres Falling or Ascending Freely in a Newtonian Fluid*

Keynote Lecture: Tony Ladd, *Dynamical Simulations of Hydrodynamic Interactions*

SESSION 13: NOVEL FLOWS

Eric S.G. Shaqfeh, David Saintillan, Brendan Hoffman, Eric Darve, *The Dynamics of Colloidal Rod Suspensions Under Induced-Charge Electrophoresis*

Ashok S. Sangani, *Capillary Interactions Among Particles Protruding from a Gas-Liquid Interface*

Mahesh Tirumkudulu, *Coating Flow of Viscous Liquids On a Rotating Vertical Disc*

SESSION 14: PARTICULATE FLOWS

Alan L. Graham, Marc S. Ingber, Shihai Feng, Howard Brenner, *The Analysis of Self-Diffusion and Migration of Rough Spheres in Nonlinear Shear Flow Using a Traction-Corrected Boundary Element Method*

Stathis Michaelides, Zhi-Gang Feng, *Inclusion of Heat/Mass Transfer Computations in DNS Studies for Particle Laden Flows*

Report composed by Andreas Acrivos and Can F. Delale

07-3 IUTAM Symposium on Unsteady Separated Flows and their Control
Corfu, Greece, June 18 - June 22, 2007

a) Scientific Committee

M. Braza (IMFT-CNRS, France, chair), K. Hourigan (Monash University, Australia, co-chair), A. Bottaro (Univ. di Genova, Italy), B.J. Geurts (Univ. of Twente, Netherlands), G.E. Karniadakis (Brown University, USA), C. Norberg (Lund Institute of Technology, Sweden), F. Smith (University College London, UK), F. Thiele (Technische Universität Berlin, Germany), G. Tzabiras (National Technical University of Athens, Greece), A. Kluwick (Univ. of Vienna, Austria, IUTAM Representative).

b) Short summary of scientific progress achieved

The present IUTAM Symposium concerned an important domain of Theoretical and Applied Mechanics nowadays. It focused on the crucial problem of flow separation and to its control. This was the second IUTAM Symposium on this subject, following the symposium in Toulouse, in April 2002.

The present symposium aimed at achieving a unified approach which regroups the knowledge coming from **theoretical, experimental, numerical simulation and modelling** aspects for unsteady separated flows and their control, in respect to incompressible and compressible regimes. The subject areas covered important themes in the domain of the fundamental research as well as in the domain of Applications. They received a great deal of impetus from international research groups, stimulated by major contracts related to this topic, involving main industrial companies especially in Aeronautics in various countries and by heading Government Programs. This symposium brought together the groups of researchers working on the problems related to the understanding, to the prediction and control of unsteady separated flows. The meeting addressed physical aspects of the dynamics of unsteady separation, as well as the state of the art of methods for modelling this kind of flows in high Reynolds numbers. The physical understanding of these dynamics on the purposes of efficient turbulence modelling and of advanced control methods of this class of flows is a serious problem in a number of engineering applications, including aeronautics, aeroelasticity, space and land vehicles.

Scientists working in experimental investigation of unsteady separated flows and those working in the numerical simulation, turbulence modelling and control of these flows attended this Symposium and stimulated the discussion and the advancing in the knowledge of the related physical mechanisms. In this way, the symposium contributed to a better insight of this important category of flows from a fundamental and applied research point of view, by means of a synergy among the three main approaches: theoretical, experimental and prediction methods.

The main objectives of this IUTAM symposium, summarised below, have been fulfilled.

The chairmen and the local organising committee received a great deal of favourable comments from the participants, among whom there were the most outstanding scientists in the field, as well as members of the IUTAM scientific committee. We kept these comments in the archives of the symposium, which has been among few ones that regrouped *seventeen invited key-note lectures*, as well as a targeted industrial round table discussion at the end of afternoon session on 18th June, co-organised by M. Braza and W. Haase, coordinator of the DESIDER (Detached Eddy Simulation for Industrial aerodynamics) European program. The discussion brought together the principal industrial players in aeronautics as well as the academic community of fundamental research. Among the invited lectures of the present IUTAM, two were devoted to provide the major outcomes from federative european research programs in aeronautics, dealing with unsteady separated flows, the DESIDER and the UFAST (Unsteady effects in shock wave induced separation), this last coordinated by P. Doerffer.

The main objectives on which the present symposium focused are listed below:

- Experimental techniques for the dynamics of separation
- Theoretical aspects of flow separation and analytical approaches
- Instability and Transition
- Compressibility effects related to unsteady separation
- Direct and Large Eddy Simulation of unsteady separated flows
- Statistical and hybrid Turbulence Modelling of unsteady separated flows
- Theoretical and industrial aspects of unsteady separated flow control

The oral presentations and posters are presented in the program below. Judging by the response of the participants, the Symposium was highly successful and all the objectives were achieved completely.

e) Countries represented and number of participants

The meeting attracted 140 participants from 12 countries:

Australia, Denmark, France, Germany, Italy, Japan, China, Netherlands, Hungary, Russia, UK, USA.

d) Publication of Proceedings of the Symposium

A volume of abstracts and a CD-Rom with the full papers presented at the symposium had been prepared and distributed to all the participants. The Proceedings are under editing by Springer. A dedicated volume of a selection of the papers presented at this symposium is to be published by in the Journal « Fluids & Structures». This volume is under final preparation.

e) Financial supports

The Symposium was sponsored by the following organisations:

International Union of Theoretical and Applied Mechanics
 Institut de Mécanique des Fluides de Toulouse, UMR 5502 CNRS-INP/ENSEEIH-UPS
 Centre National de la Recherche Scientifique
 European Research Community on Flow Turbulence And Combustion
 The European Commission
 European Aeronautic Defence and Space Company

We are grateful to our sponsors for their contribution to the success of this symposium.

f) Scientific program

Monday 18 June 2007

Session I.1: Experimental techniques for the unsteady flow separation

C.H.K. Williamson (Opening lecture), *Effects of unsteady separated flow phenomena in vortex-induced vibrations*

D. Sumner, H.B. Hemingson, D.M. Deutscher & J.E. Barth, *PIV measurements of the flow around oscillating cylinders at low KC numbers*

A. Fouras, D. Lo Jacono, G. J. Sheard & K. Hourigan, *Measurement of instantaneous velocity and surface topography of a cylinder at low Reynolds number*

Session I.2: Experimental techniques for the unsteady flow separation

T. Leweke, M.C. Thompson, G.J. Sheard, L. Schouveiler & K. Hourigan (**Keynote lecture**), *Unsteady flow around impulsively stopped bluff bodies*

R. Perrin, M. Braza, E. Cid, S. Cazin, P. Chassaing, C. Mockett, T. Reimann & F. Thiele, *Coherent and turbulent process analysis in the flow past a circular cylinder at high Reynolds number*

K. Gumowski, J. Miedzik, S. Goujon-Durand, G. Bouchet, P. Jenffer & J.E. Wesfreid, *Wake behind a sphere: experimental and numerical investigations*

H. Park & H. Choi, *Investigation of aerodynamic capabilities of flying fish in gliding flight*

M. Gohlke, J.F. Beaudoin, M. Amielh & F. Anselmet, *Effect of unsteady separation on an automotive bluff-body in crosswind*

Session II.1: Statistical and hybrid turbulence modeling of unsteady separated flows

T. B. Gatski (Keynote lecture), *Prediction methodologies for non-stationary turbulent flows*

O. Frederich, U. Bunge, C. Mockett & F. Thiele, *Flow prediction around an oscillating NACA0012 at $Re=1000\ 000$*

J.C. Uribe, N. Jarrin, R. Prosser & D. Laurence, *Two-velocities hybrid RANS-LES of a trailing edge flow*

G. Barakos, S. Lawson, R. Steijl & Punit Nayyar, *Assessment of flow control devices for transonic cavity flows using DES and LES*

Tuesday, 19 June 2007

Session III.1: Theoretical aspects & analytical approaches of flow separation

A. Kluwick, S. Braun & E.A. Cox (**Keynote lecture**), *Near critical phenomena in laminar boundary layers*

L. Baranyi, *State curves and flipping for an orbiting cylinder at low Reynolds numbers*

R. Dasgupta & R. Govindarajan, *Study of a lid-driven cavity in an axisymmetric geometry*

U. Ehrenstein & F. Gallaire, *Global low-frequency oscillations in a separating boundary-layer flow*

J.J. Healey, *Axisymmetric absolute instability of swirling jets*

V. Theofilis, *Global instability and control of laminar separation bubbles*

Session III.2: Theoretical aspects & analytical approaches of flow separation

F.T. Smith & N.C. Ovenden (Keynote lecture), *New applications with unsteady flow separation analysis*

R.P. Logue, J.S.B. Gajjar & A.I. Ruban, *Instability of supersonic compression ramp flow*

B. Scheichl & A. Kluwick, *Asymptotic theory of turbulent bluff-body separation: A novel shear layer scaling deduced from an investigation of the unsteady motion*

G.J. Sheard, *Cylinders with elliptical cross-section: Wake stability with variation in angle of incidence*

P. Luchini, F. Giannetti & J. Pralits, *Structural stability of the finite-amplitude vortex shedding behind a circular cylinder*

Session IV.1: Instability and transition

J.E. Wesfreid (Keynote lecture), *Forced wakes*

B. Carmo, S. Sherwin, P. Bearman & R. Willden, *Wake transition in the flow around two circular cylinders in staggered arrangements*

A. de Vecchi, S.J. Sherwin & J.M.R. Graham, *Wake dynamics of external flow past a curved circular cylinder with the free-stream aligned with the plane of curvature*

R. Elakoury, G. Martinat, M. Braza, R. Perrin, Y. Hoarau, G. Harran & D. Ruiz, *Successive steps of 2D and 3D transition in the flow past a rotating circular cylinder at moderate Reynolds numbers*

V.D. Narasimhamurthy, H.I. Andersson & B. Pettersen, *Direct numerical simulation of vortex shedding behind a linearly tapered circular cylinder*

Session IV.2: Instability and transition

M.C. Thompson, K. Hourigan & J. Leontini (Keynote lecture), *Wake transition of oscillating bluff bodies*

P. Fernandes, P. Ern, F. Risso & J. Magnaudet, *Dynamics of oblate freely-rising bodies*

D. Lucor & M.S. Triantafyllou, *Parametric study of the two degree-of-freedom vortex-induced vibrations of a cylinder in a two-dimensional flow*

L. Schouveiler, M.C. Thompson, T. Leweke and K. Hourigan, *Vortex dynamics associated with the impact of a cylinder with a wall*

- K. Atvars, M.C. Thompson & K. Hourigan, *Modification of the flow structures in a swirling jet*
- H. Djeridi, C. Sarraf & J.Y. Billard, *Thickness effect of NACA symmetric hydrofoils on hydrodynamic behavior and boundary layer states*
- A. Mihaiescu, H. Hangan, A. Straatman & J.E. Wesfreid, *Vortex formation in black-step flow*

Wednesday, 20 June 2007

Session V.1: Compressibility effects related to unsteady separation

J.P. Dussauge (Keynote lecture), *Why do shock waves move in separated flows?*

J. Ziefle & L. Kleiser, *Compressibility effects on turbulent separated flow in a streamwise-periodic hill channel - Part I*

J.D. Crouch, A. Garbaruk, D. Magidov & L. Jacquin, *Global structure of buffeting flow on transonic airfoils*

R. Bourguet, M. Braza & G. Harran, *Low-order modeling for unsteady separated compressible flows by POD-Galerkin Approach*

Session V.2: Compressibility effects related to unsteady separation

P. Doerffer (Keynote lecture), *European research on unsteady effects of shock wave induced separation - UFAST Project*

J.C. Robinet, *On the three-dimensionality of shock-wave / laminar boundary layer interaction*

R.A. Humble, F. Scarano & B.W. Van Oudheusden, *Unsteady flow organization of a shock wave/turbulent boundary layer interaction*

J.F. Debieve & P. Dupont, *Dependence between shock and separation in a shock wave/boundary layer interaction*

P. Meliga, P. Reijasse & J.M. Chomaz, *Effect of a serrated skirt on the buffeting phenomenon in transonic afterbody flows*

Session II.2: Statistical and hybrid turbulence modeling of unsteady separated flows

W. Haase (Keynote lecture), *DESider - Detached Eddy Simulation for Industrial Aerodynamics*

R.B. Langtry & P.R. Spalart, *Detached Eddy Simulation of a nose landing-gear cavity*

E. Guilmineau & F. Chometon, *Experimental and numerical study of unsteady wakes behind an oscillating car model*

R. Bourguet, M. Braza, R. Perrin & G. Harran, *Physical analysis of an anisotropic eddy viscosity concept for strongly detached unsteady flows*

Session II.3: Statistical and hybrid turbulence modeling of unsteady separated flows

G. Martinat, M. Braza, G. Harran, A. Sevrain, Y. Hoarau & D. Favier, *Dynamic stall of a pitching and horizontally oscillating airfoil*

R. Elakoury, M. Braza, Y. Hoarau, J. Vos, G. Harran & A. Sevrain, *Unsteady flow around a NACA0021 airfoil beyond stall at 60° angle of attack*

C. Mockett, R. Perrin, T. Reimann, M. Braza & F. Thiele, *Analysis of Detached-Eddy Simulation for the flow around a circular cylinder with reference to PIV data*

Thursday, 21 June 2007

Session II.4: Statistical and hybrid turbulence modeling of unsteady separated flows

P. Sagaut (Keynote lecture), *On the use of LES for flow control: the compressible cavity flow case*

J. Paik, C. Escauriaza & F. Sotiropoulos, *On the coherent dynamics of turbulent junction flows*

S. Schmid, T. Lutz & E. Krämer, *Simulation of the unsteady cavity flow of the stratospheric observatory for infrared astronomy*

M.V. Salvetti, B. Koobus, S. Camarri & A. Dervieux, *Simulation of bluff-body flows through a hybrid RANS/VMS-LES model*

Session VI: DNS and LES of unsteady separated flows

B.J. Geurts (Keynote lecture), *Regularization modeling for large-eddy simulation of turbulent separated boundary layer flow*

O. Marxen & D.S. Henningson, *Direct numerical simulation of the bursting of a laminar separation bubble and evaluation of flow-control strategies*

G. Palau-Salvador, T. Stoesser, J. Fröhlich & W. Rodi, *LES of the flow around two cylinders in tandem*

E. de Martel, E. Garnier & P. Sagaut, *Large Eddy Simulation of impinging shock wave / turbulent boundary layer interaction at $M=2.3$*

L. Georges, J.F. Thomas, G. Winckelmans & P. Geuzaine, *Design and validation of a Large Eddy Simulation methodology for compressible shock-free flows on unstructured meshes*

M. Pino Martin & M. Wu, *On coherent structures and low frequency motions of shock waveturbulent boundary layer interactions via DNS*

F. Richez, I. Mary, V. Gleize & C. Basdevant, *Simulation and modelling of a laminar separation bubble on airfoils*

G.J. Sheard, R.G. Evans, K.M. Denton & K. Hourigan, *Undesirable haemodynamics in aneurysms*

Session I.3: Experimental techniques for the unsteady flow separation

M. Provansal & P. Monkewitz (Keynote lecture), *Vortex shedding dynamics in the laminar wakes of various bluff bodies (cylinders, spheres and cones)*

M.S. Adaramola, D. Sumner & D.J. Bergstrom, *Effect of velocity ratio on the streamwise vortex structures in the wake of a stack*

K.K.Y. Tsang, R.C.K. Leung & R.M.C. So, *Unsteady force measurements of an airfoil undergoing dynamic stall at low Reynolds number*

T. Weier, C. Ciepka & G. Gerbeth, *Coherent structure eduction from PIV data of an electromagnetically forced separated flow*

Session VII.1: Theoretical/Industrial aspects of unsteady separated flow control

C.M. Ho, S. Ho, P.K. Wong & H. Nassef (Keynote lecture), *Control systems with large parameter spaces*

D. Lo Jacono, J.N. Sorensen, M.C. Thompson & K. Hourigan, *Control of vortex breakdown in a closed cylinder with a small rotating rod*

B. Stewart, K. Hourigan, M. Thompson & T. Leweke, *The wake dynamics of a cylinder moving along a plane wall with rotation and translation*

K.W. Cassel, C. Sardesai, S. Braun & A.I. Ruban, *Sub-optimal control of unsteady separation in a channel*

J. Favier, A. Kourta & L. Cordier, *Accurate POD reduced-order models of separated flows*

B. Günther, R. Becker, A. Carnarius, F. Thiele & R. King, *Simulation study of a robust closed-loop control of a 2D high-lift configuration*

S. Jeon & H. Choi, *Linear proportional control of flow over a sphere*

Session VII.2: Theoretical/Industrial aspects of unsteady separated flow control

T. Bewley (Keynote lecture), *Multiscale retrograde estimation and forecasting of chaotic nonlinear systems*

N. Benard, J. Jolibois, M. Forte, G. Touchard & E. Moreau, *Spreading and vectoring of a subsonic axisymmetric air jet by plasma actuator: a preliminary study*

P. Compte, F. Daude & I. Mary, *Simulation of the reduction of the unsteadiness in a passively-controlled transonic cavity flow*

O. Cadot, B. Thiria & J.F. Beaudoin, *Passive drag control of a turbulent wake by local disturbances*

T. Stephens, C. Atkinson & J. Soria, *The effect of zero-net-mass-flux jet geometry on active separation control of a NACA0015 airfoil*

Session VII.3: Theoretical/Industrial aspects of unsteady separated flow control

M. Triantafyllou (Keynote lecture), *Unsteady separated flows and their control*

T.N. Jukes & K.S. Choi, *Active control of a cylinder wake using surface plasma*

D. You & P. Moin, *Active control of flow separation over an airfoil using synthetic jets*

H. Nagib, J. Keidaisch, D. Greenblatt, I. Wygnanski & A. Hassan, *Flow control for rotorcraft applications at flight Mach numbers*

G. Mutschke, T. Weier, T. Albrecht, G. Gerbeth & R. Grundmann, *Electromagnetic control of separation at hydrofoils*

V. Kitsios, A. Ooi, J. Soria & D.You, *A numerical study of ZNMF jet lift enhancement of a NACA 0015 airfoil*

Session VII.4: Theoretical/Industrial aspects of unsteady separated flow control

A. Dauptain, J. Favier & **A. Bottaro (Keynote lecture)**, *Hydrodynamics of beating cilia*

E. Konstantinidis, C. Liang, G. Papadakis & S. Balabani, *Control of the separated flow behind a circular cylinder by low forcing – Experiments and computations*

B. Protas, *Vortex models for feedback stabilization of bluff body wake flows*

P.S. Vavilis & J.A. Ekaterinaris, *Computational investigation of flow control over wings*

POSTERSESSIONS**Posters of session I**

M. Fuchiwaki & K. Tanaka, *Detailed wake structure behind unsteady airfoils and characteristics of dynamic thrust*

S.C. Luo, T.T.L. Duong & Y.T. Chew, *Flow separation of a rotating cylinder*

S.D. Sharma & A.A. Kumar, *Unsteady flow behind a blunt based POD model*

Poster of session II

I.A. Fedorchenko, N.N. Fedorova & U. Gaisbauer, *Numerical simulation of non-steady supersonic double ramp flow by URANS Approach*

Posters of session III

F. Alizard & J.C. Robinet, *Influence of 3D perturbations on separated flows*

L. Baranyi, *Orbiting cylinder at low Reynolds numbers*

B.V. Bharati Laxmi & J.S.B. Gajjar, *Global instability computations of separated flow*

K. Debbagh & S. Saintlos Brillac, *A two-dimensional disturbed flows over a flat plate: theoretical and numerical approach*

Posters of session IV

S. Behara & S. Mittal, *Transition of boundary layer on a circular cylinder in uniform flow*

B. Carmo, S. Sherwin, P. Bearman & R. Willden, *Numerical simulation of the flow-induced vibration in the flow around two circular cylinders in tandem arrangements*

R.S. Gioria & J.R. Meneghini, *Three-dimensionalities of the flow around an oscillating circular cylinder*

S. Srigrarom, *Quasi-steady self-excited angular oscillation of equilateral triangular cylinder in 2-D separated flow*

Posters of session V

A. Hadjadj, S. Dubos & G. Ribert, *Large Eddy Simulation of a supersonic turbulent boundary layer at $M=2.25$*

P. Reijasse & L. Boccaletto, *Film cooling mass flow rate influence on a separation shock in an axisymmetric nozzle*

Posters of session VI

J. Hoessler, J.F. Beaudoin & F. Perot, *Unsteady separated flow around the Ahmed body*

J. Yao, O. Mouzoun, Y.F. Yao & P. Mason, *Unsteady RANS Calculation of Flow over Ahmed Car Model*

Posters of session VII

R.E.A. Arndt & M. Wosnik, *Towards the control of cavitating flows*

R.M. Kerimbekov & O.R. Tutty, *Active control of flows with trapped vortices*

M.A. Langthjem & M. Nakano, *A three-dimensional numerical study into non-axisymmetric perturbations of the hole-tone feedback cycle*

A. Orellano & M. Schober, *Flow control in high-speed train applications*

M.R. Soltani, K. Ghobanian, M. Gholamrezaei & M.R. Amiralaie, *Neural network prediction of aerodynamic coefficients of a pitching wing*

M. Vanierschot & E. Van den Bulck, *Flow control of annular jet expansion using cross-flow injection*

Report composed by Marianna Braza

07-4 IUTAM Symposium on Scaling in Solid Mechanics

Cardiff, UK, June 25 - June 29, 2007

a) Scientific Committee

Feodor M Borodich (UK, chair), Philippe Davy (France), Dimitrios Kolymbas (Austria), Wing Kam Liu (USA), Hans Muhlhaus (Australia), Franz-Josef Ulm (USA), Wei Yang (China) and Jüri Engelbrecht (Estonia, IUTAM Representative).

b) Short summary of scientific progress achieved

The symposium focused on theoretical, experimental and computational issues in scaling. Scaling is a rapidly expanding area of research having multidisciplinary applications. These applications include damage accumulation, growth of fatigue cracks, development of patterns of flaws in earth's core or in ice, abrasiveness of rough surfaces, and so on. Scaling methods apply wherever there is similarity across many scales or one need to bridge different scales, e.g. the nanoscale and macroscale. The emphasis in the Symposium was upon fundamental issues such as: mathematical foundations of scaling methods based on transformations and connections between multi-scale approaches and transformations. The opening lecture was given by Professor John W. Hutchinson (Harvard University) who produced some of the most important scaling models in solid mechanics and materials science. His presentation reviewed the developments in the subject and included some fascinating details of the difficulties overcome. Other papers were on state of the art developments in self-similar solutions; fractal models, models involving interplay between different scales, size effects in fracture of solids and bundles of fibres, scaling in problems of fracture mechanics, nanomechanics, geomechanics, contact mechanics and testing of materials by indentation, scaling issues in mechanics of agglomeration of adhesive particles, and in biomimetic of adhesive contact and pharmaceutical systems. A total of 42 oral presentations were delivered over a period of five days. Particularly thought-provoking presentations were given by Professors Zdenek P. Bazant (Northwestern University, USA) and Hans Herrmann (ETH Zurich, Switzerland) who concentrated on energetic probabilistic scaling laws for quasibrittle fracture and scaling issues in fibre models respectively. Very lively discussions were on scaling in contact problems in the sessions chaired by Dr. M.M. Chaudhri (Cavendish Laboratory, University of Cambridge, UK) and Professor Irina Goryacheva (Academy of Sciences, Russia), especially after presentation by Professor Boris A. Galanov (National Academy of Sciences, Ukraine). A lot of exciting new results on interplay between nanometre and meso scales were presented by Professors Robert W. Carpick (University of Pennsylvania, USA), Leon M. Keer (Northwestern University, USA) and S.A. Chizhik (National Academy of Sciences of Belarus). This Symposium on the scaling methods in solid mechanics was attended by leading experts in the field and was judged by the delegates to have succeeded in: attracting stimulating presentations on basic scaling models, encouraging lively and informative discussion, and identifying future goals for the subject.

c) Countries represented and number of participants

The meeting attracted 77 participants from twenty countries (Australia, Belarus, China, Czech Republic, Estonia, France, Germany, India, Italy, Mexico, Norway, Poland, Russia, Spain, Sweden, Switzerland, The Netherlands, Ukraine, UK and USA).

d) Publication of Proceedings of the Symposium

The proceedings of the Symposium will be published by Springer Science and Business Media (former Kluwer Academic Publishers) in 2008. Editor is F.M. Borodich.

e) Financial supports

The Symposium was sponsored by the International Union of Theoretical and Applied Mechanics and the School of Engineering, Cardiff University.

f) Scientific program

Session 1

Opening of Symposium

John W. Hutchinson and Yueguang Wei, *Scaling issues in the fracture of metal/ceramic interfaces*

Stéphane Roux, Y. Charles, F. Hild and D. Vandembroucq, *Universal effective toughness distribution for heterogeneous brittle materials*

Session 2

Feodor Borodich, *Scaling Transformations in Solid Mechanics*

Stephan Rudolph, *Mathematical Foundations of Non-Classical Extensions of Similarity Theory*

Session 3

L. Fradkin, V. Mishakin, N. Alford, A. Dobroskok, A. Linkov and G. Mishuris, *Redirecting slow cracks in PMMA*

E. Pasternak, and A.V. Dyskin, *Multiscale Hybrid Materials with Negative Poisson's Ratio*

H. Askes, I.M. Gitman, A. Simonez and L.J. Sluys, *Modelling of size effects with gradient continuum theories*

Session 4

Arkadi Berezhovski, Jüri Engelbrecht, and Gérard A. Maugin, *Internal variables and scale separation in dynamics of microstructured solids*

Aleksey A. Pichugin and Julius D. Kaplunov, *Higher-order long-wave models for bounded domains*

Session 5

P. Davy and S. Schueller, *Scaling laws during localisation of brittle/ductile systems*

O. Bour, P. Davy, C. Darcel and J.R. de Dreuzy, *Reconstructing the 3D fracture distribution model from core (10 cm) to outcrop (10 m) and lineament (10 km) scales*

B.K. Rajhans, *Propagation of seismic waves in an inhomogeneous medium*

Session 6

Ian Main and Mark Naylor, *Maximum entropy production in earthquake dynamics: spatial order and temporal unpredictability in a complex system*

Dmitry I. Garagash, *Scaling of Physical Processes in Fluid-Driven Fracture*

J  rome Weiss, Pierre Rampal, and David Marsan, *Space and time scaling laws induced by the multiscale fracturing of the Arctic sea ice cover*

Marino Arroyo and Irene Arias, *Anomalous elastic scaling, size effect, and mesoscopic models for the mechanics of multi-walled carbon nanotubes*

Session 7

Robert W. Carpick, *Stick-Slip Friction at the Atomic Scale*

S.A. Chizhik, M.A. Britch, S.V. Syroegkin, and S. Dubovskii, *Scanning Probe Microscopy Data Interpretation for Micro-, Nanocontact Simulation*

Session 8

R. Price, *Scaling mesoscopic measurements of interparticulate interactions to their macroscopic behaviour within pharmaceutical systems*

Session 9

Yong Yee Lim and **M. Munawar Chaudhri**, *Scaling effects in spherical macroindentation and nanoindentation of polycrystalline and single crystals of copper and aluminium*

Boris A. Galanov, *Similarity approach to Hertz type contact problems*

Jorge Alcala, *Continuum finite element simulations of sharp indentation experiments across the material length scales: fcc metals*

Session 10

Irina Goryacheva, *Multiscale modelling in contact mechanics*

Chad S. Korach, *Analysis of near-surface mechanical properties with instrumented indentation area functions determined by atomic force microscopy*

Session 11

Zdenek P. Bazant, *Recent progress in energetic probabilistic scaling laws for quasibrittle fracture*

A. Carpinteri and **S. Puzzi**, *The fractal-statistical nature of size-scale effects*

J. Wang, B. L. Karihaloo and H. L. Duan, *Scaling laws for properties of materials with imperfect interfaces*

Session 12

Srutarshi Pradhan, **Alex Hansen** and Per Christian Hemmer, *Burst Statistics as a Criterion for Imminent Failure*

L.R. Botvina, *Scaling in processes of damage accumulation*

A.V. Dyskin and E. Pasternak, *Scaling of Effective Elastic Characteristics of Generalised Continua*

Tomasz Sadowski and **Eligiusz Postek**, *An influence of the elastic properties of composite components on the mechanical response of polycrystalline structures at yield limit load*

Session 13

Miroslav Vorechovsky, *Statistical length scale in the Weibull strength theory and its interaction with other scaling lengths in quasibrittle failure*

Arash Yavari and Michael P. Wnuk, *Fractal Aspects of Discrete Crack Propagation*

Alexander S. Balankin and **Orlando Susarrey Huerta**, *Fractal geometry and mechanics of randomly folded elasto-plastic sheets*

Session 14

Stanislav N. Gorb, *Biomimetics of attachment devices: what we can learn from evolution?*

Huilong Duan, *Morphological evolution of inhomogeneities due to diffusion and epitaxy*

Session 15

Hans Herrmann, *Some new results on fibre models*

Dmitry A. Onishchenko, *Self-similar structural systems with no unloading and scale-invariant strength distributions*

Leon M. Keer, Binoy Shah, and Feodor M. Borodich, *Scaling and Hierarchy of Cohesive Nanoparticle Aggregates*

Session 16

H. X. Zhu and B. L. Karihaloo, *Size-dependent bending of thin metallic films*

Denis Elaguine and Per-Lennart Larsson, *On indentation and initiation of fracture in glass*

Report composed by Feodor M. Borodich

07-5 IUTAM Symposium on Fluid-Structure Interaction in Ocean Engineering
Hamburg, Germany, July 23 - July 26, 2007

a) Scientific Committee

E.J. Kreuzer (Chair, Germany), G. Delhommenau (France), O.M. Faltinsen (Norway), G. Kapsenberg (The Netherlands), J.O. de Kat (The Netherlands), K.J. Spyrou (Greece), J.M.T. Thompson (UK), A.W. Troesch (USA), N. Olhoff (IUTAM Representative, Denmark)

b) Short summary of scientific progress achieved

The study of gravity driven water waves interacting with fixed or freely floating objects is an active and important field of research in ocean engineering. The accurate prediction of large amplitude ship motions or of marine structures in severe seas is still a delicate problem in the field of fluid-structure interaction. While three-dimensional panel methods have reached the state of maturity in linear sea-keeping analysis, the original problem, governed by strongly nonlinear boundary conditions, is far from being solved efficiently. The principal nonlinearities are associated with the variable wetted surface of the ship hull or the floating body and with the nonlinear hydrodynamic conditions on the free surface. Moreover, marine structures often must be modeled as multibody systems rather than a single body. This causes additional problems due to wave slamming on floating and fixed structures. Furthermore, problems such as coupled structural behavior of submerged or floating systems as well as various wind effects have to be considered for the proper design of offshore systems.

The main aim of the symposium was to gather worldwide leading scientists working in the field of fluid-structure interaction in ocean engineering but also on applications of advanced dynamics of marine structures in order to provide an efficient cross-fertilization between the theoretical and applied science community.

The symposium lasted four days. 31 scientists from 15 different countries presented their newest research results in the following subjects:

- Ocean waves,
- Probabilistic models of sea waves, random seas,
- Fluid-loading on structures including pipes, cables, drill-strings etc.,
- Nonlinear behavior of floating systems,
- Stability and capsizing of ships,
- CFD validation and verification,
- Hydrodynamic loads, esp. slamming.

c) Countries represented and number of participants

The symposium was attended by 40 participants from 15 different countries: Austria (1), Canada (1), China (1), Denmark (2), France (5), Germany (11), Greece (2), Italy (3),

Japan (1), Korea (1), Norway (2), Russia (2), Scotland/UK (3), England/UK (1), USA (4).

d) Publication of Proceedings of the Symposium

The symposium proceeding, edited by E.J. Kreuzer, will be published by Springer Science and Business Media by mid - 2008.

e) Financial supports

The Symposium was supported in part by

- International Union of Theoretical and Applied Mechanics
- Hamburg University of Technology
- Springer Science and Business Media
- Germanischer Lloyd AG
- ThyssenKrupp Marine Systems AG – Blohm + Voss GmbH

f) Scientific program

Monday, July 23

Y. Kim, S.W. Hong, S.Y. Hong, *Water Entry of Three-Dimensional Bodies*

K. Raghavan, **M.M. Bernitsas**, D. Maroulis, *Reynolds Number Effect on Vortex Induced Vibrations*

J. Neugebauer, M. Abdel-Maksoud, M. Braun, *Fluid-Structure-Interaction of Propellers*

B. Gaurier, G. Germain, M. Le Boulluec, E. Giry, E. Fontaine, *Experimental and Numerical Results on VIV and WIO*

R.D. Rajaona, L. Rakotondrajaona, E. Rasolomanana, *On the Lift Forces Acting on an Accelerated/Decelerated Cylinder Beneath a Free Surface*

Š. Malenica, X.B. Chen, I. Senjanović, *Some Aspects of Hydro-Structure Interactions in Seakeeping*

Tuesday, July 24

E.H. Dowell, J. Thomas, K. Hall, R. Kielb, M. Spiker, A. Li, C. Denegri, *A New Solution Method for CFD Models for Unsteady Flows Around Oscillating Bluff Bodies*

H. He, **A.W. Troesch**, M. Perlin, *Hydrodynamics of Damping Plates at Small KC-Numbers*

J.M.R. Graham, T.E. Kendon, *Viscous Damping of Large Floating Structures*

M. Keber, M. Wiercigroch, *A Reduced Order Model for the Study of Vortex-Induced Vibration of a Vertical Off-Shore Riser Oscillating in Lock-In Condition*

B. Horton, X. Xu, M. Wiercigroch, *Effects of Heave Excitation on Rotations of a Pendulum for Wave Energy Extraction*

K.J. Spyrou, I. Tigkas, *Nonlinear Dynamics of Ship Steering Behaviour Under Environmental Excitations*

W. Sichermann, *Seakeeping Performance Analysis by Nonlinear 2D+t Slender-Ship Theory*

E. Kreuzer, M. Markiewicz, **M.-A. Pick**, *A Method for the Model Reduction of a Wave-Excited Floating Body*

U.P. Bulgarelli, **A. Iafrati**, A.A. Korobkin, *Hydrodynamic Loads During Water Entry of a Flat Plate*

H. Sun, O.M. Faltinsen, *Asymmetric Water Entry of a Bow-Flare Ship Section With Roll Angle*

Wednesday, July 25

J. Grue, *Nonlinear Surface Waves Interacting With a Vertical Cylinder. The First Few Steps of a General Method.*

J.P. Bougis, *Nonlinearities and Coupling Effects on Floating Breakwaters Eigenvalues*

C. Hu, M. Kashiwagi, *A CFD Approach for Extremely Nonlinear Wave-Body Interactions: Development and Validation*

G. Rega, S. Sorokin, *Asymptotic Analysis of Linear/Nonlinear Vibrations of Suspended Cables under Heavy Fluid Loading*

A. Steindl, **H. Troger**, *Dimension Reduction of Fluid Conveying Tubes: A Nontrivial Problem*

Thursday, July 26

A. Shermenev, *Nonlinear Wave Equations in Special Coordinates*

K. Ellermann, J. Reimers, *Nonlinear Dynamics of Offshore-Systems in Random Seas*

Y.-S. Wu, C. Tian, *A Non-Linear Hydroelasticity Theory of Ships and its Application*

A. Francescutto, **G. Bulian**, *Large Amplitude Rolling and Strongly Nonlinear Behaviour of Multihull Ships in Moderate Beam Waves*

J.J. Jensen, **P.T. Pedersen**, J. Vidic-Perunovic, *Estimation of Parametric Roll in a Stochastic Seaway*

Q.H. Nguyen, **E. Kreuzer**, *Modelling and Adaptive Control of an Underwater Vehicle System: Multibody System Approach*

A. Korobkin, *Non-Classical Boundary Conditions in Water-Impact Problems*

A. Basmat, *Diffraction of Water Waves by a Vertical Slotted Breakwater*

W. Wu, **L. McCue**, *Melnikov's Method for Ship Motions without the Constraint of Small Linear Damping*

C. Saraf, H. Djeridi, **J.Y. Billard** - *Thickness and Cavitation Effects on Vibrations of Hydrofoils at Large Angle of Attack*

Report composed by Edwin Kreuzer

**07-6 IUTAM Symposium on Swelling and Shrinking of Porous Materials:
From Colloid Science to Pro-Mechanics**
Petrópolis, Brazil, August 6 - August 10, 2007

a) Scientific Committee

Prof. Marcio Arab Murad (National Laboratory for Scientific Computing, Chair), Prof. Olivier Coussy (Institut Navier Laboratory of Materials and Structures of Civil Engineering), Dr. Alfred Delville (CRMD-CNRS Université d'Orleans), Prof. Wolfgang Ehlers (University of Stuttgart, Institut für Mechanik), Prof. Antonio Gens (Departamento de Ingenieria del Terreno), Dr. Jacques Huyghe (Eindhoven University of Technology, Dept. of Mechanical Engineering) Prof. George W. Scherer (Princeton University, Dept. Civil Engineering & Operations Research), Dr. John Sherwood (Schlumberger Cambridge Research), Prof. Dick H. Van Campen (Eindhoven University of Technology Mechanical Engineering, IUTAM Representative)

b) Short summary of scientific progress achieved

This IUTAM symposium focused upon bringing together people working on computational modeling of swelling and shrinking and its relation with electro-chemo-mechanical coupled phenomena in porous media. The lectures were presented by experts in the fields of Geo-mechanics, Biomechanics and Colloid Science who discussed both microscopic and macroscopic approaches and modern up-scaling techniques such as Mixture Theories, Perturbation techniques, Homogenization, Volume Averaging procedures, Molecular Dynamics, and Monte Carlo simulations. The bridging between the fields of colloid science and modern porous media theories have built-up a fruitful environment and provided guidelines for solving multiscale problems which naturally arise in the field.

c) Countries represented and number of participants

The meeting attracted 70 participants from 15 countries: Australia, Brazil, Canada, France, Germany, Italy, Japan, The Netherlands, Sweden, Spain, United Kingdom and United States.

d) Publication of Proceedings of the Symposium

The proceedings were published containing the abstracts of the lectures.

e) Financial supports

The symposium was sponsored by the following organizations:

- International Union of Theoretical and Applied Mechanics.
- National Laboratory of Scientific Computing (LNCC)
- Brazilian Oil Company PETROBRAS

- State Research Foundation (FAPERJ)
- Federal Research Agency (CNPq)

f) Scientific program

Monday (06/08)

Alan Grodzinsky, *Cartilage Tissue Engineering in Self-Assembling Peptide Scaffolds: Importance of Matrix Molecular Nano-Mechanics, Cell Mechanics, and Chondrocyte Mechanobiology*

Alfred Delville, *Molecular modeling of confined liquids: an application to clay hydration and swelling*

Wolfgang Ehlers, *Swelling and Osmosis of Chemomechanically Active Materials*

Pierre M. Adler, *Coupled phenomena in porous media*

John H. Cushman, *Modeling Desiccation-Cracking and Flow and Transport in Shrinking Soils with Application to Desertification*. Lecture delivered by co-author Lynn Schreyer-Bennethum (University of Colorado, USA).

J. Carlos Santamarina, *Particle Dissolution: Effects on K_0*

Kai Kristiansen, *Experimental investigation of the dissolution of quartz by muscovite mica surfaces: implications for pressure solution*

F. Thomas, *The anisotropy and charge heterogeneity of smectite clay: keys to their swelling and colloidal behaviour*

Tuesday (07/08)

Roland Kjellander, *Electric double layer interactions beyond Poisson-Boltzmann - an overview*

Christophe Labbez, *The Cement Cohesion: an Affair of Electrostatics*

Jean-Francois Dufreche, *Coarse-Graining for Montmorillonite Clay*

Tomasz Hueckel, *Reactive mineral mass removal or transformation, chemo-plasticity and deformation of sediments*

Claudio Tamagnini, *Experimental and numerical study of electrokinetic processes in an unsaturated clayey silt*

Henri Van Damme, *About the continuity of hydration and swelling in the unsaturated and saturated states in clays, muds and shales*

Eduardo M. R. Fairbairn, *Numerical modeling of alkali-silica reaction: 3D simulation of a real gravity dam*

David Smith, *Micromechanical approach to quantify disjoining chemomechanical pressures of montmorillonite clay*. Lecture delivered by co-author Guillermo A. Narsilio (University of Melbourne, Australia).

Frederico W. Tavares, *Ion-Specific Thermodynamics Properties For Aqueous Proteins*

Franck Plouraboué, *Attraction Between two surfaces in electrolyte with Stern layers*

Marcelo Sanchez, *Behaviour of a clay barrier submitted to heating and hydration*

Leonardo do N. Guimarães, *Formulation and validation of a coupled THMC model for unsaturated expansive clays*

Cláudio F. Mahler, *Considerations of the shrinking properties of a soil used as liner and cover system of a landfill*

Wednesday (08/08)

Olivier Coussy, *Poromechanics of Confined Crystallization*

Eduardo E. Alonso, *Heave of claystones induced by gypsum crystallization*

Joachim Dzubiella, *Explicit and implicit modeling of nanobubble formation in hydrophobic confinement*

Younane Abousleiman, *Incorporating Electrokinetic Effects in the PoroChemoelastic Inclined Wellbore Formulation and Solution*

Russell Ewy, *Shale Swelling Under Different Conditions, and the Contributions of Water and Ion Transfer*

Sergio A. B. da Fontoura, *On the interaction between drilling fluid and intact, saturated, tertiary, offshore shales*

Emmanuel Trizac, *Coupling between screening properties and colloid anisotropy: from colloidal molecular crystals to clay suspensions*

Guillermo A. Narsilio, *Electro-diffusive multi-ionic transport: from the microscale to the macroscale*

Yan Levin, *A tale of supermagnets, superconductors and ion channels*

Jacques M. Huyghe, *Swelling mechanisms in cartilaginous tissues*

Xian Chen, *A Finite Element Algorithm for Contact Analysis of Charged-Hydrated Materials*

Long-Yuan Li, *Development of multiphasic models for simulating swelling of human corneas*

Thibault Lemaire, *Multiphysical Modelling of fluid transport through Osteo-Articular Media*

Thursday (09/08)

Lynn Schreyer-Bennethum, *Things to Consider when Modeling Flow and Deformation of Swelling Porous Media*

Sully Quintero, *A Two-Scale Model of pH Sensitive Expansive Polymers: Theory, Experiments and Applications in Sensors Development I*

Ranena Ponce, *A Two-Scale Model of pH Sensitive Expansive Polymers: Theory, Experiments and Applications in Sensors Development II*

Bogdan Vernescu, *Two-scale Modeling of Porous Media with Applications to Clays Julien Sanahuja, Creep of a C-S-H gel: micromechanical approach*

Claude Boutin, *Interpretation of experiments on mixtures of Sand and Kaolin paste in the framework of homogenization*

Per Linse, *Why do cross-linked polyelectrolyte gels swell and how to shrink them*

Reghan J. Hill, *Electrokinetics and micro-mechanics of hydrogel nano-composites*

Éder D. de Oliveira, *Contributions to the Thermodynamics of Polymer Hydrogel Systems*

Pierre Turq, *Dynamics of water and ions in montmorillonite clays by microscopic simulation and quasi-elastic neutron scattering.*

H. C. Greenwell, *Understanding Interactions Between Swelling Inhibitors and Clays – A Molecular Dynamics Study*

Fernando Luís Barroso da Silva, *Peculiarities in molecular mechanisms related to the formation of complexes of interest in industries and Biosciences*

Friday (10/08)

Sidarta A. Lima, *Multiscale modelling of pH-dependent flows in clays*

Didier Stemmelen, *Transport model for proton exchange membranes of fuel cell*

Fernando P. Duda, *A Continuum Model for Deformation, Degradation and Diffusion in Gibbs Solids*

Christian Moyne, *Three-Scale Modelling of Swelling Clays: Dual Porosity Approach*

Report composed by Marcio Murad

07-7 IUTAM Symposium on Advances in Micro- and Nanofluidics
Dresden, Germany, September 6 - September 8, 2007

a) Scientific Committee

N.A. Adams (Chairman, Technical University of Munich, Germany), K. Jacobs (Saarland University, Germany), P. Koumoutsakos (ETH, Switzerland), E. Shaqfeh (Stanford University, USA), Ajay K. Sood (Indian Institute of Science, India), H. Stone (Harvard University, USA), Patrick Tabeling (Directeur de recherches au CNRS, France), C. Cercignani (Politecnico di Milano, Italy, IUTAM representative)

b) Short summary of scientific progress achieved

Micro- and nanofluidic technologies have experienced a rapid development over the past years.

Since the physics of fluids at the micro- and nano-scale can be quite different from that at the macro scale, many new questions have been studied and new modeling and simulation tools have been developed. This IUTAM Symposium served to promote discussions between researchers active in the field, provided a review of the state-of-the-art, and helped to identify important future research topics.

The symposium provided a basis for discussion and exchange of new concepts and ideas within the international scientific community. Flows at micro scales are dominated by surface effects and by interactions with immersed particles or structures. These effects and interactions frequently are expressed on meso-scopic length and time scales and can not be represented by a macro-scale or continuum description in a straightforward manner. The description by molecular dynamics is infeasible for reaching sufficient time and length scales. Meso-scale modeling, however, requires experimental and numerical investigations and theoretical modeling.

The program of the symposium was organized in 12 sessions about

- Multi-scale particle methods for numerical simulations
- Liquid-wall interactions and modeling approaches
- Modeling of immersed nano-scale structures such as macromolecules
- Organized flow behavior at micro- and nano-scales
- Methods for control of micro- and nano-scale flows

A total of 28 talks was presented and lively discussed within the 2.5 working days of the symposium. Besides the presentations and discussions in the scientific program there was time for social interaction during the conference dinner.

c) Countries represented and number of participants

The meeting attracted 28 fully registered participants from 12 different countries:

Australia (1), Denmark (1), Finland: (1), Germany (8), Greece (2), Italy (1), Japan (2), Netherlands (3), Spain (3), Sweden (1), Switzerland (2), USA (2). Unfortunately, there were a few problems with processing visas that resulted in 2 cancellations (Iran (1) and Russia (1)).

d) Publication of Proceedings of the Symposium

The proceedings of the symposium will be published by Springer in late 2008. Editors are N. A. Adams, X. Y. Hu and M. Ellero.

e) Financial supports

The Symposium was supported by International Union of Theoretical and Applied Mechanics (IUTAM)

f) Scientific program

September 7th

Invited Lecture

Jens Walther - *Computational nanofluidics - multiscale problems and solutions*

Session T1: General Aspects

E. M. Kotsalis, and P. Koumoutsakos - *Coupling atomistic and continuum descriptions using dynamic control*

Manuel Torrilhon - *Regularized 13-moment-equations for micro-Flows*

J.M. Sanchez Sanchez, R. Rodrigo Fernandez - *Small scale cavitation model*

Session T2: Micro-channel flows (1)

Jens Harting and Christian Kunert - *Roughness induced boundary slip in microchannel flows*

F. Sofos, T. Karakasidis, and A. Liakopoulos - *Variation of transport properties across nanochannels: a study by non-equilibrium molecular dynamics*

Jeanette Hussong, Jerry Westerweel, Ralph Lindken - *Study on the flow physics of a T-shaped micro mixer*

Md Ashraf Ali and Lyazid Djenidi - *Lattice Boltzmann simulation of pulsed jet in T-shaped micromixer*

Session T3: Micro-channel flows (2)

Nathaniel D. Robinson - *Electrochemical control of the surface energy of conjugated polymers for guiding samples in micro- and nano-fluidic systems*

Salvatore Cito, Jordi Pallares, Ioanis Katakis - *Wall mass transfer rates in capillary-driven flow in micro-channels*

Takeshi Furukawa - *Clarification and control of micro-plasma flow with wall interaction*

September 7th, Friday**Invited Lecture**

Jongyoon Han - *Nanofluidic filters for biosample preparation: Science and Engineering*

Session F1: Complex fluids (1)

Katrin Günther, Kristin Laube, and Michael Mertig - *Dynamic fluctuations of tethered DNA molecules in a steady shear flow*

Fathollah Varnik - *Two dimensional lattice Boltzmann studies of the effects of wall roughness/channel design on flows at moderate Reynolds numbers*

Session F2: Complex fluids (2)

O. Bäumchen, R. Fetzer and K. Jacobs - *Impact of the solid/liquid interface on the flow dynamics of thin polymer films*

K. Kindler - *Micro-Particle Image Velocimetry Applied to Rayleigh-Bénard Convection in an oil-continuous Microemulsion*

Jeffrey Guasto, Peter Huang and Kenneth Breuer - *Measurement and Simulation of Near-Wall Colloidal Behavior*

Session F3: Complex fluids (3)

W. Kowalczyk, B. E. Zima, A. Delgado - *Experimental and theoretical approach for analysis of a flow induced by microorganisms existing on a surface of Granular Activated Sludge*

José A. Moriñigo and José Hermida Quesada - *Simulation of High-Speed Flow in Micro-Rockets for Space Propulsion Applications*

John C. Wells - *Modeling normally-loaded elasto-hydrodynamic contacts in liquid*

Session F4: Gaseous flows

E.A.T. van den Akker, A.J.H. Frijns, A.A. van Steenhoven - *Analytical solution of the density profile for a gas close to a solid wall*

Stelios Varoutis and Dimitris Valougeorgis - *Estimation of the Poiseuille number in gas flows through rectangular nano- and micro-channels in the whole range of the Knudsen number*

Carlo Cercignani and Silvia Lorenzani - *Gas rarefaction effects in MEMS*

September 8th, Saturday**Invited Lecture**

Marco Ellero - *Fluid-particle methods for microfluidics*

Session S1: Numerical modeling

A.P. Markesteijn and J. Westerweel - *Connecting molecular dynamics and computational fluid dynamics*

A. Soleymani and I. Turunen - *Numerical investigations of liquid mixing in T-Type micromixers*

Xiangyu Hu - *Incompressible SPH for micro-fluidics*

Sergej Litvinov - *Smoothed Dissipative Particle Dynamics simulation of Polymer Chains: Scaling Lows and Uniform Flow Response*

Report composed by N. A. Adams and X.Y. Hu

07-8 IUTAM Symposium on Mechanical properties of Cellular Materials
Cachan, France, September 17 - September 20, 2007

a) Scientific Committee

H.Zhao (France, Chair), N.Fleck (UK, Co-Chair), J. Banhart (Germany), J.Hutchinson (USA), M. Langseth (Norway), F.G.Rammerstorfer (Austria), G. Ravichandran (USA), Z.M.Zheng (China, IUTAM representative)

b) Short summary of scientific progress achieved

Because of the full time allocated to each speaker (40mins), almost all lectures were really excellent and the discussions during the session as well as the coffee breaks were much appreciated and fruitful.

One of the main achievements is the dialogue between the material scientists who make all kind of cellular materials and the mechanical scientists who characterize and model the behavior of those materials. In general, a top material scientist does not go to a mechanical conference and vice-versa. This symposium provided an opportunity of top scientists of both domains to discuss together their concerns. I believe that there will be new cooperation between participants.

Another achievement is the dialogue between mechanical scientists working on dynamic or impact loading (mostly experimental works) and those working on modeling (mostly under static loading). Those two communities have all many things to learn from each others. I

c) Countries represented and number of participants

Austria (2), Canada (1), China (6), France (12), Germany (1), India (1), Japan (2), Netherlands (1), Norway (2), Poland (1), Slovenia (1), Switzerland (4), UK (4) and USA (2).

d) Publication of Proceedings of the Symposium

The Proceedings of the symposium will be published by Springer. A contract between Springer and organizers has been signed. Most of speakers (21/27) have submitted their papers at the beginning of the conference and most of those papers have already been reviewed in site by two referees. All the reviews and revision processes should be achieved before the end of this year.

e) Financial supports

This symposium has been financially supported by following organisms:

- Ecole Normale Supérieure Cachan (ENS Cachan)

- Centre National de Recherche Scientifique (CNRS)
- Association Française de Mécanique (AFM)
- EADS/INNOVAMPUS
- IUTAM

f) Scientific program

Monday 17th September

Y. Conde, S. Soubielle, R. Müller, J.F. Despois, A. Marmottant, R. Goodall, F. Diologent, L. Salvo and **A. Mortensen**, *Non-linear uniaxial deformation of microcellular metals: model systems and simplified analysis*

Dai-Ning Fang, Xiao-Dong Cui, Yi-Hui Zhang, *The Shock Resistant Performance and Wave Propagation Property of Lattice Materials*

H.L. Duan, J. Wang and **B.L. Karihaloo**, *Nano-cellular materials with unusual mechanical and physical properties*

K. Comley and N.A. Fleck, *The high strain rate response of adipose tissue*

Hideo Nakajima, *Mechanical Properties of Lotus-type Porous Metals*

Eric Maire, Olivier Caty, Jerome Adrien, *X ray tomography study of cellular materials. Experiments and modelling.*

M. Mukherjee, K. R. Murthy, F. Garcia-Moreno, U. Ramamurty, **J. Banhart**, *Compressive and Fatigue Behaviour of Alporas Foam studied by X-Ray Tomography*

L.P. Lefebvre, E. Baril, *Mechanical Properties of Titanium Foams with Different Oxygen Concentrations.*

Anthony Burteau, Jean-Dominique Bartout, **Samuel Forest**, Yves Bienvenu, Shadi Saberi, *Open cell nickel superalloy foam for Diesel particle filter applications: from the cell morphology to the elastoviscoplastic behaviour*

Wen-Yea Jang and **Stelios Kyriakides**, *On the crushing of metallic open cell foams*

Dai Okumura, Atsushi Okada, and **Nobutada Ohno**, *Anisotropy in Buckling Behavior of Kelvin Open-Cell Foams Subject to Uniaxial Compression*

Dirk Mohr, *Multi-scale Plasticity models for stable cellular solids*

F. Jouneid and **K. Sab**, *Elastic buckling of two-dimensional random honeycombs: Does a representative volume element exist?*

Pedro Ponte Castañeda and Oscar Lopez-Pamies, *Macroscopic response, microstructure evolution and instabilities in porous elastomers*

T. Daxner, R.W. Tomas, *Mechanical Properties of Semi-Expanded Hollow Sphere Structures*

X. F. Tao, G. K. Schleyer and **Y. Y. Zhao**, *Indentation Tests on Al Matrix Syntactic Foams*

Wednesday 19th September

K.R. Mangipudi and **P.R. Onck**, *Fracture of metal foams*

Dominik Meyer, Hau-Kit Man and **Jan G.M. van Mier**, *Fracture of Foamed Cementitious Materials: A Combined Experimental and Numerical Study*
M.H. Luxner, **H.E. Pettermann**, *Modeling and simulation of highly porous open cell structures — elasto-plasticity and localization versus disorder and defects*
Jean-François Witz, **François Hild** and Stéphane Roux, *Thermomechanical behaviour prediction of crimped mineral wool*

Thursday 20th September

Jilin Yu, Yaodong Liu, Zhijun Zheng, Jianrong Li, *Influences of inertia and material property on the dynamic behavior of cellular metals*

Pattofatto, I. Nasri, H. Zhao, *Analysis of the shock front propagation in a cellular material*

A.G. Hanssen, T. Børvik and **M. Langseth**, *Close-range blast loading of aluminium foam panels: A numerical study*

Y. Girard, *Study of cellular materials under dynamic loading for bird strike application*

Eligiusz Postek, Tomasz Sadowski, *Description of the behaviour of cellular composite with weak filling material*

Ma Hongwei, **Wang Zhihua**, Zhao Longmao, Yang Guitong, *Studies on the Dynamic Behavior of Aluminum Alloy Foams*

Matej Vesenjajak, Andreas Öchsner, Zoran Ren, *Computational modelling of closed- and open-cell cellular structures with fillers*

T. Liu, Z.C. Deng, **T.J. Lu**, *Optimization of actively cooled, pressurized hollow sandwich cylinders with prismatic cores*

Report composed by Han Zhao

07-9 IUTAM Symposium on Multi-Scale Plasticity of Crystalline Materials

Eindhoven, Netherlands, November 05 - November 09, 2007

a) Scientific Committee

Marc Geers (Netherlands, Chair), Esteban Busso (France, Co-chair), Anand Gengdong Cheng (China), Norman Fleck (UK), Samuel Forest (), Erik van der Giessen (Netherlands), Christian Miehe (Germany), Ben Freund (USA, IUTAM Representative)

b) Short summary of scientific progress achieved

Scientific discussions were held and new insights have been developed on the following topics:

- Multi-scale solutions from atomistics to dislocation dynamics up to crystal plasticity
- Size effects in thin metallic films
- Micron and submicron mechanical testing
- Multi-scale aspect of transformation induced plasticity
- Nanon-indentation tests and size effects
- Metallic interfaces mechanisms and modeling, with a particular emphasis on grain boundaries
- Dislocation pile-ups and the modeling thereof
- Size effects in single crystal superalloys
- Enhanced and higher-order crystal plasticity models
- Statistical models for dislocation dynamics and dislocation interactions
- New insights in strain gradient theories, their foundations and applications
- Crack-void interactions

c) Countries represented and number of participants

Austria (1), Belgium (8), Denmark (3), France (8), Germany (6), Greece (1), Hungary (1), Netherlands (27), Poland (1), Spain (2), Sweden (3), UK (4) and USA (11).

d) Publication of Proceedings of the Symposium

The Proceedings of the symposium will be published as a special issue in the Philosophical Magazine (Publisher: Taylor & Francis)

e) Financial supports

The symposium was sponsored by the following organizations:

Corus, EDAX, FEI, GOM, Kammrath & Weiss, MicroNed, NIMR, NLR, Philips, Senang, St Instruments, Struers.

f) Scientific program

Monday November 5th

John W. Hutchinson, Yueguang Wei, *Plasticity enhanced toughness of interfaces: implications from strain gradient plasticity*

Akke S.J. Suiker, Sergio Turteltaub, Denny D. Tjahjanto, *Micro-mechanical modelling of plasticity and damage induced by martensitic transformations in TRIP-assisted carbon steels*

Tom Arsenlis, Moono Rhee, Lin Yang, Meijie Tang, Vasily V. Bulatov, *Constitutive model development using dislocation dynamics*

Roland Logé, M. Bernacki, H. Resk, H. Dignonnet, Y. Chastel, T. Coupez, *Linking plastic deformation to recrystallization in metals, using digital microstructures*

Varvara Kouznetsova, Marc Geers, *Modeling the interaction between plasticity and the austenite-martensite transformation*

Douglas Bamman, David L. McDowell, Jason Mayeur, *An internal variable model of micropolar elastic-viscoplasticity*

Istvan Groma, G. Gyorgyi, P.D. Ispanovity, *Stress screening by dislocations*

Lucia Nicola, Erik van der Giessen, Alan Needleman, *Size effects during compression of passivated micropillars: a dislocation dynamics study*

Joost J. Vlassak, *Plastic deformation of freestanding Cu thin films: The effects of film thickness and passivation conditions*

Martin Idiart, **Norman Fleck**, *Application of strain gradient plasticity to Lüders bands*

Elias C. Aifantis, *On stress/strain gradient theories*

Tuesday November 6

Can Ayas, **Erik van der Giessen**, Alan Needleman, *Dislocation dynamics simulations of the relaxation of intrinsic stress in thin films*

N. André, M. Coulombier, V. De Longueville, D. Fabrègue, T. Gets, S. Hourri, A. Safi, J.-P. Raskin, **Thomas Pardoën**, *Multipurpose on-chip nanomechanical laboratory for testing the size-dependent strength and ductility of submicron metallic films*

Lallit Anand, Suvrat Lele, *A small-deformation strain-gradient theory for isotropic elastic-viscoplastic materials*

Michael Zaiser, “Small is ugly”: *dislocation avalanches, strain bursts, and the limits of formability on the micron scale*

Christian F. Niordson, *On higher order boundary conditions at elastic-plastic boundaries in strain gradient plasticity*

Jaap den Toonder, Boudewijn van Schaik, Vincent Burg, Auke van Dijken, Marcel Brekelmans, Marc Geers, *Micromechanical experiments and simulations of thin free-standing metal films for RF MEMS*

Ron Peerlings, *Deterministic modelling of dislocation pile-up: from discrete to continuum*

N. Osipov, B. Marini, A.-F. Gourgues, F. Nguyen, V. Mounoury, **G. Cailletaud**, *FE modeling of bainitic steels using crystal plasticity*

Tiedo Tinga, Marc Geers, Marcel Brekelmans, *Micromechanical modelling of Nickel base superalloys*

Dierk Raabe, Franz Roters, Nader Zaafarani, Florian Weber, *3D studies on orientation patterning and size effects in nanoscale mechanical tests using 3D tomographic electron microscopy and dislocation density based crystal plasticity finite element simulations*

Wednesday November 7

Alan Needleman, *Large indentation of crystalline solids*

Viggo Tvergaard, Christian F. Niordson, *Size-effects at a crack-tip interacting with a number of voids*

Javier Llorca, Ignacio Romero, Javier Segurado, *An analysis of void growth due to plastic deformation using discrete dislocation dynamics*

William Curtin, M.P. Dewald, *Multiscale modeling of dislocation/grain boundary interactions*

Marc Fivel, *Multiscale modelling of nanoindentation*

Poster session

M.P. Ariza, A. Ramasubramaniam and M. Ortiz, *Discrete crystal plasticity*

O. Aslan and S. Forest, *Crack growth modeling in single crystals based on higher-order continua*

Bart van Binsbergen, Vitoon Uthaisangasuk, Ulrich Prahl, Wolfgang Bleck, *Investigation of damage development in microstructures of dual phase steels using cohesive zone modelling*

C. Rehrl, R. Pippan, S. Kleber, T. Antretter, *Cold and Warm Forming of Polycrystals: The Effect of Crystal Plasticity*

Ekh, M., Grymer, M, Runesson, K, *On the modeling of grain size dependent behavior of polycrystals*

Martin S. Gallegillo, Esteban P. Busso, Ricardo A. Lebensohn, *A multi-scale mechanistic approach to study the microstructure influence on the constitutive behavior of multiphase coatings*

C. Britta Hirschberger, Paul Steinmann, N. Sukumar, *Computational Homogenisation of Inelastic Material Interfaces*

Juliette Chevy, Marc Fivel, Paul Duval, *Dislocation Dynamics in Ice Single Crystals Deformed by Torsion*

Shehzad Saleem Khan, Janin Eiken, Norbert Hort, Ingo Steinbach, Siegfried Schmauder, *Microstructure evolution simulation of magnesium/aluminium alloys using the Phase field method*

Katarzyna Kowalczyk-Gajewska, *Multiscale modelling of intermetallics of lamellar microstructure at finite strains*

Jurij Sidor, Roumen Petrov, Alexis Miroux, Leo Kestens, *Texture development under various strain paths in aluminium alloys*

T. Tinga, M.G.D. Geers, W.A.M. Brekelmans, *Micro-mechanical modelling of single crystal nickel-base superalloys*

Vitoon Uthaisangskuk, Ulrich Prahll, Wolfgang Bleck, *Characterisation of deformability behaviour of multi phase steel using a microstructure based failure modelling*

T. Yalcinkaya, W.A.M Brekelmans, M.G.D. Geers, *Modelling of strain path change induced anisotropy in BCC structured metals*

Vladimir Nosenko, **Sergey Zhdanov**, Gregor Morfill, *Dislocation nucleation and motion observed in a plasma crystal*

Alexei Balmachnov, Varvara G. Kouznetsova, Marc G.D. Geers, *Modeling martensitic transformation with incorporation of interaction between plasticity and transformation*

Stefan Sandfeld, *Numerical Implementation of a 2D Continuum Theory of Curved Dislocations*

Lab market session in the multi-scale lab with about 20 experimental set-ups involving the physical and mechanical analysis of crystalline materials at different length scales with different experimental tools.

Thursday November 8

Samuel Forest, Asmahana Zéghadi, Filip Siska, Franck Nguyen, *Computing the deformation of polycrystalline aggregates with a view to comparison with full field measurements*

Bob Svendsen, Vladislav Levkovitch, Mark Henning, Horst Vehoff, *Multiscale modeling and simulation of experimentally-determined orientation fields in mesocrystals*
Mark A. Tschoop, Garritt Tucker, Jason Mayeur, **David L. McDowell**, *Grain boundary structure, properties and implications for dislocation/disclination mechanics in FCC Metals*

Padubidri J. Guruprasad, **A. Amin Benzerga**, *Modeling micropillar deformation using mechanism-based discrete dislocation plasticity*

Ricardo A. Lebensohn, Carlos N. Tomé, Pedro Ponte Castañeda, *Multiscale modelling of viscoplastic polycrystals using statistical approaches at the mesoscale*

Laurent Stainier, *Meso-scale numerical simulation of plasticity in polycrystalline metals*

Satya Varadhan, Vincent Taupin, Luc Tartar, Anish Roy, Raurabh Puri, Claude Fressengeas, Amit Das, Armand Beaudoin, **Amit Acharya**, *A field theory for mesoscopic dislocation mechanics*

Johan Hoefnagels, Joost Vlassak, *Bauschinger effect in thin metal films on compliant substrates*

Anter El-Azab, Jie Deng, B.C. Larson, *Collective dislocation dynamics and statistical foundation of crystal plasticity theory*

Peter Gudmundson, **Carl F.O. Dahlberg**, *Hardening and softening mechanisms at decreasing microstructural length scales*

Report composed by Marc Geers

Report of the IUTAM Summer School held in 2007

Report on the IUTAM - CISM Summer School on Bone Cell and Tissue Mechanics

Udine, Italy, July 16 - July 20, 2007

a) Organization

The IUTAM summer school on “Bone Cell and Tissue Mechanics” was held at the International Centre for Mechanical Sciences (CISM) at Udine, Italy, from July 16 - July 20, 2007.

b) Lecturers

The summer school was taught by the following lecturers:

- S.C. Cowin - City University of New York, USA
- J.D. Currey - University of York, UK
- M. Doblaré - University of Zaragoza, Spain
- A.J. El Haj - Keele University, UK
- A. Goodship - Royal Veterinary College and Institute of Orthopaedics, University College, London, UK
- B. v. Rietbergen - Eindhoven University of Technology, The Netherlands

c) Summer School Aims and Covered Topics – Scientific Report

The topic

Bone mechanics is considered here to include the mechanical behavior of whole bones as structural elements, the mechanical behavior of bone tissue as a material, the response of bone cells to mechanical and electrokinetic stimuli and the physiological significance of the mechanical behavior. Specialists in orthopaedics, dentistry, biochemistry and molecular and cellular biology as well as biomechanics are involved in the bone cell and tissue mechanics. This topic has only formalized into a distinct discipline in the last thirty years. During this period the salient mechanical properties of bone have been determined, but the salient mechanical properties of bone cells are only now being studied.

Bone remodeling is the primary research area in bone mechanics. Bone remodeling is a term used to describe the renewal and redevelopment of bone tissue as it adapts to altered load bearing. That is to say, in the course of time bone changes its shape, its apparent density, and its stiffness to adapt to the environmental load it experiences. In engineering terminology, bone is an optimum composite and the skeletal system is an optimal structure. The cellular mechanisms that constitute the mechanosensory system in bone

tissue and drive the adaptive remodeling are unknown at the present time, but there are several promising candidates for the mechanosensory system.

The subject of bone mechanics is basic to the design of orthopaedic implanted prostheses such as artificial hips, knees, finger joints, as well as dental implants. The engineering design of these orthopaedic and dental appliances is less than thirty years old and still in a state of evolution. It is a major manufacturing industry.

The goal of this course was to review the entire area of bone cell and tissue mechanics, with an emphasis on bone remodeling. Besides being informative, the course was designed to function as a forum for the exchange of data, philosophy, and ideas across disciplinary divides and so provide further stimulus for a comprehensive approach to the problems of bone mechanics. When this course was first presented in 1987 it drew more people from biological backgrounds than engineering backgrounds; in 2007 we drew mostly people with engineering backgrounds and only a token few with biological backgrounds. However the 2007 engineering attendees found the diversity of the lecturers to be a very favorable factor.

SUBJECT LIST AND LECTURERS-2007

S.C. COWIN —City University of New York, USA

1. Introduction, then some material on Collagen
2. Bone tissue microstructure; bone blood supply and bone hydraulics
4. The mechanosensory system in bone
5. Bone remodeling theories, then cartilage if time permits
6. Friday Q&A
7. Monday Q&A

J.D. CURREY—University of York, ENGLAND

1. 'Form function relationships in whole bones'. E.g. Hollowness, straightness, expansion at ends, various roles of cancellous, sandwich bones
2. 'Composition-mechanical property relations in bone tissue' Stress-strain curve and mechanical properties derived therefrom, Range of composition (mineral-organic-water) The various effects that mineral and porosity have on properties, difference between pre-yield and post-yield
3. 'Histology-mechanical property relations in bone tissue' Hierarchical structure, lamellar, woven, fibrolamellar, secondary remodelling How they are produced and what they mean, mechanically
4. 'The role of microdamage in bone mechanics'. What it looks like, ways of measuring, what it does.

M. DOBLARE—University of Zaragoza, SPAIN

1. Computational models for the prediction of Bone Fracture
2. Damage-based phenomenological models of bone remodeling
3. Mechanistic models of bone remodeling

4. A biologically-based model of bone fracture healing
5. Mechanical effects in bone fracture healing
6. Computational methods in the design of bone prostheses and implants
7. Thursday, Q&A

A. J. El Haj — Keele University, ENGLAND

1. Bone cell biology
2. Differentiation of bone cells and the bone cell lineage
3. Bone development and remodelling
4. Mechanotransduction and bone cell signalling
5. Controlling bone cells by physical forces/Applied cell biomechanics
6. Bone cell apoptosis and cell turnover
7. Wednesday Q&A

A. GOODSHIP - Royal Veterinary College and Institute of Orthopaedics, University College, London, ENGLAND

1. Bone modeling and remodeling
2. The dynamics of mechanically related remodeling
3. Functional adaptation in bone tissue
4. Mechanically related responses in bone cells
5. Mechanically related responses in bone cells (con't)
6. Practical applications, osteoporosis, implant design
7. Tuesday Q&A

B. van Rietbergen—Eindhoven University of Technology, NETHERLANDS

1. Trabecular bone imaging and modeling
2. The mechanical optimality of bone structures and osteoporosis
3. Regulation models for strain-adaptive remodeling at the trabecular level

d) Participants

The course was attended by 79 participants.

e) Publication of Proceedings of the Summer School

There will be no publication.

f) Financial support

The summer school was sponsored by IUTAM and CISM

Report composed by Stephen Cowin

Reports of the IUTAM Working Parties

WP-1 - Non-Newtonian Fluid Mechanics and Rheology

The membership of this WP has been reconsidered. As of 2008 this WP will become active again.

WP-2 - Dynamical Systems and Mechatronics

- 1) There are no changes with respect to the personal structure of WP2.
- 2) Several proposals have been made for IUTAM-Symposia, especially from Japan.

Two initiatives with respect to co-sponsorships were put on the way: Firstly a proposal from Prof. Tomizuka to include a co-sponsorship of IUTAM for an IFAC-Symposium has been approved in the meantime, by you. Secondly, a co-sponsorship with respect to a new MBS-Conference launched by Prof. Schiehlen and others is on the way.

A trial has been made to include the topic of walking dynamics and control into IUTAM08, with not much success. Three introductory lectures could be realized, but no invited lectures (smaller ones). There is too much competition of other very well established Conferences in that area, and Australia is a bit far away for a Conference, so the whole mini-symposium was cancelled (Prof. Pfeiffer, Prof. Yabuno).

All members of WP2 have the one or the other responsibility in national and international institutions. Prof. Chernousko in Committees of two Conferences in Petersburg and Moscow, chief editor PMM, vice-chairman Russian Union of Mechanics. Prof. Sharp IUTAM UK Panel, Prof. Tomizuka in IFAC, Conference Committees and national authorities. Prof. Yabuno in various Conference Committees. Prof. Pfeiffer in IUTAM, GAMM, VDI, CISM.

Report composed by Friedrich Pfeiffer, Chair of WP-2

WP-3 - Mechanics of Materials

The membership of WP-3 has been expanded and now consists of the following members: Olivier Allix (France), Tatsuo Inoue (Japan), Stelios Kyriakides (USA), Yulong Li (China) and Carl Herakovich (USA), Chair.

Activities of the Working Party during the biennium 2006-08 included consultation on four proposals for IUTAM Symposia, one proposal for an IUTAM Summer School, and development of sessions on Mechanics of Foams at ICTAM 2008.

The proposals considered are:

Symposia:

- Theoretical and Computational aspects of Gradient theories by Askes (UK)
- Linking Scales in Computations: From Microstructure to Macro-scale Properties by Cazacu & Belytschko (USA)
- Mechanics of Liquid and Solid Foams by Kyriakides and Kraynik (USA)
- From Generalised Continua to Dislocation Theory –Bridging the Scales. Frameworks, Experimental Methods, Numerical Schemes by Sansour (UK)

Summer School:

- Simulation Based Engineering & Science for Nano Mechanics, Materials and Micro/Nano Manufacturing by Liu (USA)

A meeting of the Working Party was held during ICTAM 2008.

Report composed by Carl T. Herakovich, Chair of WP-3

WP-4 - Materials Processing

This working party covers four main classes of materials: metals, semi-conductors, ceramics and polymers. In each field, the scientific activity is significant and the number of conferences and less formal seminars or colloquia is large. The approach is generally multidisciplinary, so that specialists in materials sciences collaborate with practitioners in fluid or solid mechanics. This has been a pragmatic trend for almost two decades, but, in the field of this WP, it is also a consequence of the development of numerical techniques, which make easier than before the integration of knowledge coming from different disciplines. In addition, international programs oriented towards applications play a significant role in establishing networks among complementary research groups and industries. It is clear that these trends will continue for the foreseeable future.

The polymer processing area is rich in theoretical and applied mechanics content. Topics such as simulation of non-Newtonian fluid flow, theoretical and applied rheology, and the modeling of structure development during crystallization present significant challenges and research opportunities for mechanicians. Research in polymer processing has traditionally centered on continuum mechanics, its relation to polymer physics, and on numerical simulation methods. However, in recent years other aspects of mechanics have begun to have an impact on the area. For instance, nonlinear dynamics is becoming an important tool for analyzing polymer mixing operations, which are now known to be an important application of chaotic advection. Technical meetings and workshops on

polymer processing are sponsored by a number of groups worldwide. Some of these are societies that are dedicated to the subject: The Society of Rheology, the European Society of Rheology, the Japanese Society of Rheology, and the Polymer Processing Society. A few, less-formal groups sponsor important meetings, e.g. the Workshop on Numerical Methods in Non-Newtonian Flow, and the Gordon Research Conference on Polymer Processing. Finally, polymer processing sessions and symposia, and opportunities to discuss polymer processing research in a broader setting, are provided by societies such as ASME, AIChE, and IUPAC, as well as IUTAM.

Ceramics processing presents many opportunities for work in theoretical and applied mechanics and this field is very active. The production and handling of green bodies provides many challenges to those working in the areas of mixing, rheology, viscoplasticity and shape forming. In sintering, problems related to stress coupled mass transport, viscoelasticity, microstructural evolution and high temperature plastic deformation have been tackled with a theoretical and applied mechanics approach. In addition, production methods such as machining and net shape forming have recently commanded the attention of researchers in the theoretical and applied mechanics field. Thus, the area of ceramics processing in connection with theoretical and applied mechanics is very active in terms of meetings and workshops. The theoretical and applied mechanics of the subject is addressed regularly in symposia and conference sessions in the meetings around the world of groups and societies primarily concerned with mechanics, such as the IUTAM itself, EUROMECH, the ASME Applied Mechanics Division, JSME, GAMM and other national organizations. In addition to these activities, organizations with a primary focus on materials science also mount symposia and conference sessions that contain a significant amount of theoretical and applied mechanics addressed towards ceramic processing. These groups include the American Ceramic Society, the European Ceramic Society and the Japanese Ceramic Society plus broadly based organizations such as the Materials Research Society. The wide variety of fora available for theoretical and applied mechanics research in ceramic processing promotes breadth and relevance in the field and ensures effective multidisciplinary approaches. Thus the ceramics area of materials processing in regard to theoretical and applied mechanics has momentum and is in a relatively healthy state.

Report written by Robert M. McMeeking, Chairman of WP-4

WP-5 - Computational Fluid and Solid Mechanics

The main computational event of 2007 was the US National Congress on Computational Mechanics, July 23-26 in San Francisco. This conference drew an international audience and was a great success. Some 1,300 participants came, about 800 of whom were from North America, 290 from Europe, 150 from Asia, 32 from South America, 12 from Africa and 9 from Australia.

The next important meeting for the computational mechanics community will be the 8th World Congress of the IACM (International Association for Computational Mechanics), June 30-July 5, 2008 in Venice, for which more than three thousand papers have been submitted! Thus, the computational mechanics community has the opportunity to attend one international congress each year.

The 2007 meeting of WP5 took place July 25th in San Francisco during the US National Congress on Computational Mechanics. All the members except Y.K. Cheung were present.

First, the working party discussed the rapid evolution of what is called “Computational Mechanics” today and potential important issues for the IACM/IUTAM to promote. A new definition would be welcome, and the WP agrees with the following:

Mechanics is the study of the motion of bodies under the action of forces. It encompasses virtually every phenomenon in the physical universe, from the deformation and flow of solids and fluids, to the motion of electrons around the nuclei of atoms. Computational mechanics is the science and technology concerned with the use of computational methods and devices to study problems of mechanics. It is more than a science, for it includes as its mission the prediction of physical events governed by the laws of mechanics. It is, thus, the principal tool of engineering. Within its domain are the study and prediction of events on all scales, from the atomic and molecular to the galactic. Computational mechanics is a remarkably rich, challenging and important discipline in engineering and applied science, which has enriched virtually every aspect of human existence.

There are quite a few joint IACM/IUTAM pressing issues, such as:

- Model Validation
- Multiscale Mechanics
- Computational Nanomechanics
- Uncertainties and Lacks-of-Knowledge: Modeling and Calculation

Among the other questions discussed, one could mention the possibility to organize IUTAM/IACM co-sponsored symposia in which WP5 could intervene, and possible measures to foster the scientific and technological development of the African continent, particularly North African countries, e.g. through CISME grants. Y.K. Cheung’s term (China) expires at the end of 2007 and he will be succeeded by M. Yan (China).

Report written by Pierre Ladevèze, Chairman of WP-5

WP-6 - Biomechanics

In 2007 the community of Biomechanics and Biomechanical Engineering has strengthened its standing not only within specifically devoted biomechanics-related conferences, but also at numerous high level meetings and workshops which did not focus on biomechanics at the first place. One example was the successful 44th Annual

Technical Meeting Society of Engineering Science at College Station, USA, in October, with one plenary presentation and six MiniSymposia including over 70 talks. The percentage of presentations with bio-related topics with respect to others was particularly high at this conference. It turns out that at all conferences which involve “computation” an increasing number of presentations in the area of biomechanics can be noticed. Biomechanics is certainly a worldwide growing area. Molecular and cell biology is getting more dominant, stimulating the whole area of biomechanics on the microscopic scale at which the evolution of biological systems is mainly triggered. The fusion between biological sciences and engineering sciences is evolving. Microfluidics is a fast developing field with many applications such as fast cell screening, implantable micro drug delivery systems, design of micro organs, study of biomolecular motors, lab-on-chip, etc. Many research groups are now closely collaborating with clinicians in order to identify clinical implications of biomechanical studies. Other important growth areas in the field are Tissue Engineering for diseased or injured tissues. Multidisciplinary research teams are now tackling conditions in the context of the whole body (i.e. partitioning strictly into bone or cardiac may preclude us from understanding interaction among organ systems).

In the following selected events on Biomechanics in 2007 are listed where IUTAM-members has been strongly involved. One category lists events devoted to Biomechanics, while another lists conferences and meetings which were not specifically devoted to biomechanics, but considered keynote or plenary lectures and MiniSymposia on Biomechanics. The latter category is described in more detail.

Conferences, meetings, workshops and schools devoted to Biomechanics:

- Workshop on Biomechanics and Chemotaxis, Linz, Austria, December 10-14, 2007
- 3th Asian Pacific Conference on Biomechanics, Tokyo, Japan, November 5-8, 2007
- The 18th Biofrontier meeting, Bioengineering Division, the Japan Society of Mechanical Engineering, Fukuoka, Japan, October 6-7, 2007
- 3th International Congress on Computational Bioengineering (ICCB 2007), Island of Margarita, Venezuela, September 17-19, 2007
- The annual meeting of the Japan Society of Mechanical Engineering, Osaka, Japan, September 9-12, 2007
- International Conference on Computational Biomechanics and Biology, Pilsen, Czech Republic, September 10-14, 2007
- European Society of Biomechanics Workshop 2007 on Finite Element Modelling in Biomechanics and Mechanobiology, Trinity College Dublin, Ireland, August 26-28, 2007
- American Society of Biomechanics, 2007 Annual Conference, Stanford University, Palo Alto, CA, August 22-25, 2007
- The 4th IASTED International Conference on Biomechanics, Honolulu, Hawaii, August 20-22, 2007
- Biomedical Modeling and Cardiovascular-Respiratory Control: Theory and Practice, Summer School and Workshop, Graz, July 22 - August 4, 2007

- International Workshop on “The Interplay Between Mechanics and Biology on Multiple Length Scales”, Castro Urdiales, Spain, July 1-4, 2007
- Summer School on “New Trends in Biomechanical Modelling”, Castro Urdiales, Spain, July 2007
- ASME Summer Bioengineering Conference, Keystone Resort & Conference Center, Keystone, CO, USA, June 20-24, 2007
- The 30th Annual meeting of Japanese Society of Biorheology, Sapporo, Japan, June 14-15, 2007
- 4th International Conference on Functional Imaging and Modeling of the Heart, Salt Lake City, USA, June 7-9, 2007
- American Society of Biomechanics, Northwest Biomechanics Symposium 2007, University of Oregon, USA, May 18-19, 2007
- The 46th Annual meeting of Japanese Society for Medical and Biological Engineering, Sendai, Japan, April 25-27, 2007
- European Symposium of Vascular Biomaterials on Fundamentals About Stents II, Strasbourg, France, April 26-27, 2007
- 2nd Symposium on Biomechanics in Vascular Disease: Shear Stress in Vascular Biology, Rotterdam, The Netherlands, April 19-20, 2007
- The 20th meeting of Bioengineering, Bioengineering Division, the Japan Society of Mechanical Engineering, January 25-26, 2008, in Tokyo, Japan

Conferences and meetings which were not specifically devoted to biomechanics, but which considered plenary or keynote lectures and MiniSymposia and sessions on Biomechanics:

- 44th Annual Technical Meeting Society of Engineering Science, College Station, USA, October 21-24, 2007

Plenary presentation:

- TJR Hughes, University of Texas at Austin, USA, Isogeometric Modeling and Analysis of Fluid-structure Interaction with Particular Emphasis on Patient-Specific Cardiovascular Simulation

3rd Symposium on Mechanics of Soft Materials and Soft Tissues

Organizers: R Dupaix, Ohio State University; T Nyugen, Sandia National Laboratories; J Bergstrom, Exponent, Inc.; HJ Qi, University of Colorado
3 sessions with 14 talks

MiniSymposia:

- Biomechanics of Cells and Molecules; Organizers: JD Humphrey, W Hwang, Texas A&M University
4 sessions with 18 talks including keynotes
- Biomechanics of Growth and Remodeling; Organizer: JD Humphrey, Texas A&M University
3 sessions with 13 talks including keynotes

- Musculoskeletal Biomechanics; Organizers: I Jasiuk, AW Johnson, E Hsiao-Weckler, University of Illinois at Urbana-Champaign
4 sessions with 18 talks including keynotes
 - New Directions in Large Deformation Solid Mechanics; Organizers: L Dorfmann, Tufts University, RW Ogden, University of Glasgow; A Wineman, University of Michigan
5 sessions with 20 talks (not all of them bio-related)
 - Nonlinear Continuum Mechanics; Organizers: KR Rajagopal, Texas A&M University, Yi-C Chen, University of Houston
1 session with 4 talks
 - Solid-Fluid Interactions in Biomechanics; Organizers: JD Humphrey, J Moore, Texas A&M University
1 session with 4 talks including keynote
- microTAS 2007 Conference. The 11th International Conference on Miniaturized Systems for Chemistry and Life Sciences, Paris, France, October 7-11, 2007
Section on “Microfluidics – Fluid Mechanics & Modeling” with a total of 23 talks
 - 9th International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS 2007), Barcelona, Spain, September 5-7, 2007
Invited Session:
Computational Methods in Biomechanics and Mechanobiology; Organizer: GA Holzapfel, Graz University of Technology and KTH Stockholm, Sweden
3 sessions with 16 talks
 - 9th US National Congress on Computational Mechanics, San Francisco, USA, July 22-26, 2007
MiniSymposia:
 - Symposium on Multiscale Methods and Applications to Nano- and Bio-Mechanics and Materials; Organizers: WK Liu, J Fish, D Qian
 - Computational Methods in Biological Growth and Remodeling; Organizers: K Garikipati, E Kuhl
 - Clinical Biomechanics of the Spine: Computational Mechanics Challenges; Organizer: JM Buckley
 - Computational Biomechanics: From Biomolecules to Organisms; Organizers: MRK Mofrad, GA Holzapfel, A Barakat
 - Computational Methods in Bioengineering; Organizers: S De, MRK Mofrad, A Vaziri
 - Biofluids and Coupled Problems in Biomechanics; Organizers: W Wall, M Behr, A Figueroa
 - Computational Biology, Biomechanics and Biomedicine; Organizers: Y Feng, MN Rylander, S De

- 78th Annual Meeting of the Gesellschaft für Angewandte Mathematik und Mechanik together with 6th International Congress on Industrial and Applied Mathematics, Zürich, Switzerland, July 16-20, 2007
Several talks on biomechanics throughout the different sessions.
MiniSymposium:
 - Modeling the mechanics of the cardiovascular system; Organizers: J Sundnes, Simula Research Laboratory, Oslo, GA Holzapfel, Graz University of Technology and KTH Stockholm, Sweden
- International Conference on Modelling of Heterogeneous Materials with Applications in Construction and Biomedical Engineering, Prague, Czech Republic, June 25-27, 2007
MiniSymposium:
 - Modelling of biological tissues; 3 sessions with 15 talks
- International Conference on Computational Fracture and Failure of Materials and Structure, Nantes, France, June 11-13, 2007
MiniSymposium:
 - Evolving discontinuities in composite (bio) materials; Organizer: GA Holzapfel, Graz University of Technology and KTH Stockholm, Sweden
1 session with 5 talks

Report composed by Gerhard A. Holzapfel, Chairman of WP-6

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

No report has been submitted on WP-7.

WP-8 - Geophysical and Environmental Mechanics

The composition of the WG has remained unchanged. The committee's main activity this year has been to participate in a (funded) proposal to ICSU (PI Prof. H.K. Moffatt) to hold an IUTAM/IUGG Spring School on the "Fluid Mechanics and Geophysics of Environmental Hazards". The Spring School will take place in Singapore during the two-week period 20th April to 2nd May 2009.

Report composed by Paul F. Linden, Chairman of WP-8

WP-9 - Education in Mechanics and Capacity Building

The members of IUTAM Working Party #9 on Education in Mechanics and Capacity Building did not have an opportunity to meet in person during 2007. Hence all business was conducted by e-mail. The activities of the Working Party are currently focused on the following issues:

1. Proper representation of the topic of education in mechanics at IUTAM congresses.

The first pre-nominated session on education in mechanics was held at ICTAM2004 in Warsaw. It was a runaway success with standing room only for several of the presentations. The idea of having a pre-nominated session on education in mechanics was thus retained for ICTAM2008. Currently this session is treated a bit differently than other sessions. In general, the rule at an IUTAM congress is that each author may present only one paper in one of the pre-nominated sessions. However, the Congress Committee currently allows an author to present a paper on education in mechanics in addition to another "technical" presentation in one of the other sessions. The appropriateness of this policy is under continuous review.

2. Associate membership of IUTAM

A proposal, now in a mature stage, will be presented to the General Assembly at ICTAM2008. The gist of the proposal is to allow a category of membership that is preliminary to full membership in the hope that this would induce countries that are not currently members of IUTAM to "test the waters" as a step to full membership. The new category is called associate membership. In principle the concept of associate membership appears to enjoy widespread support. However, certain technical details of implementation have required more careful consideration. The Working Party sees this initiative as important to broadening the reach of IUTAM and, hence, to building capacity worldwide in mechanics.

3. Recruitment of new members, stimulation of initiatives

Individual contacts have led to consideration by a number of nations and groups to become more active within IUTAM. Individuals have been approached about moving their country to join IUTAM. An initiative to propose a symposium or summer school with an educational theme is being discussed. The members of the Working Party are constantly engaging colleagues in such discussions.

ICTAM2008 and the General Assembly will, hopefully, allow the members of the Working Party to meet face-to-face.

Report composed by Hassan Aref, Chairman of WP-9

2007 Treasurer's Report

Statement of Change in Fund Balance	USD
Balance, 31 December 2006	438,000.30
Net revenues minus expenses for 2007	-10,995.19
Balance, 31 December 2007	427,005.11

Statement of Cash Revenues Collected over Expenses Paid

Revenues collected during 2007:	
Subscription dues	90,517.82
Returns from Symposia Awards	3,951.25
Interest income	5,759.22
Total	100,228.29

Expenses paid during 2007:	
Symposia	49,344.00
IUTAM Summer School	5,000.00
ICTAM 2008	15,000.00
Travel, Bureau	12,388.00
Travel, Congress Committee Executive Committee	11,990.00
Travel, others	3,304.00
Contribution to ICSU	3,908.90
Administration & printing	20,335.00
Auditor's fee	3,134.70
Bank fees	439.68
Total	124,844.28

Revenues minus expenses for 2007	-24,615.99
Gain (loss) from exchange of currency	13,620.80
Net revenues minus expenses for 2007	-10,995.19

**Statement of IUTAM Bank Accounts
(1 January 2006 through 31 December 2006)**

Bank	Balance 31-Dec-06	Withdrawals 2007	Deposits 2007	Balance 31-Dec-07	Currency
Checking Accounts					
Citizens Bank Providence 1009-367-2	101,643.90	-117,643.51	66,503.94	50,504.33	USD
Citizens Bank Providence 1597-967-1	132,445.79	0.00	1,470.31	133,916.10	USD
ABN-AMRO Bank Eindhoven 41.41.42.551	8,475.44	-7,043.60	24,131.50	25,563.34	USD
ABN-AMRO Bank Eindhoven 41.41.28.311	7,765.68	-119.29	2,857.62	10,504.01	EUR

Savings Accounts

Bank	Balance 31-Dec-06	Withdrawals 2007	Deposits 2007	Balance 31-Dec-07	Currency
Citizens Bank Providence	84,457.31	0.00	2,484.37	86,941.68	USD
ABN-AMRO Bank Eindhoven	76,466.52	0.00	1,223.48	77,690.00	EUR

IUTAM Bank Account Information**Treasurer:**

Professor J. Engelbrecht, Institute of Cybernetics at Tallinn University of Technology, Akadeemia 21, 12618 Tallinn, Estonia

Assistant Treasurers:

Professor D. H. van Campen, Faculty of Mechanical Engineering, Eindhoven University of Technology, Postbus 315, NL-5600 MB Eindhoven, The Netherlands
 Professor L. B. Freund, Division of Engineering, Brown University, Providence, RI 02912-9104, USA

Bank Accounts:

ABN-AMRO Bank, Postbus 515, 5600 AM Eindhoven, The Netherlands, Account 41.41.28.311 (EUR), 41.41.42.551 (USD)
 Citizens Bank, One Citizens Drive, Riverside, RI 02915-3000, Account 1009-367-2 (USD)

**Subscription Due Paid in Membership Units
 (1 January 2007 through 31 December 2007)**

Adhering Organization	2002	2003	2004	2005	2006	2007
Argentina	--	--	--	--	--	--
Australia	3	3	3	3	3	3
Austria	1	1	1	1	1	1
Belgium	5	5	5	5	5	5
Brazil	1	1	1	1	1	1
Bulgaria	1	--	1	--	--	--
Canada	8	8	8	8	8	8
Chile*	1	1	--	--	--	--
China/ Beijing**	8	8	8	8	8	--

Adhering Organization	2002	2003	2004	2005	2006	2007
China/Hong Kong**	1	1	1	1	1	--
China/Taipei	3	3	3	3	3	3
Croatia	1	1	1	1	1	--
Czech Republic	1	1	1	1	1	1
Denmark	3	3	3	3	3	3
Egypt	1	1	1	1	1	--
Estonia	1	1	1	1	1	1
Finland	3	3	3	3	3	3
France**	8	8	8	8	8	--
Georgia	--	--	--	--	--	--
Germany	8	8	8	8	8	8
Greece	1	1	1	1	1	--
Hungary	1	1	1	1	1	1
India	5	5	5	5	5	5
Ireland	1	1	1	1	1	1
Israel	3	3	3	3	3	3
Italy	8	8	8	8	8	8
Japan	8	8	8	8	8	8
Korea	1	1	1	1	1	--
Latvia	1	1	1	1	1	1
Netherlands**	5	5	5	5	5	--

Adhering Organization	2002	2003	2004	2005	2006	2007
New Zealand	1	1	1	1	1	1
Norway	--	--	1	1	1	1
Poland	3	3	3	3	3	3
Portugal	1	1	1	1	1	1
Romania	1	1	1	1	1	1
Russia***	8	8	8	8	8	-
Saudi Arabia	1	1	1	1	1	1
Serbia & Montenegro	1	1	1	1	1	--
Slovakia	1	1	1	1	1	1
Slovenia	1	1	1	1	1	1
South Africa	1	1	1	1	1	1
Spain	1	1	1	1	1	--
Sweden	5	5	5	5	5	5
Switzerland	3	3	3	3	3	3
Turkey	1	1	1	1	1	1
Ukraine	1	1	1	1	1	1
United Kingdom	8	8	8	8	8	8
United States	12	12	12	12	12	12
Vietnam	1	1	1	1	1	1

Note: For any particular year, a dash (--) indicates that dues had not been paid as of 31 December 2007.

Dues are expressed in membership units of 1, 3, 5, 8 or 12, corresponding to category of membership from I through V, respectively.

- * Chile, unpaid 1997 and 1998
- ** China/Beijing, China/Hong Kong, France and Netherlands paid for 07, however not recorded in Bank Statement for 2007
- *** Russia paid partly for 07

Reports on Affiliated Organizations

AFMC (Asian Fluid Mechanics Committee)

Preparations for the Twelfth Asian Congress on Fluid Mechanics are well in progress. The Congress will be held on August 18-21, 2008 in Daejeon, Korea. The Chairman of the Organizing Committee is Professor H.J. Sung, Department of Mechanical Engineering, Korea Advanced Institute of Science and Technology, Taejeon 305-701, Korea. Up to now, we have received more than 200 submitted papers. More than 10 invited speakers are planned to deliver presentations on the occasion. A website: <http://12acfm.kaist.ac.kr> is available for more information.

Jointly sponsored by TSI Inc. and AFMC, Zhou-Sato-Narasimha award was set up for the first time in recognition of contribution in fluid dynamics by young Asian scientist. The award recipient will be invited to give a presentation at the Congress.

As an affiliated organization, AFMC wrote to Professor H.K. Moffat, Vice president of IUTAM to express our full support to organizing a summer school on "Fluid Dynamics of Geophysics and Environmental Hazards". The subject is of great significance and will also be continuously focused on in ACFM later activities.

Professor Dr. S. G. Bhat, Centre for Atmospheric and Oceanic Sciences (CAOS), Indian Institute of Science, India was elected as new vice-chairman in 2007.

Report composed by Jiachun Li

CACOFD (Caribbean Congress of Fluid Dynamics)

No report has been submitted on CACOFD.

CISM (International Centre for Mechanical Sciences)

1. Courses and Seminars

The regular programme of courses and seminars, planned by the Scientific Council at the Centre for 2007, took place in two Scientific Sessions, the Brousse Session (June-July 2007) and the Zyczkowski Session (September-October 2007). The topics, always at an advanced level, included different fields of mechanics and related sciences, both at a basic and applied level. One school was sponsored by IUTAM and one was organized within NoE-KMM project, sponsored by EC.

The Brousse Session:

Vortices and Turbulence at very Low Temperatures

Generalised Continua and Dislocation Theory. Theoretical Concepts, Computational Methods and Experimental Verification
 Advances in Constitutive Relations Applied to Computer Codes

The Zyczkowski Session:

Sport Aerodynamics

Simulation Techniques for Applied Dynamics

Poly-, Quasi-, and Rank-One Convexity in Applied Mechanics

Semi-active Vibration Suppression - The Best from Active and Passive Technologies

Advances of Soft Computing in Engineering

15th IUTAM International Summer School on Bone Cell and Tissue Mechanics

2. Other Events

Besides the above courses, the following other meetings were organized or hosted by CISM in 2007:

- Advanced Analysis and Testing of Complex Mechanical and Structural Systems (June 2007)
- CEPET 8th Workshop (Central European Programme in Economic Theory) (June 2007)
- NoE/KMM - Third Summer School, sponsored by EC (September 2007)

3. Editorial Activities

The lectures of several courses held at CISM were published in book form and distributed by Springer Verlag Vienna-New York.

The following books were published in 2007:

S. Kalliadasis - U. Thiele "Thin Films of Soft Matter"

D.V. Griffiths - G.A. Fenton "Probabilistic Methods in Geotechnical Engineering"

D. Marchisio - R.O. Fox "Multiphase Reacting Flows: Modelling and Simulation"

T. Stathopoulos - C.C. Baniotopoulos "Wind Effects on Buildings and Design of Sensitive Structures"

A. Pecker "Advanced Earthquake Engineering Analysis"

M. Destrade - G. Saccomandi "Waves in Nonlinear Pre-Stressed Materials"

L. D'Agostino - M.V. Salvetti "Fluid Dynamics of Cavitation and Cavitating Turbopumps"

W. Schiehlen "Dynamical Analysis of Vehicle Systems"

P. Wriggers - T.A. Laursen "Computational Contact Mechanics"

The International Journal for rapid communication "Mechanics Research Communications" (bimonthly) created by CISM and Pergamon Press, Oxford-New York in 1973, (now with Elsevier) published in 2007 its thirtyfourth volume. It contains short

communications on research related to a wide domain of both theoretical and applied mechanics.

4. Scholarships

A number of scholarships, including free lodging and board or exemption from registration fee, was offered by CISM during the courses to participants who were not supported by their home institutions, priority being given to young researchers coming from countries that contribute to CISM's operating resources.

In addition free board and lodging in Udine were granted to several participants from European and extra-European countries, thanks to contributions by IUTAM and EC and, in the context of the 7th Framework Programme, the Marie-Curie Action fully supported a number of young researchers, including the travel.

5. International Participation

In 2007, 56 lecturers from 14 countries delivered lectures in the Brousse and Zyczkowski Sessions. The courses were attended by 357 participants coming from 34 countries.

Report composed by Bernard Schrefler

EUROMECH (European Mechanics Society)

EUROMECH - European Mechanics Society is an international non-governmental non-profit scientific organization.

The objective of the Society is to engage in all activities intended to promote in Europe the development of mechanics as a branch of science and engineering.

The society is governed by the Council whose members are being elected according to rules set in Statutes.

EUROMECH meetings

The EUROMECH Council has overall responsibility for EUROMECH Colloquia and EUROMECH Conferences.

EUROMECH Colloquia are informal meetings on specialized research topics. Participation is restricted to a small number of research workers actively engaged in the field of each Colloquium. The organization of each Colloquium, including the selection of participants for invitation, is entrusted to a Chairperson. Proceedings are not normally published. Those who are interested in taking part in a Colloquium should write to the appropriate Chairperson (Number, Title, Chairperson or Co-chairperson).

EUROMECH Conferences are broad in scientific scope. They comprise

- the EUROMECH Solid Mechanics Conference,
- the EUROMECH Fluid Mechanics Conference,
- the EUROMECH Turbulence Conference,
- the EUROMECH Non-linear Dynamics Conference and
- the EUROMECH Mechanics of Materials Conference.

They are open to all those interested and are expected to have a number of participants between 150 and 600. The general purpose is to provide opportunities for scientists and engineers to meet and discuss current research. The responsibility for each series of Conferences is delegated to a Standing Conference Committee. The organizational work is carried out by Local Organizing Committees (LOC). Those who are interested in taking part in one of the Conference should write to the Chairman or Secretary of the appropriate LOC.

EUROMECH COLLOQUIA in 2007

[481]. *Recent Advances in the Theory and Applications of Surface and Edge Waves*; 11-14 June 2007, Keele University, UK

[482]. *Efficient Methods for Robust Design and Optimization*; 10-12 September 2007, London, UK

[483]. *Non-linear Vibrations of Structures*, 9-11 July 2007, University of Porto, Portugal

[488]. *The Influence of Fluid Dynamics on the Behaviour and Distribution of Plankton*, 13-15 June 2007, Liverpool, UK

[489]. *Porous media: Modelling of multiphase materials*, 19-21 September 2007, Chalmers University of Technology, Gothenburg, Sweden

[490]. *Dynamics and Stability of Thin Liquid Films and Slender Jets*, 26-28 September 2007, Imperial College, London, UK

[491]. *Vortex dynamics from quantum to geophysical scales*, 11-14 September 2007, Exeter, U.K

[492]. *Shear-banding phenomena in micellar fluids*, 3-5 September 2007, London, UK

[493]. *Interface Dynamics, Stability and Fragmentation*, 29-31 August 2007, Grenoble, France

EUROMECH CONFERENCES in 2007

[EMMC10] *MECAMAT, 10th European Mechanics of Materials Conference*, 11 - 14 June 2007, Kazimierz Dolny, Poland

[EETC11] *11th EUROMECH European Turbulence Conference*, 25 June 2007 - 28 June 2007, Faculty of Engineering of the University of Porto, Porto, Portugal.

For more details see www.euromech.org.

Report composed by Bernhard Schrefler

HYDROMAG (International Association for Hydromagnetic Phenomena and Applications)

HYDROMAG is an international association of scientists and engineers active in those fields of research which involve the flow of fluids in the presence of a magnetic fields, namely magnetohydrodynamics (MHD), electromagnetic processing of materials (EPM) and dynamics of magnetic fluids (MF). HYDROMAG promotes growth and visibility of the field of hydromagnetics and stimulates exchanges between its members throughout the world via conferences, workshops, summer schools and publications. Detailed information on HYDROMAG can be accessed under

<http://wcms1.rz.tu-ilmenau.de/fakmb/hydromag.html>

This WWW-site contains information on membership, forthcoming conferences, the electronic HYDROMAG newsletter and a link to the German Ferrofluid Information Server, maintained by Prof. S. Odenbach (University of Dresden).

During the year 2006 several workshops and scientific meetings have been conducted involving the active participation of HYDROMAG and its members.

A group of European Scientists successfully established a network on EPM in frame of the COST-programme of the European Commission called "COST action P17 Electromagnetic Processing of Materials". The programme supports mutual visits of scientists. Detailed information can be obtained from

<http://www.cost.esf.org/index.php?id=412>

Report composed by André Thess

IABEM (International Association for Boundary Element Methods)

In 2007, IABEM held no event, but participated in the preparation of an extended minisymposium (with over 30 papers) on boundary element methods to be held as part of the World Congress on Computational Mechanics (Venice, June 30 to July 4, 2008).

Report composed by Marc Bonnet

IACM (International Association for Computational Mechanics)

No report has been submitted on IACM.

IAVSD (International Association for Vehicle Systems Dynamics)

(<http://www.iavsd.org>)

The main event organized by IAVSD was the 20th International IAVSD Symposium that took place on August 13 – 17, 2007 in University of California in Berkeley, USA. There were 167 participants from 21 countries all over the world and there were presented 148 papers (5 invited as state-of-the-art, 100 orally and 43 as poster). The event was successful and attended by many participants from academia and industry from many countries.

The IAVSD Board has decided that the next 21th International IAVSD Symposium will take place in KTH University in Stockholm, Sweden on August 13 - 17, 2009. The next associated events of IAVSD will be the 9th International Conference on Advanced Vehicle Control AVEC'08 in October 6-9, 2008 in Kobe, Japan

Report composed by Michael Valásek

ICA (International Commission for Acoustics)

(<http://www.icacommission.org>)

Following the General Assembly and associated Board meetings in September 2008 the new ICA board was formed (see also <http://www.icacommission.org/Board07-10.pdf>). New to the executive are Samir Gerges as President and Marion Burgess as Secretary General. Sonoko Kuwano, who was the General Secretary, has taken on the role as Vice President and Hugo Fastl continues as the Treasurer.

First it is important to note the outstanding success of the 19th International Congress in Acoustics held in Madrid in September. With over 1400 registrants and over 1200 presentations this congress provided an excellent demonstration of the width and breadth of acoustics around the world. We now look forward to the next ICA in Sydney,

Australia in 2010 and will be seeking the assistance of IUTAM in promoting this important activity.

ICA has been engaged in the process of achieving better international recognition for our subject discipline. The International Council for Science (ICSU) has formally admitted ICA as a Scientific Associate which recognises ICA's role as the representative international body in acoustics. We are now planning an application for full Union membership, once we have firmly established a greater degree of coordination and cooperation from other International organisations involved in the discipline of acoustics. To this end the Board of the ICA has representatives from the following international affiliates: European Acoustics Association (EAA), IberoAmerican Federation of Acoustics (FIA), International Institute of Noise Control Engineering (I-INCE), International Institute of Acoustics and Vibration (IIAV), Western Pacific Acoustics Commission (WESPAC) and the International Congress on Ultrasonics (ICU). The board has set up an International Conference Coordination Committee as a first step towards bringing about better coordination of these international activities.

The ICA continues to encourage excellence in all the fields of acoustics with Young Scientist Grants to attend the Congress and the prestigious early career award. In 2007 this was made to Dr. Nico F. Declerq, Georgia Institute of Technology "For outstanding contributions to ultrasonics, particularly for studies of propagation and diffraction of acoustic waves".

The ICA has also provided support to the following specialist symposia in 2007:

- Therapeutic Ultrasound, 2007.4.10-13, France (750)
- 6th EAA International Symposium on Hydroacoustics -XXIV Symposium on Hydroacoustics, 2007.5. 15-18, Poland (1000)
- International Symposium on Musical Acoustics (ISMA 2007) 2007.9.9-12, Barcelona, Spain (1000)
- International Symposium on Room Acoustics (ISRA 2007) 2007.9. 10-12, Sevilla, Spain (1000)
- Acoustical Imaging of Complex Media: Applications in Medicine, Seismology and Oceanography, 2007.10.15-20, France (750).

The ICA acknowledges the ongoing collaboration with IUTAM and the valued contribution from the IUTAM representative at Board Meetings. We look forward to strengthening this link in the future

Report composed by Samir Gerges and Marion Burgess

ICF (International Congress on Fracture)

The next quadrennial conference of ICF (ICF12) will be held in Ottawa, Canada from July 12-17, 2009. More information can be found at ICF12 website <http://www.icf12.org/>

ICHMT (International Centre for Heat and Mass Transfer)

No report has been submitted on ICHMT.

ICM (International Congress on the Mechanical Behaviour of Materials)

The ICM-10 Conference was held in Busan, Korea from 27 till 30 of May, 2007. During the Conference, 456 papers were presented by the 426 participants from 25 countries. These numbers are the second largest number since ICM-6, held in Kyoto, Japan in 1991.

During the ICM-10 Conference there were two important meetings, viz. (I) the ICM Executive Committee Meeting and (II) the ICM Board of Governors' Meeting. The major items of these two meetings are given below.

(I) ICM Executive Committee Meeting

Item I.1: Report from ICM Vice-President

Professor T. Inoue, ICM Vice President, reported on the activities of ICM from 2003 till 2007, as follows:

I.1.1 Preparation of ICM-11

Representatives from, Italy and Germany are going to present their proposals at the Meeting of Board of Governors.

I.1.2. IUTAM link

The President had been acting as the ICM Representative for IUTAM.

Some explanations on IUTAM were given.

I.1.3. JSMS Web Site of ICM

A proper website should be sought for a permanent use. Through negotiation by the President and the Secretary-General with the Japanese Society of Materials Science, Japan, the ICM web site had been permanently set on the homepage of JSMS. Hereafter, Prof. T. Hoshide will act as liaison between ICM and JSMS.

The new website includes information on the ICM charter, Committee Members etc, and ICM-10 has also been linked to JSMS website.

Item I. 2: Report from the ICM-10 Chairman

Professor S.W. Nam, Chairman of ICM-10, reported on ICM-10 as follows.

685 Abstracts were originally submitted from 31 countries and areas. The final number of papers to be presented at ICM-10 has been reduced to be 456 from 25 countries and areas.

(II) Decisions by the ICM Board of Governors' Meeting

The ICM Board of Governors' meeting was attended by: 24 Governors from 20 countries

Item II.1. Approval of nomination list of the Executives

The Board of Governors approved the list of Honorary Presidents, the list of Executive Officers, the list of Governors at Large, the list of Elected representatives and the Chair and Secretary-General of ICM-11.

Item II.2. Procedure and decision for the ICM-11 bid presentation

Two bids were proposed by representatives from Italy and Germany. • After voting Italy was chosen to be the host of ICM-11. Then, Prof. T. Inoue officially announced that the next ICM-11 will be held in Como, Italy in 2011.

Report composed by Soo Woo Nam, President of ICM 10**ICR (International Committee on Rheology)**

The XVth International Congress on Rheology takes place on August 3 - 8, 2008 in Monterey, California; website <http://www.rheology.org/ICR2008/>.

Report composed by Manfred Wagner**ICTS (International Congresses on Thermal Stresses)**

The single most important event for ICTS in the year 2007 was the *7th International Congress on Thermal Stresses* that was held at the National Taiwan University of Science and Technology, in Taipei, Taiwan, 4 - 7 June, 2007. The web page of the Congress: <http://www.ntust.edu.tw/~ts2007>.

Number of participants: 229.

Number of represented countries: 23.

Most of the participants represented Taiwan, Japan, U.S.A., Russia, Iran, Poland, Ukraine, and India.

Organizers of the 7th International Congress on Thermal Stresses:

General Chair: Ching-Kong Chao (Taiwan).

Co-Chairs: Richard B. Hetnarski (U.S.A.), and Naotake Noda (Japan).

Secretary: Chyi-Yeu Lin (Taiwan).

International Organizing Committee:

Chairs: Franz Ziegler (Austria), and Liviu Librescu (U.S.A.).

Members: W. H. Chen (Taiwan), S. C. Yeh (Taiwan), C. Hwu (Taiwan), W. C. Wang (Taiwan), K. Kishimoto (Japan), Y. Tanigawa (Japan), N. Sumi (Japan), K. Watanabe (Japan), T. Hata (Japan), J. R. Barber (U.S.A.), E. P. Chen (U.S.A.), T. C. T. Ting

(U.S.A.), T. R. Tauchert (U.S.A.), W. S. Chan (U.S.A.), J. Achenbach (U.S.A.), P. Marzocca (U.S.A.), D. Y. Tzou (U.S.A.), Y. K. Yong (U.S.A.), Martin Ostoja-Starzewski (U.S.A.), R. Heuer (Austria), J. J. Skrzypek (Poland), A. Tylikowski (Poland), H. Gao (U.S.A.), T. Y. Zhang (HK), W. Yang (China), Y. Nyashin (Russia), M. Shitikova (Russia).

National Organizing and Program Committees:

Chair: K. C. Wu (Taiwan); Co-Chairs: C. C. Ma (Taiwan) and W. F. Wu (Taiwan).

Members: C. H. Liu, R. C. Chang, M. K. Kuo, T. T. Wu, Y. D. Kuan, J. H. Huang, M. K. Yeh, Y. C. Shiah, J. N. Au, C. H. Wang, C. H. Chue, T. Chen, T. C. Chen, J. H. Kuang, J. L. Tsai, S. F. Hwang, H. K. Hong, J. T. Chen, M. H. Jen, C. H. Tai.

The two-volume *Proceedings of the Seventh International Congress on Thermal Stresses* were published (802 pages total). The Editors: C.K. Chao and C.Y. Lin. The Proceedings contain six-page abstracts of lectures by invited speakers, and four-page abstracts of lectures by regular attendees.

As a part of the Congress, a *Special Session* was held, dedicated to the memory of Liviu Librescu, the late Professor at Virginia Tech, and the author of fundamental contributions to the field of Thermal Stresses and Thermoelasticity. Professor Librescu was murdered in the massacre at the Virginia Tech classroom on April 16, 2007, when he was trying to save lives of his students. Professor Librescu was the main organizer and Chair of the *5th International Congress on Thermal Stresses* that was held at Virginia Tech in Blacksburg on June 8-11, 2003. At the *7th Congress* in Taipei, a 116-page book, *The Heroic Life and Works of Professor Liviu Librescu (1930 – 2007)*, published by National Taiwan University of Science and Technology in Taipei, was distributed to all participants.

A special double issue (the June-July issue) of the *Journal of Thermal Stresses* was published with full text of six Invited Lectures presented at the 7th Congress. The issue was distributed among all participants at the 7th Congress.

As part of the 7th Congress, the *70th Birthday of Jozef Ignaczak Symposium* was held. A special double issue (the September-October issue) of the *Journal of Thermal Stresses* was published, which contained all 13 lectures presented at the J. Ignaczak Symposium. Also the official photograph of the 7th Congress was published in this special issue.

The preparations for the *8th International Congress on Thermal Stresses, TS 2009*, are currently in full swing. The 8th Congress is being organized and will be hosted by Professor Martin Ostoja-Starzewski in Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign, USA, June 1-4, 2009. The web page of the 8th Congress: <http://www.conferences.uiuc.edu/thermalstresses>

Report composed by Richard B. Hetnarski

IIAV (International Institute of Acoustics and Vibration)

IIAV at present has over 500 individual members in 55 countries. In addition there are 32 affiliated or cooperating societies with IIAV. The eleventh IIAV annual election was held in 2007 in which all members voted on candidates for five new directors. The elected directors replaced the directors whose four-year terms had expired. The five directors elected were: Tamer Elnady (Egypt), Leonid Gelman (United Kingdom), Chris K. Mechefske (Canada), Bert Roozen (Netherlands), and Rupert M. Thornely-Taylor (United Kingdom). Professor Franz Ziegler of Austria will complete his two year term as president of IIAV in July 2008 and Professor Luis Bento Coelho of Portugal will take over the position as president for a two-year term beginning in July 2008.

The Fourteenth International Congress on Sound and Vibration (ICSV14) was held at the Cairns Convention Centre in Cairns, Australia on July 2-6 2007. ICSV14 was hosted by the International Institute of Acoustics and Vibration in cooperation with the Acoustical Society of Australia and the American Society of Mechanical Engineers. More than 750 abstracts from 55 different countries on all areas of sound and vibration were submitted. Altogether 600 delegates attended ICSV14. A list of submitted abstracts can be found on the Congress website, <http://www.icsv14.com/>

The opening ceremony and the first keynote lecture were given to a large audience on Monday morning 9 July. The ICSV14 technical proceedings were available to delegates at the congress itself on CD-ROM. The ICSV14 CD includes all abstracts and the full texts of all the accepted papers. During the congress banquet at a special ceremony, Professors Jeremy Astley, UK and Colin H. Hansen, Australia were presented with certificates for their elevation as fellows of the IIAV. A welcome reception party was held on Monday 9 July, a rainforest nature park trip on Tuesday 10 July, and the congress banquet on Wednesday 11 July.

The seven ICSV14 keynote lectures covered very different aspects of acoustics and vibration and were presented by prominent researchers such as Professor Jeremy Astley, Southampton, UK 'Predicting and reducing aircraft noise'; Professor Ilene Busch-Vishniac, Baltimore, USA; 'The challenges of noise control in hospitals'; Associate Professor Svante Finnveden, Stockholm, Sweden, 'Two observations on the wave approach to SEA'; Professor Colin Hansen, Adelaide, Australia, 'Optimisation of active and semi-active noise and vibration systems'; Professor Jeong-Guon Ih, Daejeon, Korea', Acoustic holography based on the inverse-BEM for the source identification of machinery noise'; Professor Kimihiro Sakagami, Kobe, Japan, 'Recent developments in applications of microperforated panel absorbers'; and Professor David Thompson, Southampton, UK, 'But are the trains getting any quieter?'

The ICSV14 technical programme also included lectures arranged in 11 parallel technical sessions over a period of three and a half days. Thirty five special structured sessions were organised by members of the ICSV14 scientific committee. A large exhibition of sound and vibration transducers, measurement equipment and materials was held in conjunction with ICSV14 in which 25 major exhibitors took part. In addition there were

three gold, one silver and two bronze sponsors for ICSV14 who provided financial support for the congress. Further details can be found on the ICSV14 website:

<http://www.icsv14.com/>

The International Journal of Acoustics and Vibration (IJAV), the refereed quarterly journal of IIAV, continues to receive a steady flow of good papers and to be published on schedule. The titles and abstracts of papers are displayed on the internet in addition to hard copies, which are airmailed to all IIAV members and to libraries all over the world. A new improved website was designed and implemented for IIAV in 2007. It is now operational at <http://www.iiav.org/>

Report composed by Malcolm J. Crocker (Executive Director IIAV)

ISIMM (International Society for the Interaction of Mechanics and Mathematics)

1. Results of Elections

The elections for President and Secretary of ISIMM and the by-elections for the Executive Committee have been concluded. For completeness we give a list of the new officers and members of the Executive Committee together with the dates when their tenure expires.

President	Prof. L. Truskinovsky	trusk@lms.polytechnique.fr	(until 2011)
Vice President	Prof. M. Pitteri	pitteri@dmsa.unipd.it	(until 2011)
Secretary/Treasurer	Prof. D. Bigoni	bigoni@ing.unitn.it	(until 2011)
	Prof. S. Antman	ssa@math.umd.edu	(until 2011)
	Prof. Ph. Boulanger	phboul@ulb.ac.be	(until 2009)
	Prof. A. Mielke	mielke@wias-berlin.de	(until 2009)
	Prof. W. Müller	Wolfgang.H.Mueller@tu-berlin.de	(until 2009)
	Prof. M. Padula	pad@dbs.unife.it	(until 2009)
	Prof. T. Ruggeri	ruggeri@ciram.unibo.it	(until 2011)
	Prof. D.L. Steigmann	steigman@me.berkeley.edu	(until 2011)
	Prof. L. Tartar	tartar@andrew.cmu.edu	(until 2011)
	Prof. L. Turski	laturski@cft.edu.pl	(until 2009)
	Prof. A. Visintin	visintin@science.unitn.it	(until 2009)

2. Organization of STAMM XVI, 2008

The conference will take place in Levico Terme (IT), from September 22 to September 25, 2008.

Scientific Committee: P. Colli (Pavia), I. Müller (Berlin) and A. Visintin (Trento).

Sponsored by:

- MUR - PRIN Project 'Free Boundary Problems, Phase Transitions and Models of Hysteresis'
- Università degli Studi di Trento
- CIRM (Centro Internazionale per la Ricerca Matematica)

Invited Speakers: H.-D. Alber (Darmstadt), G. Allaire (Paris), G. Bertotti (INRIM – Turin), A. Fasano (Florence), G. Kremer (Curitiba), A. Mikelic (Lyon), R. Monneau (Champs sur Marne), G. Mulone (Catania), M. Plapp (Paris), B. Piccoli (IAC – Rome), E. Presutti (Rome), M. Pulvirenti (Rome), T. Ruggeri (Bologna) and W.-A. Yong (Beijing).

Scientific program:

The program of the workshop consists of invited lectures, short communications, and posters. It will be made available on the web at due time.

Consistently with the aims of ISIMM, mathematical modelling will be at the focus.

The formulation and analysis of problems issued from physics, engineering and other disciplines will be welcome.

We encourage participants to submit abstracts. A (necessarily restricted) number of 15' communications will be selected among all submitted abstracts.

Registration:

As there is a restriction on the number of participants, we invite you to register by **May 31, 2008**. The selection will be made by registration date only.

Accepted participants will be notified by e-mail by June 15, 2008.

Please note that a registration fee of 100.00 euro is foreseen.

Web page: <http://mate.unipv.it/pier/stamm08.html>

3. Organization of a Joint IUTAM-ISIMM Symposium

The IUTAM General Assembly has approved the joint IUTAM-ISIMM Symposium *Mathematical Modeling and Physical Instances of Granular Flows*, coded GA.06-05 (=F/S.2) and introduced in the IUTAM calendar at <http://www.iutam.net/iutam/Events/index.php/1/2009>

The Symposium will take place in Reggio Calabria, Italy, in 2009. The members of the Scientific Committee are: Joe Goddard (Chairman), Gianfranco Capriz, Carlo Cercignani (IUTAM Representative), Robert Connelly, Jim Jenkins, Ioannis Vardoulakis, Krzysztof Wilmanski.

The local organization is headed by Prof. Pasquale Giovine, Department of Mechanics and Materials, Faculty of Engineering - "Mediterranean" University of Reggio Calabria, Via Graziella, 1 - Locality Feo di Vito, I-89060 Reggio Calabria - Italy
Phone: +39(0965)875.253 - (Home 331.280), Fax: +39(0965)875.201 - (Home 310.084), E-mail: giovine@unirc.it - (giovine@mail.dm.unipi.it)
More details will be published as soon as possible

4. New Honorary Member

It has been our pleasure to give the status of Honorary Member to Professor Ingo Müller, Technische Universität Berlin. Professor Müller became eligible for this honor upon completing his 70th year. We have congratulated him and will present him with a certificate of honorary membership.

5. New Members

Martin Brokate (TU München), Andro Mikelic, (Université Villeurbanne), Claudio Giorgi (Università di Brescia), Paolo Secchi (Università di Brescia), Andrew N. Norris (Rutgers), Srboľjub S. Simic, (Novi Sad), Alexander Panchenko (Oregon State Univ.), Alain Bourgeat (Université de Lyon 1), Qing Jiang (U. of California-Riverside), Romesh Batra (Virginia Tech), Ivan I. Kosenko (Moscow State University of Service), Guglielmo Rubinacci (Università di Napoli), Claudio Serpico (Università di Napoli) and Ciro Visone (Università del Sannio, Benevento).

5. Members deceased

With great regret we have learned that our esteemed member Professor George Herrmann (Stanford) has passed away early 2007.

5. Book series

By the initiative of our publication committee a series of books has come to fruition, called "*Interaction of Mechanics and Mathematics Series*" (IMM) and is published by Springer Heidelberg.

In the publication agreement it says that the series will "cover advanced textbooks and introductory scientific monographs in English language. The authors should be distinguished specialists with international reputation in their field of expertise".

Professor Lev Truskinovsky has signed the agreement on behalf of the Society. He is also the editor of the series and he should be approached by members who wish to contribute. *All ISIMM members are strongly encouraged to submit new proposals for this book series, whose importance for our society cannot be overemphasized, as it should reflect the progress of our subject which is the promotion of the mutual interaction of mathematics and mechanics.*

At this time the following books have been printed:

- I.Müller, W. Weiss: Entropy and Energy, 2005
- H.Struchtrup: Macroscopic Transport Equations for Rarefied Gas Flows, 2005
- F.Cakoni, D. Colton: Qualitative Methods in Inverse Scattering Theory: An Introduction, 2006
- M. Epstein, M. Elzanowski, Material Inhomogeneities and their Evolution: A Geometric Approach, 2007

The following books are in preparation, listed together with their expected date of print.

- R. Knops: Saint-Venants Principle: Edge Effects in Continuum Theory, 2007
- L. Truskinovsky: Mechanics of Materials with Internal Instabilities, 2007
- G. Del Piero, H. Smaoi: Unilateral Problems in Structural Analysis. Theory and Applications, 2007
- A.Di Carlo: Material Remodelling: Introduction to the Dynamical Theory of Growth, 2007
- R. Batra: Theory and Analysis of Piezoelectric Plates, 2007
- B.Sleeman: Weyl Asymptotics for the Interior and Exterior Laplacian with applications to Fractal Domains, 2007
- G. Kremer, G. Alves, The Boltzmann Equation and Transport Processes in Reacting Gases, 2007

Report composed by A. Montanaro

ISSMO (International Society for Structural and Multidisciplinary Optimization)

ISSMO held its Seventh World Congress on Structural and Multidisciplinary Optimization on May 21-25, 2007 in Seoul, Korea. The Congress was attended by 337 delegates and 15 accompanying persons, and 37 countries were represented. The International Papers Committee had accepted 312 papers (264 for lecture and 48 for poster presentation), and these were presented in five parallel lecture sessions and one poster session. In addition, there was a plenum panel session summarizing status and progress of the following pre-selected areas relevant to ISSMO: Surrogate-based optimization, Multidisciplinary and multi-objective optimization, Design optimization under uncertainty, and Topology and shape design optimization. The proceedings of the Congress are published on CD-ROM (ISBN 978-89-959384-2-398550).

ISSMO held two Executive Committee meetings and a General Assembly meeting in conjunction with the Congress. The General Assembly elected a new Executive Committee for the next four year term with office-bearers as follows: Prof. K.K Choi (President), Profs. V. Toropov and A. Diaz (Vice-Presidents), Prof. B.M. Kwak (Secretary-General), and Prof. N. Olhoff (Treasurer). The next World Congress will be held in Lisbon, Portugal in May, 2009.

ISSMO also co-sponsored a number of scientific specialty meetings in 2007. Please refer to the website <http://www.issmo.net> for more information about ISSMO.

Report composed by Niels Olhoff

Reports on ICSU and its Scientific Committees

ICSU (International Council for Science)

The ICSU Grants Programme was reactivated in November 2007, with a deadline for receipt of applications at the ICSU headquarters in Paris of 1 March 2008. IUTAM will be submitting a proposal for consideration in this program.

The ICSU Regional Office for Asia and the Pacific held its second Regional Consultation in November of 2007. This meeting was attended by IUTAM Vice President Keith Moffat with a view toward laying the groundwork for preparation of her proposal to be submitted in the 2008 ICSU Grants Programme.

The 2007 ICSU Scientific Unions Meeting was held in Rome on 23-24 April 2007. IUTAM was represented at this meeting by Vice President Keith Moffat and his report follows:

There were 55 participants at this meeting, with representatives of most of the International Scientific Unions, including our “nearest neighbours” IMU, IUPAP, IUPAC, IAU, IUGG.

The following matters that were on the Agenda have some relevance for IUTAM:

1. Human Health

A “scoping exercise” has determined that ICSU should explore the potential interest and usefulness of a *systems analysis approach to population health and wellbeing in the changing urban environment*. [Problems of urban pollution fall within the scope of IUTAM.]

2. Environmental Hazards and Disasters

An ICSU Planning group has prepared a substantial Preliminary Report, which proposes that ICSU should “*focus on natural and human-induced environmental hazards, including hazards related to hydrometeorological and geophysical trigger events: i.e. earthquakes, volcanoes, flooding, storms, heat waves, droughts and fires, tsunamis, coastal erosion, landslides, aspects of climate change, space weather and impact by near-Earth objects, and related events*”. These topics are all within the scope of IUTAM’s WP-8 “Geophysical and Environmental Mechanics”. The best way that IUTAM can contribute is perhaps to encourage proposals for Symposia and/or Summer Schools covering any of these areas.

3. Regional Offices

The Directors of the three ICSU Regional Offices reported on progress:

- African Region (Sospeter Muhongo, Pretoria): The next General Assembly of ICSU will be held in Mozambique, October 2008.

- Asia and Pacific Region (Nordin Hasan, Kuala Lumpur);
- Latin America and Caribbean (Alice Abreu, Rio de Janeiro).

I suggested that, in order to enhance the links between the Scientific Unions and the Regional Offices, ICSU should invite its Scientific Union Members to nominate representatives to act as liaisons with each of these offices. Prof. Hasan has already invited IUTAM to nominate a representative for the Asia and Pacific Region. We should do this, and should also nominate (in anticipation) representatives for the other two Regional Offices.

4. ICSU Grants Program

This is still under review, and no definite proposal has yet emerged for continuation of the program, pending identification of sources of funding (possibly UNESCO). A minimum of 500k Euros per annum is needed to sustain an adequate grants program.

5. ICSU Finances

After a difficult period, the finances of ICSU have, since 2006, been stabilised, with income and expenditure in balance. The dues system is excessively complicated (with 51 different ‘bands’!), and a review of this system has been recommended to the Executive Board. It is suggested that the 51 bands be reduced to 10, with no more than 4 bands for the Scientific Union members, each Union to select its appropriate band.

6. International Polar Year

Dave Carlson, Director of IPY, reported on this huge enterprise, launched on 1st March 2007, which includes 228 projects with a total budget of more than \$1.25 billion. It is good that IUTAM has been involved at an early stage, through its support of the International Sea Ice Summer School held in Svalbard, Spitzbergen; 2-13 July, 2007.

Report composed by Ben Freund

COSPAR (Committee on Space Research)

In 2007 COSPAR as an important International organization continued its traditional work.

As planned for year 2007 the following scientific meetings organized or co-sponsored by COSPAR have taken place successfully:

- 20-24 May 2007. Beijing, China. Humans in Space.
- 4-16 June 2007. Sinaia, Romania. Solar-Terrestrial Interactions: Instrumentation and Techniques.
- 10-14 July 2007. Prague, Czech Republic. Ionosphere Modelling, Forcing and Telecommunications.

- 2-4 October 2007. Toulouse, France. Scientific and Fundamental Aspects of the Galileo Programme.

In the year 2008 the following meetings are planned:

- 19 January – 1 February.
Alexandria, Egypt. Space Astrophysics with NASA and ESA Missions: Swift, Chandra and XMM.
- 18-20 February.
Montreal, Canada. COSPAR Workshop on Planetary Protection.
- 27 March. Paris, France. International Polar Year and the Importance of Understanding Polar Regions of the Earth, the Moon and Mars.
- 18-24 May. Limenas Hersonissou, Crete, Greece. Equatorial Aeronomy.

The next most important scientific event of COSPAR – its **37th Scientific Assembly** will be held 13-20 July in Montreal, Canada. It will be the **50th anniversary assembly**.

In 2007 COSPAR continued its publication activity. Four issues of COSPAR information bulletin “Space Research Today” have been published in 2007. The bulletin is now a completely open journal where submissions can be made at any time by any scientist, engineer, and mission planner.

COSPAR office in Paris has moved from his old site and is now housed with French Space Agency (CNES). The new address is COSPAR Secretariat, c/o CNES, 2 place Maurice Quentin, 75039 Paris Cedex 01, FRANCE.

Report composed by G.G. Chernyi

SCOPE (Scientific Committee on Problems of the Environment)

No report has been submitted on SCOPE.

SCOR (Scientific Committee on Oceanic Research)

1. Background:

Recognition, that scientific questions about the ocean often requires an interdisciplinary approach, led the International Council for Science (ICSU) to form the Scientific Committee on Oceanic Research (SCOR) in 1957.

SCOR activities focus on promoting international cooperation in planning and conducting oceanographic research, and solving methodological and conceptual problems that hinder research. Scientists from thirty-five nations participate in SCOR working groups and steering committees. Approximately 250 scientists participate in SCOR activities on a voluntary basis at any given time.

SCOR has been instrumental in the planning and coordination of large-scale ocean research projects for long-term complex activities. SCOR provides a mechanism to bring together international scientists for this purpose.

2. 2007 SCOR Executive Committee Meeting:

The 2007 SCOR Executive committee meeting was held on August 26-28 in Bergen, Norway. SCOR-sponsored activities were reviewed and SCOR's partner organizations presented updates on their activities. The following actions were taken: (i) a committee for the 2008 SCOR elections was nominated; (ii) an Ad Hoc publication committee was formed; (iii) instrumentation of Volunteer Observing Ships was discussed and it was decided that SCOR will work with the Partnership for Observation of the Global Oceans (POGO) on this issue; (iv) two new working groups were approved.

3. Update on SCOR secretariat move to the University of Delaware:

The SCOR Secretariat has moved to the University of Delaware, College of Marine and Earth Studies. The contact information for the Secretariat is as follows:

SCOR Secretariat
Dr. Ed Urban, Scientific Director
College of Marine and Earth Studies
Robinson Hall
University of Delaware
Newark, DE 19716, USA
Tel: +1-302-831-7011
Fax: +1-302-831-7012
mail: Ed.Urban@scor-int.org

4. Current SCOR working groups which may be of interest to IUTAM:

- *WG 122 on Sediment Retention in Estuaries* – The last meeting of this group, in Boulder Colorado, September 2007, discussed a series of issues regarding (a) sediment input to estuaries under human influence, (b) morphodynamics and evolution of estuaries, (c) sediment-biological interactions, (d) estuarine hydrodynamics, (e) sea level changes, (f) the physics and models of sediment budgets in estuaries, and (g) socioeconomic impacts of changes in estuarine sedimentation.
- *WG 127 on Thermodynamics and Equation of State of Seawater* – met in May 2007 in Reggio Calabria, Italy. The group is making good progress in fulfilling its terms of reference. The properties of seawater will be defined relative to those of fresh water described by IAPWS-95. This new description of seawater will be in the form of a single thermodynamic potential function (Gibbs function) as a primary standard, rather than by a set of equations like the current EOS-80 formulation. From this primary standard, practical approximate equations for specific quantities or purposes will be derived; for

example, equations that are valid in restricted parameter ranges or are designed for improved computational speed.

- *WG 129 on Deep Ocean Exchanges with Shelf* – held its first meeting in Perugia, Italy in conjunction with the Assembly of the International Union on Geodesy and Geophysics. The meeting discussed refinement of its bibliography, interaction with other projects, and planning of a workshop on October 2008 in Cape Town, South Africa. This workshop will address the group's terms of reference and will have a capacity building component.

5. Meetings in 2008 which may be of interest to IUTAM:

- *Sept. 7-13* WG 127 Workshop on Thermodynamics and Equation of State of Seawater, Berlin, Germany.
- *Oct. 6-8* SCOR/IAPSO Workshop on Deep Ocean Exchanges with the Shelf, Cape Town, South Africa.
- *Oct. 20-24* The 2008 SCOR General Meeting and 50th Anniversary Symposium, Woods Hole, Massachusetts, USA.

6. Further Information:

For additional information about SCOR activities, please enter the SCOR Web Site: <http://www.scor-int.org>.

Report composed by Michael Stiassnie

Agreement by and between IUTAM and Springer Science and Business Media B.V.

hereinafter referred to as "the Publisher"

WHEREAS IUTAM and the Publisher agree that Springer Science and Business Media is the official designated publisher of the proceedings of IUTAM Symposia (hereinafter referred to as "Symposia". The organizer or organizers of an IUTAM Symposium, being the chairmen of the Scientific Committee of the Symposium, are hereinafter referred to as the "Organizers");

WHEREAS IUTAM and the Publisher agree that each IUTAM proceedings volume published by the Publisher (hereinafter referred to as "Volume"), providing it is appropriate vis-a-vis subject matter, will be published in the "Solid Mechanics and Its Applications" book series, or the "Fluid Mechanics and Its Applications" book series (hereinafter referred to as the "Series");

WHEREBY, in consideration of the mutual covenants and obligations herein contained, the parties hereto have agreed and do agree as follows:

1. Publication

1. Springer Science and Business Media shall be the official publisher of the proceedings of all IUTAM Symposia. Each proceedings accepted for publication shall appear as a Volume in the Series. In those cases where it is not appropriate, the Volume will be published out-of-series in the same style and format. Each Volume will appear in a hard bound version.
2. IUTAM will inform the Organizers of IUTAM Symposia of the possibility of publishing a proceedings with the Publisher, and encourage them to contact the Publisher. Further contact between the Organizers and the Publisher will be bilateral. In addition, IUTAM will notify the Publisher sufficiently ahead of time which Symposia are to be organized and shall give the Publisher the names and addresses of the Organizers.
3. The Organizers of each individual Symposium, in accordance with the IUTAM Scientific Committee, will remain free to propose to publish the proceedings in a suitable journal. In such case, the Organizers and the Publisher shall first jointly make an effort to investigate the availability of a suitable journal of published by Springer Science and Business Media.
4. If the Organizers decide to publish a proceedings with the Publisher, as recommended by IUTAM, a separate contract will be concluded between the Organizers and the Publisher in which all details regarding publication will be settled. The terms and conditions relating to the publication of a given Volume will be a matter of negotiation between the Organizers and the Publisher, where the basic conditions are based on this present Agreement.
5. The Organizers act as the Editors of the Volume.

6. Typescripts for Volumes in the Series shall yield maximally about 450 printed pages. Exemption from this restriction can be agreed on by the Organizers and the Publisher. Further, the typescripts will not contain colour pictures or colour photographs, unless the Organizers and the Publisher agree otherwise.
7. The papers submitted for publication will be preferably in LaTeX format using the Springer style file. The style file will be made available by the Publisher, and the Publisher will assist in any questions regarding its use. The papers will be submitted in camera-ready, laser printed, form (with the original figures pasted in the typescript) according to the guidelines given by the Publisher.
8. The proceedings of IUTAM Symposia will be published as Volumes in the Series, having a uniform design and recognisable cover design, including the IUTAM logo (see article 1.2). Proceedings that will be or have been published with other publishers do not form part of the Series.
9. Both the Publisher and the Organizers will do their very best in bringing the Volume out no later than one year after the Symposium has taken place. This requires that the Volume Editors who are responsible of assembling the final typescript should deliver it on time, in consultation with the Publisher.
10. IUTAM grants the Publisher the non-exclusive rights of the use of the IUTAM logo.
11. IUTAM grants the Publisher the use of the brand name "IUTAM Symposium on". This brand name is solely reserved for proceedings Volumes based on the Symposia which have been decided upon by the IUTAM General Assembly and entrusted to the Scientific Committee of the Symposium.
12. The brand name "IUTAM Symposium on" will be an integral part of the title page and the front and back cover of each Volume, and will feature in relevant promotional material.
13. The right to publish the IUTAM Symposium proceedings is not transferable by Springer Science and Business Media to any other publisher.
14. The Volumes will be published entirely for the account and risk of the Publisher, who shall be the proprietor of the goodwill and copyrights to each individual Volume.
15. In consideration of the Publisher's obligations hereinafter mentioned, IUTAM grants to the Publisher all of its rights, title, and interest in and to the publication rights to the Volumes in any language throughout the world, including but not limited to the following: the exclusive right to print, publish and sell the Volumes in whole or in part, in book form and in any other form including, without limitation, mechanical, electronic and visual reproduction, electronic storage and retrieval systems, and all other forms of electronic publication not known or hereinafter invented. The Publisher also shall have the the exclusive authorization to license the right to translate, print, publish, or sell any no-English language edition of the Volumes, all during the unrestricted period of copyright.
16. IUTAM hereby agrees that the Publisher shall be the copyright holder of each Volume in the Series, and the Publisher shall be responsible for affixing the proper notice of copyright in each copy of each Volume.
17. The publisher agrees to publish an e-book of each IUTAM Proceedings Hardbound Edition.

2. Responsibilities

1. The Organizers, will in their role as Editors of the Volume be responsible for ensuring that each Volume satisfies the standards of high scientific quality. This requires that a reviewing procedure should be carried out of each submission to the Volume. This reviewing procedure will in general be performed by the Scientific Committee of each Symposium.
2. The Publisher will provide either directly, or through the Volume Editors, guidelines and instructions to contributing authors so as to ensure that each contribution appearing in the Volume is prepared to a consistent style and format. The Editors of each Volume shall endeavour that the typescripts are prepared in accordance with the Publisher's instructions.
3. All decisions regarding publication, promotion, prices and the sale of Volumes in the Series shall be made by the Publisher. However, at the Publisher's request, IUTAM or the Volume Editors will advise the Publisher on matters pertaining to promotion and advertisement. IUTAM will allow the Publisher the right to use its name in connection with such advertising and promotion of the Series and Volumes in the Series.
4. The Publisher will be responsible for ensuring that the Volumes are produced to a high quality in a consistent style and format.
5. IUTAM and Volume Editors warrant to ensure to the best of their ability that no material in the Series contains anything that is obscene, objectionable, indecent, or of libellous or scandalous character.

3. Payments/Complimentary Copies

1. Royalties shall not be paid to the Organizers.
2. In lieu of royalties, the Organizers will get a minimum of 2 copies of each Volume free of charge.
3. The Publisher will provide the IUTAM Bureau with 9 free copies of each Volume.
4. Participants to the Symposium will be given the opportunity to order the Volume at a special prepublication price. The special Volume price will be included in the Symposium registration fee, so that each registered Participant will automatically receive a copy of the Volume upon publication. The special price includes tax (if applicable) and postage. The special price will depend on the number of participants and the size of the Volume and will be subject to negotiation between the Publisher and the Organizers of the Symposium concerned.
5. The agreed pre-publication prices for 2005-2008 shall be as set forth in the addendum to this contract.
6. It will be the sole responsibility of the Organizers of a given Symposium to forward the appropriate, one-time payment to the Publisher. The Organizers will also supply the Publisher with adhesive labels with the names and addresses of the relevant participants.

4. Special Conditions

1. Should Springer Science and Business Media decide to send a representative to a given Symposium, the Organizers will agree to provide display space free of charge for the display of relevant publications and, possibly, the dissemination of relevant promotion material to participants in the conference portfolios.
2. Springer Science and Business Media will provide the Organizers with a subsidy of 850 Euro towards the costs of organizing the Symposium. This subsidy will be paid upon receipt of the contracts signed by the Organizers.

5. Termination

The Agreement between IUTAM and Springer Science and Business Media will remain in force for an initial period of 4 (four) years, starting January 1, 2005. The Agreement will be renewed for additional periods of 3 (three) years subject to confirmation of extension by both parties 12 months before the end of the initial 4-year period or subsequent 3-year periods. Either party may terminate the Agreement with or without cause upon 12 months written notice to the other.

6. Arbitration

All disputes that may arise in connection with this present agreement or the breach thereof shall be settled exclusively by arbitration, to be held in The Netherlands in accordance with Dutch law, and shall be conducted under the Rules of the 'Nederlands Arbitrage Instituut' (Netherlands Institute of Arbitration).

Statutes

Statuts de l'Union Internationale de Mécanique Théorique et Appliquée

- I «L'Union Internationale de Mécanique Théorique et Appliquée» ci-après dénommée «l'Union» est une organisation scientifique à la fois internationale et non-gouvernementale.
- II* Les principaux objectifs de l'Union sont
- a) de constituer un lien entre les personnes et les organisations engagées dans le travail scientifique dans toutes les branches de la mécanique théorique et appliquée, par des recherches analytiques, numériques et expérimentales;
 - b) d'organiser les congrès internationaux de mécanique théorique et appliquée par l'intermédiaire de son Comité permanent des Congrès (cf. Art. XII ci-après), et d'organiser d'autres réunions internationales sur des sujets relevant de la mécanique théorique et appliquée;
 - c) de s'engager en d'autres activités visant à promouvoir le développement de la mécanique, aussi bien théorique qu'appliquée, en tant que branche de la science.
- *) Article II adopté par l'Assemblée Générale de l'Union, le 18 août 2004 à Varsovie, Pologne

III L'autorité suprême de l'Union est son Assemblée Générale.

Cette Assemblée détient le pouvoir de décider sur toute question affectant l'Union, notamment sur toute modification de ses Statuts. Sur des questions spécifiées, elle peut déléguer tout ou partie de ses pouvoirs à un ou à des organismes appropriés.

La composition de l'Assemblée Générale est régie par l'article VI ci-après. Les réunions de l'Assemblée Générale doivent se tenir aux dates fixées par le Bureau de l'Union (cf. Art. XI ci-après) ou sur la demande de 10 Membres au moins de cette Assemblée.

IV Dans toutes ses décisions, l'Assemblée Générale doit être guidée par la tradition de libre coopération scientifique internationale développée par les Congrès Internationaux de Mécanique Théorique et Appliquée. En poursuivant ses objectifs, l'Union respectera le principe général de non-discrimination et reconnaîtra le droit pour tout scientifique, partout dans le monde, d'adhérer ou de s'associer à une activité scientifique internationale sans rencontrer d'opposition pour motif de race,

de religion, de philosophie politique, d'origine ethnique, de citoyenneté, de langage ou de sexe.

V Dans les votes de l'Assemblée Générale, chaque membre ne dispose que d'une voix. Pour une modification des Statuts, la majorité requise est de deux tiers des votes exprimés.

Pour toute autre décision la majorité simple des votes exprimés est requise. Tout membre se trouvant dans l'impossibilité d'être présent à une réunion peut désigner, à l'avance et par lettre adressée au Secrétaire Général, un autre membre qu'il charge de voter en son nom.

Dans l'intervalle entre réunions de l'Assemblée Générale, un vote peut être émis par correspondance sur proposition formulée par le Bureau (cf. Art. XI ci-après). En pareil cas, le résultat du vote n'est valablement obtenu que si le nombre des participants effectifs n'est pas inférieur aux deux tiers du nombre total des membres de l'Assemblée Générale.

VI** L'Assemblée Générale se compose des membres suivants avec droit de vote:

- a) des représentants des «organisations adhérentes» (cf. art. VIII);
- b) des membres du Bureau (cf. art. XI);
- c) des membres cooptés par l'Assemblée Générale de l'Union;

La durée de mandat d'un membre coopté est précisée, lors de son élection, par l'Assemblée Générale. La durée de mandat des membres du Bureau coïncide avec celle de leur appartenance au Bureau.

Les catégories suivantes d'observateurs sont invitées à participer, sans droit de vote, à l'Assemblée Générale de l'Union:

- i) des représentants des «organisations affiliées» (cf. art. X);
- ii) le Secrétaire du Comité de Congrès (cf. art. XII);
- iii) les présidents des «Symposia Panels»;
- iv) les présidents des «Working Parties»;
- v) des représentants des pays candidats à l'adhésion;
- vi) s'il y a lieu, et sur décision de l'Assemblée Générale, des représentants de comités ou groupes de scientifiques.

***) Article VI adopté par l'Assemblée Générale de l'Union, le 18 août 2004 à Varsovie, Pologne

VII L'Assemblée Générale doit veiller à une représentation adéquate de tout groupe de scientifiques poursuivant des recherches en mécanique théorique ou appliquée et non représenté par une organisation adhérente.

VIII Les organisations de scientifiques en mécanique théorique ou appliquée (ou les unions de telles organisations) qui représentent effectivement une activité scientifique indépendante dans un pays ou dans un territoire bien défini peuvent être admises dans l'Union par l'Assemblée Générale comme «organisations adhérentes» pourvu que leur dénomination exclue tout malentendu quant à la qualification du pays ou du territoire en cause.

En principe, une seule organisation pourra être admise pour chaque pays ou chaque territoire.

IX Chaque «organisation adhérente» dispose d'un certain nombre de représentants dans l'Assemblée Générale et doit acquitter une cotisation annuelle à l'Union (cf. Art. XIV ci-après).

X Des organisations internationales dont les domaines principaux d'activité sont en étroite relation avec ceux de l'Union peuvent être admises par l'Assemblée Générale en qualité «d'organisations affiliées» à l'Union.

Chaque organisation affiliée a la faculté de désigner un observateur qui est invité à participer, sans droit de vote, à l'Assemblée Générale de l'Union. Le Bureau de l'Union (Article XI) a réciproquement la faculté de désigner un observateur, sans droit de vote, à l'organe ayant une responsabilité équivalente dans l'organisation affiliée.

L'organisation affiliée et l'Union sont tenues de s'informer mutuellement de toutes leurs activités importantes et des mesures affectant leur fonctionnement.

En préparant les rencontres scientifiques internationales qu'elles organisent, l'Union et chaque organisation affiliée sont tenues de prendre soigneusement en considération toutes les décisions déjà prises par l'Union et les organisations affiliées de manière à assurer la bonne coordination de toutes ces activités scientifiques.

Les organisations affiliées n'ont à payer aucune cotisation annuelle à l'Union.

XI*** Pour exécuter les décisions de l'Assemblée Générale et pour assurer entre ses sessions le travail de l'Union, l'Assemblée Générale élit les membres d'un Bureau pour une durée de quatre ans au plus. Le Bureau est composé d'un Comité Directeur (un Président, le précédent Président qui remplit la fonction de Vice-Président, un Secrétaire Général et un Trésorier) et de quatre autres personnes qui ont été membres de l'Assemblée Générale à un moment de la période précédant de quatre ans le moment de l'élection du Bureau.

Les membres, qui ne sont pas au Comité Directeur, ne peuvent recevoir plus de deux mandats consécutifs. Les membres du Bureau nouvellement élus entrent en fonction au premier novembre qui suit l'Assemblée Générale qui a procédé à leur élection.

Le Bureau doit se réunir au moins une fois par an. Tout membre du Bureau empêché de prendre part à une réunion de celui-ci peut désigner, par lettre adressée au Secrétaire Général, un autre membre de l'Assemblée Générale pour le remplacer.

C'est au Secrétaire Général que doivent être adressées toutes les questions concernant le fonctionnement de l'Union y compris ses relations avec les organisations adhérentes, affiliées ou autres.

Le domicile légal de l'Union se situe au domicile du Secrétaire Général.

Le Bureau a le droit de désigner un trésorier-assistant en tout pays où l'Union est titulaire d'un compte bancaire. Les trésoriers-assistants doivent être choisis parmi les membres de l'Assemblée Générale, mais non nécessairement parmi les membres du Bureau.

Le Bureau doit établir un budget prévisionnel pour l'année à venir, administrer les finances de l'Union et soumettre, chaque année, à l'Assemblée Générale un rapport financier.

Le Vice-Président doit normalement remplir les fonctions du Président pendant toute période où celui-ci se trouve empêché de les exercer.

Entre les réunions de l'Assemblée Générale, il incombe au Bureau de désigner un remplaçant temporaire pour remplir les fonctions du Vice-Président, du Secrétaire Général ou du Trésorier si cela s'avère nécessaire.

***) Article XI adoptés par l'Assemblée Générale de l'Union, le 2 Septembre 1990 à Vienne, Autriche

XII L'Assemblée Générale désigne un Comité permanent des Congrès chargé d'organiser à intervalles réguliers les Congrès Internationaux de Mécanique Théorique et Appliquée (ICTAM).

- a) Le Président de l'Union préside aussi ce Comité des Congrès.
- b) Les Membres de ce Comité sont nommés par l'Assemblée Générale; ce sont des scientifiques actifs en mécanique théorique ou appliquée, n'appartenant pas nécessairement à l'Assemblée Générale.
- c) Le Comité des Congrès nomme un Secrétaire, sans précision de durée.
- d) Les règles de fonctionnement du Comité des Congrès sont soumises à l'approbation de l'Assemblée Générale.

XIII Les ressources financières de l'Union sont constituées par:

- a) les cotisations annuelles des «organisations adhérentes»;
- b) les dons et subventions que l'Union peut recevoir.

L'Union doit tenir une liste de ses bienfaiteurs où doivent être mentionnés pour chaque année les noms des personnes ou institutions qui ont accordé à l'Union des dons, des legs ou des subventions.

XIV Le nombre des représentants d'une «organisation adhérente» et le montant de la cotisation annuelle qu'elle doit acquitter sont défini dans le tableau suivant, par la catégorie à laquelle elle désire appartenir, et avec l'accord de l'Assemblée Générale.

Catégorie représentants	Nombre de de la cotisation annuelle	Nombre d'unités
I	1	1
II	2	3
III	3	5
IV	4	8
V	5	12

Le montant de l'unité de cotisation annuelle est fixé par l'Assemblée Générale, au moins une année précédente celle à laquelle cette cotisation devient exigible.

XV**** Toute proposition de modification des Statuts, présentée ou par le Bureau ou par le Secrétaire Général, et ayant reçu l'appui d'au moins dix membres de l'Assemblée Générale ayant le droit de vote, devra être envoyée aux membres de l'Assemblée Générale avec l'ordre du jour de la réunion de l'Assemblée Générale. Le débat sur de telles propositions devra s'effectuer au cours de la première session et le vote au cours de la seconde (Article V).

****) Article XV adopté par l'Assemblée Générale de l'Union, le 28 Août 1994 à Amsterdam, les Pays-Bas

Règles de fonctionnement du Comité des Congrès de l'Union

1. Le Comité des Congrès se réunit au moins une fois lors de chaque Congrès.
2. Le Comité des Congrès doit nommer un Comité Exécutif chargé de prendre en son nom toutes les décisions nécessaires pendant la période qui s'écoule entre deux réunions successives, et de lui en faire rapport à sa prochaine réunion. Le Comité Exécutif comprend le président, le secrétaire du Comité des Congrès, et un ou plusieurs membres désignés par le comité des Congrès.
3. L'organisation effective d'un Congrès est confiée à un Comité local d'Organisation, élu par le pays ou l'organisation qui invite, et ce Comité est également responsable de la publication des Comptes rendus du Congrès. Le Comité d'Organisation fera son

rapport au Comité des Congrès soit au cours du Congrès qu'il organise, soit avant, s'il le juge préférable.

4. Le Comité d'Organisation devra obtenir l'approbation du Comité des Congrès (normalement par l'intermédiaire du Comité Exécutif) pour toutes les questions relevant de la politique générale du Comité des Congrès, en particulier pour celles qui concernent:
 - 4.1. le but du Congrès;
 - 4.2. la sélection des communications pour le Congrès;
 - 4.3. le choix des conférences générales pour le Congrès;
 - 4.4. la désignation des présidents de sessions du Congrès;
 - 4.5. les principes généraux régissant les arrangements financiers du Congrès.
5. Le Comité d'Organisation percevra, de tous les membres du Congrès, une contribution (dont le montant sera proposé par le Comité du Congrès et approuvé par le Bureau) afin de couvrir les dépenses administratives du Comité du Congrès. Ces contributions seront reversées à l'IUTAM immédiatement après le Congrès.

Procédés pour l'élection du Bureau de l'IUTAM *****

1. Lors de l'Assemblée Générale (AG) précédant celle au cours de laquelle le nouveau Bureau doit être élu, un Comité Electoral (CE) doit être élu comprenant le Président de IUTAM (qui assure la présidence de ce Comité) et deux à quatre membres de l'AG, non-membres du Bureau en exercice.
2. A la suite de cette élection, le CE invite les membres avec droit de vote et observateurs de l'AG, spécifiés dans l'Article VI des Statuts sous les rubriques a), b), c), i) et ii), à faire connaître à son Président, dans des délais fixés, leurs suggestions de candidatures pour le Bureau, c'est-à-dire pour les charges de Président (P) de Secrétaire Général (S), de Trésorier (T) et pour quatre autres postes. Toutes ces suggestions doivent être traitées confidentiellement par le CE.
3. Prenant en compte toutes les suggestions reçues, le CE doit soumettre au Secrétaire Général les noms proposés comme candidats au Bureau: un seul nom pour les charges P,S,T et un ou plusieurs noms pour chacun des quatre autres postes (W,X,Y,Z). Le CE doit s'assurer que tous les candidats ainsi proposés sont prêts à accepter leur élection. Toutes ces propositions sont portées par le Secrétaire Général à la connaissance des membres de l'AG avant la première session de l'AG au cours de laquelle le nouveau Bureau doit être élu.

4. Lors de cette première session d'autres propositions de candidatures peuvent être proposées pour chacun des postes P, S, T, W, X, Y, Z. Aucun candidat ne peut être proposé pour plus d'un seul poste.
5. Avant la seconde session de l'AG au cours de laquelle le nouveau Bureau doit être élu, chaque proposition envisagée au point 4 ci dessus pour pouvoir être acceptée doit recevoir l'appui d'au moins dix membres de l'AG ayant le droit de vote au moyen d'une déclaration écrite et signée et faire l'objet d'un engagement écrit de la personne proposée indiquant qu'elle est prête à accepter son élection. Toute proposition ne remplissant pas ces conditions sera retirée.
6. Pour chacun des postes P, S, T, W, X, Y, S, l'AG est appelé à désigner le titulaire par un vote mettant en compétition les candidats restants. S'il y a plusieurs candidats pour un poste, le vote doit avoir lieu au scrutin secret.

*****) Procédure adoptée par l'Assemblée Générale de l'Union, le 18 Août 2004 à Varsovie, Pologne

Procédure pour l'élection de membres cooptés par l'Assemblée Générale*****

1. La procédure s'applique à l'élection et à la réélection des membres cooptés par l'Assemblée Générale mentionnés à l'article VI c) des Statuts.
2. Les propositions émanant des membres de l'Assemblée Générale ayant le droit de vote en vue de l'élection des membres cooptés, doivent parvenir au Bureau au moins trois mois avant l'Assemblée Générale au cours de laquelle ces propositions sont prises par elle en considération, en règle générale celle qui se tient pendant le Congrès International de Mécanique Théorique et Appliquée. Toutes ces propositions doivent être traitées confidentiellement par le Bureau.
3. Après avoir pris en compte toutes les propositions ainsi reçues le Bureau présente à l'Assemblée Générale une liste de celles qui sont jugées pouvoir recevoir de la part de l'Assemblée Générale un soutien raisonnable, pourvu cependant que le nombre total des membres cooptés n'excède pas 1/8 environ du nombre total des membres ayant le droit de vote. La liste de ces propositions est communiquée à tous les membres de l'Assemblée Générale pendant la première session de la réunion de l'Assemblée au cours de laquelle doit avoir lieu le vote.
4. Une liste de propositions différente de celle présentée par le Bureau n'est recevable que si elle a recueilli le soutien d'au moins dix membres de l'Assemblée Générale avant la seconde session.
5. L'Assemblée Générale vote sur les listes de candidats qui font l'objet des paragraphes 3 et 4.

*****)Procédure adoptée par l'Assemblée Générale de l'Union, le 26 Août 1992 à Haïfa, Israël

Statutes of the International Union of Theoretical and Applied Mechanics

I "The International Union of Theoretical and Applied Mechanics" hereinafter called "the Union" is an international non-governmental scientific organization.

II* The principal objectives of the Union are

- a) to form a link between persons and organizations engaged in scientific work in all branches of theoretical and applied mechanics and related sciences, including analytical, computational and experimental investigations;
 - b) to organize international congresses of theoretical and applied mechanics through a standing Congress Committee (Article XII), and to organize other international meetings for subjects falling within the field of theoretical and applied mechanics;
 - d) to engage in other activities meant to promote development of mechanics, both theoretical and applied, as a branch of science.
- *) Article II adopted by the General Assembly on August 18, 2004, in Warsaw, Poland

III The highest authority of the Union is its General Assembly.

The General Assembly has the power to decide all questions affecting the Union, including alterations of the Statutes. On specified questions it may delegate its power to appropriate bodies.

The composition of the General Assembly is regulated in Article VI.

Meeting of the General Assembly will take place at times decided by the Bureau (Article XI) or on the request of at least 10 members of the General Assembly.

IV In all its decisions the General Assembly shall be guided by the tradition of free international scientific cooperation, developed in the International Congresses for Theoretical and Applied Mechanics.

In pursuing its objectives the Union shall observe the basic policy of non-discrimination and affirm the rights of scientists throughout the world to adhere to or to associate with international scientific activity without regard to race, religion, political philosophy, ethnic origin, citizenship, language or sex.

- V In voting every member of the General Assembly shall dispose of one vote. For an alteration of the Statutes the majority required is 2/3 of the votes brought forward. For all other decisions a simple majority of the votes brought forward is required.

Any member who is unable to attend a meeting may by a letter to the Secretary General constitute another member of the General Assembly as proxy.

Between meetings of the General Assembly voting may be carried out by correspondence upon proposals made by the Bureau (Article XI); in this case decisions will be valid only provided the number of persons taking part in the vote is not less than 2/3 of the total membership of the General Assembly.

- VI** The General Assembly is composed of the following voting members:

- a) representatives of the adhering organizations (Article VIII);
- b) members of the Bureau (Article XI);
- c) members-at-large;

The term of a member-at-large shall be determined by the General Assembly at the time of the election. The term of members of the Bureau shall coincide with their term of service on the Bureau.

The following categories of observers are invited to take part in the General Assembly without voting rights:

- i) representatives of affiliated organizations (Article X);
- ii) Secretary of the Congress Committee (Article XII);
- iii) chairmen of the Symposia Panels;
- iv) chairmen of the Working Parties;
- v) representatives of countries applying for membership;
- vi) representatives of committees and groups of scientists, if so decided by the General Assembly.

** Article VI adopted by the General Assembly on August 18, 2004, in Warsaw, Poland

- VII The General Assembly shall provide for an adequate representation of any group of scientists carrying out research in theoretical or applied mechanics and not represented by an adhering organization.

- VIII Organizations of scientists in theoretical or applied mechanics (or unions of such organizations) which effectively represent independent scientific activity in a country or in a definite territory can be admitted by the General Assembly as adhering organizations of the Union provided they can be listed under a name that will avoid any misunderstanding about the country or territory represented.

In general only one organization from each country or territory will be admitted.

- IX Each adhering organization shall have representatives in the General Assembly of the Union, and pay an annual subscription to the Union in accordance with Article XIV.
- X International organizations mainly occupied in fields closely related to that of the Union can be admitted by the General Assembly as affiliated organizations of the Union.

Each affiliated organization has the right to appoint an observer, who is invited to take part in the General Assembly without voting rights. The Bureau of the Union (Article X) has the reciprocal right to appoint a nonvoting observer to the corresponding council or other executive body of the affiliated organization.

The affiliated organization and the Union are mutually obliged to keep each other informed about all important activities of and organizational measures taken.

In organizing international scientific meetings the Union and each of the affiliated organizations are obliged to consider carefully all measures already taken by the Union and its affiliated organizations in order to coordinate such international scientific activities.

Affiliated organizations pay no annual dues to the Union.

- XI*** To execute the decisions of the General Assembly and to carry out work between meetings, the General Assembly elects members of a Bureau for a period of at most four years. The Bureau consists of the officers (President, the retiring President who serves as Vice-President, Secretary-General, and Treasurer) and four other persons who shall have been members of the General Assembly at some time within the four years preceding the time of election to the Bureau. The maximum continuous period of service as a member of the Bureau, other than an officer, is limited to eight years. Newly elected members of the Bureau enter into office on the date of November 1, following the General Assembly at which they were elected. The Bureau will meet at least every year. A member of the Bureau who is prevented from attending a meeting may by letter to the Secretary-General designate another member of the General Assembly as a replacement.

The Secretary-General will act as a permanent centre for all matters affecting the Union, including relations with adhering, affiliated and other organizations.

The legal domicile of the Union shall be the place where the Secretary-General lives.

The Bureau is authorized to appoint Assistant-Treasurers in those countries where the Union has a bank account.

The Assistant-Treasurers must be members of the General Assembly but need not to be members of the Bureau.

The Bureau shall draft a budget for each coming year, and shall administer the finances. The Bureau shall submit an annual financial report to the General Assembly.

The Vice-President shall normally fulfil the duties of the President should the President become unable to discharge them.

Between meetings of the General Assembly the Bureau shall decide who shall undertake the duties of the Vice President, Secretary-General, or Treasurer should a temporary replacement be necessary.

***) Article XI adopted by the General Assembly on September 2, 1990, in Vienna, (Austria)

XII The General Assembly establishes a standing Congress Committee that is responsible for the organization of International Congresses of Theoretical and Applied Mechanics at regular intervals.

- a) The President of the Union shall also serve as President of the Congress Committee.
- b) The members of the Congress Committee are appointed by the General Assembly as scientists active in theoretical or applied mechanics and need not be members of the General Assembly.
- c) The Congress Committee appoints a Secretary, without stated terms of office.
- d) The rules of procedure of the Congress Committee shall be approved by the General Assembly.

XIII The financial means of the Union are formed by:

- a) the annual subscriptions of the adhering organizations;
- b) gifts and grants.

The Union shall maintain a roll of benefactors on which shall be inscribed annually the names of those persons or institutions which have accorded gifts, legacies or other subventions to the Union.

XIV The number of representatives of an adhering organization and the amount of the annual subscription to be paid by that organization will be regulated according to

one of the following categories, as proposed by the adhering organization and after approval of the General Assembly of the Union:

Category	Number of Representatives	Units of annual subscription
I	1	1
II	2	3
III	3	5
IV	4	8
V	5	12

Changes in the amount of the unit annual subscription will be decided by the General Assembly not less than one year in advance.

XV**** Any proposal for alteration of the Statutes either prepared by the Bureau or supported by statements to the General-Secretary signed by at least ten voting members of the General Assembly with voting rights, shall be sent to members of the General Assembly with the Agenda for a meeting of the General Assembly. Such proposals shall be discussed during the first session of that meeting and voted upon during the second session (Article V).

****) Article XV adopted by the General Assembly on August 28, 1994, in Amsterdam, The Netherlands

Rules of procedure for the Congress Committee of IUTAM

1. The Congress Committee meets at least once at every Congress.
2. The Congress Committee may appoint an Executive Committee to take all necessary actions on its behalf in the period between two successive Congresses, and to report to it at its next meeting. The Executive Committee will consist of the president, the secretary and one or more members appointed by the Congress Committee.
3. The actual organization of a Congress is delegated to a local Organizing Committee, elected by the host-country or host-organization, which is also responsible for publication of its Proceedings. The Organizing Committee will report to the Congress Committee either during or, if it sees fit, before the Congress which it organizes.
4. The Organizing Committee will obtain the approval of the Congress Committee (normally through the Executive Committee) with regard to all matters affecting the general policy of the Congress Committee, in particular with regard to:
 - 4.1. the scope of the Congress;

- 4.2. the screening of papers of the Congress;
 - 4.3. the selection of general lectures for the Congress;
 - 4.4. the appointment of chairmen of sessions of the Congress;
 - 4.5. the broad principles regarding financial arrangements for the Congress.
5. The Organizing Committee will levy a fee (the level to be recommended by the Congress Committee and approved by the Bureau) for administrative expenses of the Congress Committee, from all Congress members. This fee will be paid over to IUTAM after the Congress.

Procedure for election of the Bureau of IUTAM*****

1. At the General Assembly (GA) preceding the one at which the new Bureau is to be elected, an Electoral Committee (EC) shall be elected, consisting of the President of IUTAM (who shall act as Chairman of the EC) and two to four members of the GA who are not members of the current Bureau.
2. Following its election, the EC shall invite from those voting members and observers of the GA indicated under a), b), c), i) and ii) in Article VI of the Statutes, within a specified time limit, suggestions for candidates for the Bureau, viz. for the Offices of President (P), Secretary-General (S) and Treasurer (T), and for the four non-Officer positions. All suggestions shall be treated confidentially by the EC.
3. Taking account of all suggestions received, the EC shall submit to the Secretary-General nominations for candidates for election to the Bureau: one name for each of the Officer positions (P, S, T) and one or more names for each of the non-Officer positions (W, X, Y, Z). The EC will make sure that the candidates thus nominated are willing to accept an election. These nominations shall be conveyed by the Secretary-General to the GA in advance of the first session of the meeting of the GA at which the new Bureau is to be elected.
4. At this first session, additional candidates may be proposed by members of the GA for each and any of the positions P, S, T, W, X, Y, Z. No candidate may be proposed for more than one position.
5. Before the second session of the GA at which the new Bureau is to be elected, the proposals under clause 4 above shall be accepted if supported by statements to the Secretary-General each signed by at least ten (voting) members of the GA and by written confirmation that each nominee is willing to accept election; otherwise they shall be considered withdrawn.

6. The GA shall vote separately on the surviving nominations for each of the positions P, S, T, W, X, Y, Z. In any case in which there is more than one candidate for a position, the vote shall be by secret ballot.

*****) Procedure adopted by the General Assembly on August 18, 2004, in Warsaw, Poland

Procedure for electing Members-at-Large of the General Assembly*****

1. This procedure shall apply for the election and re-election of the Members-at-Large of the General Assembly provided for in Article VI(c) of the Statutes.
2. Proposals, by members of the General Assembly with voting rights, for Members-at-Large must be received by the Bureau at least three months before the meeting of the General Assembly at which proposals are to be considered, normally during the International Congresses of Theoretical and Applied Mechanics (ICTAM). All proposals will be treated confidentially by the Bureau.
3. Taking into account all material received, the Bureau will present to the General Assembly such proposals as it deems will have at least a reasonable support by the General Assembly, provided however that the total number of Members-at-Large is not to exceed approximately one eighth ($1/8$) of the total General Assembly membership with voting rights. Such proposals will be circulated to all members of the General Assembly during the first session of meeting of the Assembly at which the proposals are to be voted on.
4. Proposals not identical with those presented by the Bureau are considered to be withdrawn, unless they are sustained and supported by at least ten members of the General Assembly before its second session.
5. The General Assembly will vote on those candidates mentioned in the proposals of paragraphs 3 and 4.

*****) Procedure adopted by the General Assembly on August 26, 1992, in Haifa, Israel

List of Publications

Five categories of IUTAM publications can be distinguished:

a) Annual Reports

Since 1948, the Union has published a Report every year with detailed information on its activities. These Annual Reports are preserved at the IUTAM Archive at CISM, Udine, Italy.

The IUTAM Annual Reports over the last five years are available upon request from the IUTAM Secretariat and as pdf file on the IUTAM website <http://www.iutam.net/iutam/Publications/>

b) Newsletters

At the meeting of the Bureau of IUTAM held in Warsaw in August 2001 it was agreed that the IUTAM Newsletter should be revived.

A primary purpose of the Newsletter, in conjunction with the IUTAM website, is to provide information concerning future activities of IUTAM, particularly its Symposia and Summer Schools, and concerning the International Congress of Theoretical and Applied Mechanics (ICTAM).

The Newsletter will also serve to keep members of IUTAM informed about any other current developments of concern to IUTAM.

The last IUTAM Newsletter is available from the IUTAM Secretariat. Pdf versions of IUTAM Newsletters are available from the IUTAM website (<http://www.iutam.net/iutam/Publications/index.php/6>).

c) Proceedings of IUTAM Symposia

These are only available by ordering directly from the publisher.

d) Proceedings of the International Congresses on Theoretical and Applied Mechanics (ICTAM)

These are only available by direct ordering from the publisher.

e) Publications on the history of IUTAM

Proceedings of IUTAM Symposia

The Proceedings of IUTAM Symposia published since 1995 are listed below. The names of the editors and of the publisher are given in every case. A complete listing of all published Proceedings can be found at the IUTAM website <http://www.iutam.net> or <http://www.iutam.org> or <http://www.iutam.info>.

1995

- 95-1 *IUTAM Symposium on Optimization of Mechanical Systems* (Stuttgart, Germany, 26-31 March 1995).
The Proceedings of the Symposium, edited by D. Bestle and W. Schiehlen, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1996. ISBN 0-7923-3830-8.
- 95-2 *IUTAM Symposium on Asymptotic Methods for Turbulent Shear Flows at High Reynolds Numbers* (Bochum, Germany, 28-30 June 1995).
The Proceedings of the Symposium, edited by K. Gersten, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1996. ISBN 0-7923-4138-4.
- 95-3 *IUTAM Symposium on Advances in Nonlinear Stochastic Mechanics* (Trondheim, Norway, 3 - 7 July 1995).
The Proceedings of the Symposium, edited by A. Naess and S. Krenk, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1996. ISBN 0-7923-4193-7.
- 95-4 *IUTAM Symposium on Nonlinear Instability and Transition in Three-Dimensional Boundary Layers* (Manchester, UK, 17-20 July 1995).
The Proceedings of the Symposium, edited by P.W. Duck and P. Hall, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1996. ISBN 0-7923-4079-5.
- 95-6 *IUTAM Symposium on Micromechanics of Plasticity and Damage of Multiphase Materials* (Paris, France, 29 August-1 September 1995).
The Proceedings of the Symposium, edited by A.Pineau and A.Zaoui, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1996. ISBN 0-7923-41388-0.

- 95-7 *IUTAM Symposium on Nonlinear Analysis of Fracture*
(Cambridge, UK, 3-7 September 1995).
The Proceedings of the Symposium, edited by J. Willis, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1997. ISBN 0-7923-4378-6.
- 95-9 *IUTAM Symposium on Combustion in Supersonic Flows*
(Poitiers, France, 2-6 October 1995).
The Proceedings of the Symposium, edited by M. Champion and B. Deshaies, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1997. ISBN 0-7923-4313-1.
- 1996**
- 96-1 *IUTAM Symposium on Interaction between Dynamics and Control in Advanced Mechanical Systems*
(Eindhoven, The Netherlands, 21-26 April 1996).
The Proceedings of the Symposium, edited by D.H. van Campen have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1997. ISBN 0-7923-4429-4.
- 96-2 *IUTAM Symposium on Innovative Computational Methods for Fracture and Damage*
(Dublin, Ireland, 30 June-5 July 1996).
The Proceedings of the Symposium, edited by P. E. O' Donoghue, M. D. Gilchrist and K. B. Broberg, have been published in the "Computational Mechanics Journal", 19, 447- 552; 20, 3-198, 1997.
- 96-3 *IUTAM Symposium on Variable Density Low Speed Turbulent Flows*
(Marseille, France, 7-10 July 1996). Co-sponsored by ICSU.
The Proceedings of the Symposium, edited by Louis Fulachier, John L. Lumley and Fabien Anselmet, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1997. ISBN 0-7923-4602-5.
- 96-4 *IUTAM Symposium on Mechanics of Granular and Porous Materials*
(Cambridge, UK, 15-17 July 1996).
The Proceedings of the Symposium, edited by N.A. Fleck and A.C.F. Cocks, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1997. ISBN 0-7923-4553-3.

1997

- 97-1 *IUTAM Symposium on Lubricated Transport of Viscous Materials*
(Tobago, 7-10 January 1997).
The Proceedings of the Symposium, edited by Harold Ramkissoon, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1997. ISBN 0-7923-4897-4.
- 97-2 *IUTAM Symposium on Transformation Problems in Composite and Active Materials*
(Cairo, Egypt, 9-12 March 1997).
The Proceedings of the Symposium, edited by Y.A. Bahei-El-Din and G.J. Dvorak, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998. ISBN 0-7923-5122-3.
- 97-3 *IUTAM Symposium on Non-Linear Singularities in Deformation and Flow*
(Haifa, Israel, 17-21 March 1997).
The Proceedings of the Symposium, edited by D. Durban and J.R.A. Pearson, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998. ISBN 0-7923-5349-8.
- 97-4 *IUTAM Symposium on Variations of Domains and Free-Boundary Problems in Solid Mechanics*
(Paris, France, 22-25 April 1997).
The Proceedings of the Symposium, edited by P. Argoul, M. Frémond and Q.S. Nguyen, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998. ISBN 0-7923-5450-8.
- 97-5 *IUTAM Symposium on Simulation and Identification of Organized Structures in Flows*
(Lyngby, Denmark, 25-29 May 1997).
The Proceedings of the Symposium, edited by J.N. Sørensen, E.J. Hopfinger, and N. Aubry, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1999. ISBN 0-7923-5603-9.
- 97-6 *IUTAM Symposium on Discretization Methods in Structural Mechanics*
(Vienna, Austria, 1-6 June 1997).
The Proceedings of the Symposium, edited by H.A. Mang and F.G. Rammerstorfer, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands 1999. ISBN 0-7923-5591-1.

- 97-7 *IUTAM Symposium on Material Instabilities in Solids*
(Delft, The Netherlands, 9-13 June 1997)
The Proceedings of the Symposium, edited by R. de Borst en E. van der Giessen, have been published by John Wiley & Sons, Chichester, UK, 1998 . ISBN 0-471-97460-9.
- 97-8 *IUTAM Symposium on Statistical Energy Analysis*
(Southampton, UK. 8-11 July 1997).
The Proceedings of the Symposium, edited by F.J. Fahy and W.G Price, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998, ISBN 0-7923-5457-5.
- 97-9 *IUTAM Symposium on Rheology and Computation*
(Sydney, Australia, 20-25 July 1997).
No formal Proceedings of the Symposium have been published. Selected papers have been published in several 1999-volumes of the "Journal of Non-Newtonian Fluid Mechanics", with a footnote attached to each of those papers.
- 97-10 *IUTAM Symposium on New Applications of Nonlinear and Chaotic Dynamics in Mechanics*
(Ithaca, NY, USA, 27 July-1 August 1997).
The Proceedings of the Symposium, edited by Francis C. Moon, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998. ISBN 0-7923-5276-9.
- 97-11 *IUTAM Symposium on Computational Methods for Unbounded Domains*
(Boulder, USA, 3-7 August 1997).
The Proceedings of the Symposium, edited by Thomas L. Geers, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998. ISBN 0-7923-5266-1.
- 97-12 *IUTAM Symposium on Micro- and Macrostructural Aspects of Thermoplasticity*
(Bochum, Germany, 25-29 August 1997).
The Proceedings of the Symposium, edited by O.T. Bruhns and E. Stein, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998. ISBN 0-7923-5265-3.
- 97-13 *IUTAM Symposium on Dynamics of Slender Vortices*
(Aachen, Germany, 31 August - 3 September 1997).
The Proceedings of the Symposium, edited by E. Krause and K. Gersten, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998. ISBN 0-7923-5041-3.

- 97-14 *IUTAM Symposium on Rheology of Bodies with Defects*
(Beijing, China, 2-6 September 1997).
The Proceedings of the Symposium, edited by Ren Wang, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998. ISBN 0-7923-5297-1.
- 1998**
- 98-1 *IUTAM Symposium on Three-Dimensional Aspects of Air-Sea Interaction*
(Nice, France, 17-21 May 1998)
The Proceedings of the Symposium, edited by F. Dias and C. Khariff, have been published as a special issue of the "European Journal of Mechanics B / Fluids", Vol. 18, No. 3 (1999)
- 98-2 *IUTAM Symposium on Synthesis in Bio Solid Mechanics*
(Lyngby, Denmark, 24-27 May 1998).
The Proceedings of the Symposium, edited by Pauli Pedersen and Martin P. Bendsøe, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1999. ISBN 0-7923-5615-2.
- 98-3 *IUTAM/IUGG Symposium on Developments in Geophysical Turbulence*
(Boulder, USA, 16-19 June 1998).
The Proceedings of the Symposium, edited by R.M. Kerr and Y. Kimura, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2000 ISBN 0-7923-6673-5.
- 98-4 *IUTAM Symposium on Viscoelastic Fluid Mechanics*
(Stanford, USA, 21-25 June 1998).
A Report on this Symposium by E.S.G. Shaqfeh and a collection of selected papers have been published in the "Journal of Non-Newtonian Fluid Mechanics", Vol. 82 (1999), pp. 127-457.
- 98-5 *IUTAM Symposium on Unilateral Multibody Contacts*
(Munich, Germany, 3-7 August 1998).
The Proceedings of the Symposium, edited by F. Pfeiffer and Ch. Glocker, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1999. ISBN 0-7923-6030-3.
- 98-6 *IUTAM/IFTToMM Symposium on Synthesis of Nonlinear Dynamical Systems*
(Riga, Latvia, 24-28 August 1998).
The Proceedings of the Symposium, edited by E. Lavendelis and M. Zakrzhevsky, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1999. ISBN 0-7923-6106-7.

- 98-7 *IUTAM Symposium on Advanced Optical Methods and Applications in Solid Mechanics*
(Poitiers, France, 31 August-4 September 1998).
The Proceedings of the Symposium, edited by A. Lagarde, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2000. ISBN 0-7923-6604-2.
- 98-8 *IUTAM/IASS Symposium on Deployable Structures: Theory and Applications*
(Cambridge, UK, 6-9 September 1998).
The Proceedings of the Symposium, edited by S. Pellegrino and S.D. Guest, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2000. ISBN 0-7923-6516-X.
- 98-9 *IUTAM Symposium on Mechanics of Passive and Active Flow Control*
(Göttingen, Germany, 7-11 September 1998).
The Proceedings of the Symposium, edited by G.E.A. Meier and P.R. Viswanath, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 1999. ISBN 0-7923-5928-3.
- 1999**
- 99-1 *IUTAM Symposium on Nonlinearity and Stochastic Structural Dynamics*
(Madras, India, 4-8 January 1999).
The Proceedings of the Symposium, edited by S. Narayanan and R.N. Iyengar, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2000. ISBN 0-7923-6733-2.
- 99-2 *IUTAM Symposium on Mechanical and Electromagnetic Waves in Structured Media*
(Sydney, NSW, Australia, 18-22 January 1999).
The Proceedings of the Symposium, edited by R.C. McPhedran, L.C. Botten and N.A. Nicorovici, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. ISBN 0-7923-7038-4.
- 99-3 *IUTAM Symposium on Recent Developments in Nonlinear Oscillations of Mechanical Systems*
(Hanoi, Vietnam, 2-5 March 1999).
The Proceedings of the Symposium, edited by N. Van Dao and E.J. Kreuzer, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2000. ISBN 0-7923-6470-8.

- 99-4 *IUTAM/LACM/LABEM Symposium on Advanced Mathematical and Computational Mechanics Aspects of the Boundary Element Method* (Cracow, Poland, 31 May-3 June 1999).
The Proceedings of the Symposium, edited by T. Burczynski, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. ISBN 0-7923-7081-3.
- 99-5 *IUTAM Symposium on Segregation in Granular Flows* (Cape May, New Jersey, USA, 5-10 June 1999).
The Proceedings of the Symposium, edited by A.D. Rosato and D.L. Blackmore, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2000. ISBN 0-7923-6547-X.
- 99-6 *IUTAM Symposium on Nonlinear Wave Behaviour in Multi Phase Flow* (Notre Dame, Indiana, USA, 7-9 July 1999)
The Proceedings of the Symposium edited by H.C. Chang, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2000. ISBN 0-7923-6454-6.
- 99-7 *IUTAM Symposium on Theoretical and Numerical Methods in Continuum Mechanics of Porous Materials* (Stuttgart, Germany, 5-10 September 1999).
The Proceedings of the Symposium, edited by W. Ehlers, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. ISBN 0-7923-6766-9.
- 99-8 *IUTAM Symposium on Laminar-Turbulent Transition* (Sedona, Arizona, USA, 12-18 September 1999).
The Proceedings of the Symposium, edited by H. Fasel and W.S. Saric, have been published by Springer-Verlag, Berlin/Heideberg/New York, 2000. ISBN 3-540-67947-2.
- 99-9 *IUTAM Symposium on Geometry and Statistics of Turbulence* (Hayama, Japan, 1-5 November 1999).
The Proceedings of the Symposium edited by T. Kambe, T. Nakano and T. Miyauchi, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. ISBN 0-7923-6711-1.
- 2000**
- 00-1 *IUTAM Symposium on Creep in Structures* (Nagoa, Japan, 3-7 April 2000).
The Proceedings of the Symposium, edited by S. Murakami and N. Ohno, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2000. ISBN 0-7923-6737-5.

- 00-2 *IUTAM Symposium on Bluff Body Wakes and Vortex-induced Vibration*
(Marseille, France, 13-16 June 2000).
The Proceedings of the Symposium edited by T. Leweke, P.W. Bearman and C.H.K. Williamson, have been published by Academic Press in the Journal of Fluids and Structures, Special Issue on Bluff Body Wakes and Vortex-Induced Vibrations, London, 2001. ISSN 0889-9746, Vol. 15, nos. 3/4.
- 00-2a *IUTAM Symposium on Scaling Laws in Ice Mechanics and Ice Dynamics*
(Fairbanks, Alaska, USA, 13-16 June 2000).
The Proceedings of the Symposium, edited by J.P. Dempsey and H.H. Shen, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. ISBN 1-4020-0171-1.
- 00-3 *IUTAM Symposium on Mechanical Waves for Composite Structures Characterization*
(Chania, Crete, Greece, 14-17 June 2000).
The Proceedings of the Symposium, edited by D.A. Sotiropoulos, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. ISBN 0-7923-7164-X.
- 00-4 *IUTAM Symposium on Advances in Mathematical Modelling of Atmosphere and Ocean Dynamics*
(Limerick, Ireland, 2-7 July 2000).
The Proceedings of the Symposium, edited by P.F. Hodnett, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. ISBN 0-7923-7075-9.
- 00-5 *IUTAM Symposium on Free Surface Flows*
(Birmingham, United Kingdom, 10-14 July 2000).
The Proceedings of the Symposium, edited by A.C. King and Y.D. Shikhmurzaev, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. ISBN 0-7923-7085-6.
- 00-6 *IUTAM Symposium on Diffraction and Scattering in Fluid Mechanics and Elasticity*
(Manchester, England, 17-20 July 2000).
The Proceedings of the Symposium, edited by I.D. Abrahams, P.A. Martin and M.J. Simon, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2002. ISBN 1-4020-0590-3.

- 00-7 *IUTAM Symposium on Field Analyses for Determination of Material Parameters-Experimental and Numerical Aspects* (Kiruna, Sweden, 31 July-4 August 2000).
The Proceedings of the Symposium, edited by P. Stahle and K.G. Sundin, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003. ISBN 1-4020-1283-7.
- 00-8 *IUTAM Symposium on Smart Structures and Structronic Systems* (Magdeburg, Germany, 26-29 September 2000).
The Proceedings of the Symposium, edited by U. Gabbert and H.S. Tzou, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. ISBN 0-7923-6968-8.
- 00-9 *IUTAM Symposium on Designing for Quietness* (Bangalore, India, 12-14 December 2000).
The Proceedings of the Symposium, edited by M.L. Munjal, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2002. ISBN 1-4020-0765-5.
- 2001**
- 01-1 *IUTAM Symposium on Flow in Collapsible Tubes and Past Other Highly Compliant Boundaries* (Warwick, Coventry, March 26-30, 2001).
The Proceedings of the Symposium, edited by P.W. Carpenter and T.J. Pedley, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003. ISBN 1-4020-1161-X.
- 01-2 *IUTAM Symposium on Material Instabilities and the Effect of Microstructure* (Austin, Texas, USA, 7-11 May 2001).
The Proceedings of the Symposium, edited by S. Kyriakides and N. Triantafyllidis, have been published by Elsevier Science Ltd. as a special issue of the International Journal of Solids and Structures, number 39, 2002.
- 01-3 *IUTAM Symposium on Turbulent Mixing and Combustion* (Kingston, Ontario, Canada, 3-6 June 2001).
The Proceedings of the Symposium, edited by A. Pollard and S. Candel, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2002. ISBN 1-4020-0747-7.

- 01-4 *IUTAM Symposium on Micromechanics of Martensitic Phase Transformation in Solids*
(Hong Kong, 11-15 June 2001).
The Proceedings of the Symposium, edited by Q.P. Sun, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2002.
ISBN 1-4020-0741-8
- 01-5 *IUTAM Symposium on Analytical and Computational Fracture Mechanics of Non-Homogeneous Materials*
(Cardiff, England, 18-22 June 2001).
The Proceedings of the Symposium, edited by B.L. Karihaloo, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2002.
ISBN 1-4020-0510-5
- 01-6 *IUTAM Symposium on Computational Mechanics of Solid Materials at Large Strains*
(Stuttgart, Germany, 20-24 August 2001).
The Proceedings of the Symposium, edited by C. Miehe, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003.
ISBN 1-4020-1170-9
- 01-7 *IUTAM Symposium on Tubes, Sheets and Singularities In Fluid Dynamics*
(Zakopane, Poland, 2-7 September 2001).
The Proceedings of the Symposium, edited by K. Bajaj and H.K. Moffatt, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2002. ISBN 1-4020-0980-1

2002

- 02-1 *IUTAM Symposium on Micromechanics of Fluid Suspensions and Solid Composites*
(Austin, Texas, USA, 3-5 April 2002).
The Proceedings of the Symposium have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, in a special issue of the Philosophical Transactions: Mathematical, Physical & Engineering Sciences in May 2003
- 02-2 *IUTAM Symposium on Unsteady Separated Flows*
(Toulouse, France, 8-12 April 2002).
The Proceedings of the Symposium edited by M. Braza, Ch. Hirsch and F. Hussain, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, in a special issue of Flow, Turbulence and Combustion, Volume 71, Nos 1-4, 2003. ISSN 1386-6184.

- 02-3 *IUTAM Symposium on Dynamics of Advanced Materials and Smart Structures* (Yamagata, Japan, 20-24 May 2002).
The Proceedings of the Symposium edited by K. Watanabe and F. Ziegler, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003. ISBN 1-4020-1061-3.
- 02-4 *IUTAM Symposium on Asymptotics, Singularities and Homogenisation in Problems of Mechanics* (Liverpool, UK, 8-11 July 2002).
The Proceedings of the Symposium edited by A.B. Movchan, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003. ISBN 1-4020-1780-4.
- 02-5 *IUTAM Symposium on Complementary, _Dual Variational Principles in Nonlinear Mechanics* (Shanghai, China, 13-16 August 2002).
The Proceedings of the Symposium edited by David Y. Gao have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, in 2004. ISBN 1-4020-7887-0 (HB) and ISBN 1-4020-7888-9 (E-book)
- 02-6 *IUTAM Symposium on Nonlinear Stochastic Systems* (Urbana-Champaign, Illinois, USA, 25-31 August 2002).
The Proceedings of the Symposium edited by N. Sri Namachchivaya and Y.K. Lin, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003. ISBN 1-4020-1471-6.
- 02-7 *IUTAM Symposium Transsonicum IV* (Göttingen, Germany, 02-06 September 2002).
The Proceedings of the Symposium edited by H. Sobieczky, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003. ISBN 1-4020-1608-5.
- 02-8 *IUTAM Symposium on Reynolds Number Scaling in Turbulent Flow* (Princeton, N.J. USA, 11-13 September 2002).
The Proceedings of the Symposium edited by A.J. Smits, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003. ISBN 1-4020-1775-8.
- 02-9 *IUTAM Symposium on Evolutionary Methods in Mechanics* (Cracow, Poland, 24-27 September 2002).
The Proceedings of the Symposium edited by Tadeusz Burczynski and Andrzej Osyczka have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, in 2004.
ISBN 1-4020-2266-2 (HB) and ISBN 1-4020-2267-0 (E-book)

- 02-10 *IUTAM Symposium on Multiscale Modeling and Characterization of Elastic-Inelastic Behavior of Engineering Materials*
(Marrakech, Morocco, 20-25 October 2002).
The Proceedings of the Symposium edited by S. Ahzi, M. Charkaoui, M.A. Khaleel, H.M. Zbib, M.A. Zikry, and B. LaMatina, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003.
ISBN 1-4020-1861-4.
- 2003**
- 03-1 *IUTAM Symposium on Mechanics of Physicochemical and Electromechanical Interactions in Porous Media*
(Kerkrade, The Netherlands 18-23 May 2003).
The Proceedings of the Symposium edited by J.M. Huyghe, P.A.C. Raats and S.C. Cowin, have been published by Springer, Dordrecht, The Netherlands in 2006.
ISBN: 978-1-4020-3864-8
- 03-2 *IUTAM Symposium on Integrated Modeling of Fully Coupled Fluid-Structure Interactions*
(Rutgers, N.J. USA 02-06 June 2003).
The Proceedings of the Symposium edited by Haym Benaroya and Thomothy Wei, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003. ISBN 1-4020-1806-1.
- 03-3 *IUTAM Symposium on Chaotic Dynamics and Control of Systems and Processes in Mechanics*
(Rome, Italy, 08-13 June 2003).
The Proceedings of the Symposium edited by G. Rega and F. Vestroni have been published by Springer, Dordrecht, The Netherlands in 2005.
ISBN 1-4020-3267-6 (HB) and ISBN 1-4020-3268-4 (E-book)
- 03-4 *IUTAM Symposium on Mesoscopic Dynamics of Fracture Process and Materials Strength*
(Osaka, Japan, 06-11 July 2003).
The Proceedings of the Symposium edited by H. Kitagawa and Y. Shibutani, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2004. ISBN 1-4020-2037-6 (HB) and ISBN 1-4020-2111-9 (e-book).

2004

- 04-1 *IUTAM Symposium on Size Effects on Material and Structural Behavior at Micron- and Nano-Scales*
(Hong Kong, China, 30 May-4 June, 2004)
The Proceedings of the Symposium edited by Q.P. Sun and P. Tong, have been published by Springer, Dordrecht, The Netherlands in 2006.
ISBN 1-4020-4945-5
- 04-3 *IUTAM Symposium on Non-Uniqueness of Solutions to the Navier-Stokes equations and their Connection with Laminar-Turbulent Transition*
(Manchester, UK, 9-11 August, 2004)
The Proceedings of the Symposium edited by T. Mullin and R.R. Kerswell, have been published by Springer, Dordrecht, The Netherlands in 2005.
ISBN 1-4020-4048-2
- 04-4 *IUTAM Symposium on One Hundred Years of Boundary Layer Research*
(Göttingen, Germany, 12-14 August, 2004)
The Proceedings of the Symposium edited by G.E.A. Meier, K.R. Sreenivasan et.al, have been published by Springer, Dordrecht, The Netherlands in 2006.
ISBN 1-4020-4149-7
- 04-5 *IUTAM Symposium on Elastohydrodynamics and Microelastohydrodynamics*
(Cardiff, UK, 1-3 September, 2004)
The Proceedings of the Symposium edited by R.W. Snidle and H.P. Evans, have been published by Springer, Dordrecht, The Netherlands in 2006.
ISBN 1-4020-4532-8
- 04-6 *IUTAM Symposium on Mechanics and Reliability of Actuating Materials*
(Beijing, China, 1-3 September, 2004)
The Proceedings of the Symposium edited by W. Yang, have been published by Springer, Dordrecht, The Netherlands in 2005. ISBN 1-4020-4130-6
- 04-7 *IUTAM Symposium on Computational Approaches to Multiphase Flow*
(Argonne, Illinois, USA, 4-7 October, 2004)
The Proceedings of the Symposium edited by S. Balachandar and A. Prosperetti, have been published by Springer, Dordrecht, The Netherlands in 2006.
ISBN 1-4020-4976-5
- 04-8 *IUTAM Symposium on Elementary Vortices and Coherent Structures: Significance in Turbulence Dynamics*
(Kyoto, Japan, 26-28 October, 2004)
The Proceedings of the Symposium edited by Kida, Shigea, have been published by Springer, Dordrecht, The Netherlands in 2006.
ISBN 1-4020-4180-2

- 04-9 *IUTAM Symposium on Laminar-Turbulent Transition*
(Bangalore, India, 13-17 December, 2004)
The Proceedings of the Symposium edited by Govindarajan, Rama, have been published by Springer, Dordrecht, The Netherlands in 2006.
ISBN 1-4020-3459-8
- 2005**
- 05-1 *IUTAM Symposium on Multiscale Modelling of Damage and Fracture Processes in Composite Materials*
(Kazimierz Dolny, Poland 23-27 May, 2005).
The Proceedings of the Symposium edited by T. Sadowski, have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2006.
ISBN 978-1-4020-4565-3.
- 05-2 *IUTAM Symposium on IUTAM Symposium on Mechanical Behavior and Micro-mechanics of Nanostructured Materials*
(Beijing, China 27-30 June 2005).
The Proceedings of the Symposium edited by Y.L. Bai, Q.S. Zheng and Y.G. Wei have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2007. ISBN 978-1-4020-5623-9.
- 05-3 *IUTAM Symposium on Impact Biomechanics: From Fundamental Insights to Applications*
(Dublin, Ireland 11-15 July, 2005).
The Proceedings of the Symposium edited by M.D. Gilchrist, have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2005.
ISBN 978-1-4020-3795-5.
- 05-4 *IUTAM Symposium on Vibration Control of Nonlinear Mechanisms and Structures*
(Munich, Germany 18-22 July, 2005).
The Proceedings of the Symposium edited by H. Ulbrich and W. Günthner, have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2005. ISBN 978-1-4020-4160-0.
- 05-5 *IUTAM Symposium on Topological Design Optimization of Structures, Machines and Materials - Status and Perspectives*
(Aalborg and Lyngby, Denmark, 26-29 October, 2005).
The Proceedings of the Symposium edited by M.P. Bendsøe, N. Olhoff and O. Sigmund, have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2006. ISBN 978-1-4020-4729-9.

2006

- 06-1 *IUTAM Symposium on Multiscale Problems in Multibody System Contacts* (Stuttgart, Germany, February 20-23, 2006).
The Proceedings of the Symposium edited by Peter Eberhard, have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2006. ISBN 978-1-4020-5980-3
- 06-2 *IUTAM Symposium on Interactions for Dispersed Systems in Newtonian and Viscoelastic Fluids* (Guanajuato, Mexico, March 26-31, 2006).
A report on the Symposium was published and appeared in *Physics of Fluids*, Vol 18, 121501-1, 2006.
- 06-3 *IUTAM Symposium on Plasticity at the Micron Scale* (Lyngby, Denmark, May 21 - May 25, 2006).
The Proceedings of the Symposium edited by V. Tvergaard, have been published by IOP Publishing, in a special issue of *Modelling and Simulation in Materials Science and Engineering*, Volume 15, number 1, 2007, ISSN 0965-0393.
- 06-4 *IUTAM Symposium on Hamiltonian Dynamics, Vortex Structures, Turbulence* (Moscow, Russia, August 25-30, 2006).
The Proceedings of the Symposium edited by Borisov, A.V., Kozlov, V.V. et.al., have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2007.
ISBN 978-1-4020-6743-3
- 06-5 *IUTAM Symposium on Discretization Methods for Evolving Discontinuities* (Lyon, France, September 04-07, 2006).
The Proceedings of the Symposium edited by Combescure, Alain, Borst, René de, Belytschko, Ted, have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2007.
ISBN 978-1-4020-6529-3
- 06-6 *IUTAM Symposium on Computational Physics and new Perspectives in Turbulence* (Nagoya, Japan, September 11-14, 2006).
The Proceedings of the Symposium edited by Kaneda, Yukio, have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2007. ISBN 978-1-4020-6471-5

- 06-7 *IUTAM Symposium on Dynamics and Control of Nonlinear Systems with Uncertainty*
(Nanjing, China, September 18-22, 2006).
The Proceedings of the Symposium edited by Hu, H. Y., Kreuzer E.J., have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2007. ISBN 978-1-4020-6331-2
- 06-8 *IUTAM Symposium on Flow Control and MEMS*
(London, UK, September 19-22, 2006).
The Proceedings of the Symposium edited by Morrison, J.F., Birch, D.M., Lavoie, P., have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2007.
ISBN 978-1-4020-6857-7
- 06-9 *IUTAM Symposium on Computational Contact Mechanics*
(Hannover, Germany, November 05-09, 2006).
The Proceedings of the Symposium edited by Wriggers, Peter, Neckenhorst, Udo have been published by Springer Academic Publishers, Dordrecht, The Netherlands, 2007.
ISBN 978-1-4020-6404-3

Proceedings of the International Congresses on Theoretical and Applied Mechanics (ICTAM)

Until September 4, 1964 the organization of the International Congresses for Applied Mechanics was supervised by the "International Committee for the Congresses of Applied Mechanics" and for each Congress the organization was separately entrusted to a local Organizing Committee who also undertook the publication of the Proceedings. Consequently, there is no central point from which Proceedings may be ordered, and for each volume, application must be made to the publishers who took care of that particular volume.

Since September 4, 1964 the same task will be fulfilled by the Standing Congress Committee of IUTAM, and local Organizing Committees to be established. The titles of the volumes and the names of the publishing firms are given below.

1st Congress, Delft (Netherlands), 22-26 April 1924.

Proceedings of the First International Congress for Applied Mechanics, Delft 1924, edited by C.B. Biezeno and J.M. Burgers (one vol.). Technische Boekhandel en Drukkerij J. Waltman Jr. Delft, 1925. No more copies are available for sale at Delft.

2nd Congress, Zürich (Switzerland), 12-17 September 1926.

Verhandlungen - Comptes rendus - Proceedings of the 2nd International Congress for Applied Mechanics, Zürich, 12-17 September 1926, herausgegeben von E. Meissner (one vol.). Orell Füssli Verlag, Zürich und Leipzig, 1927.

3rd Congress, Stockholm (Sweden), 24-29 August 1930.

Verhandlungen - Comptes rendus - Proceedings of the 3rd International Congress for Applied Mechanics, herausgegeben von A.C.W. Oseen und W. Weibull (3 vol.). AB. Sveriges Litografiska Tryckerier, Stockholm, 1931.

4th Congress, Cambridge (UK), 3-9 July 1934.

Proceedings of the Fourth International Congress for Applied Mechanics, Cambridge, UK, 3-9 July, 1934 (one vol.). University Press, Cambridge (UK), 1935.

5th Congress, Cambridge (Massachusetts, USA), 12-16 September 1938.

Proceedings of the Fifth International Congress for Applied Mechanics, held at Harvard University and the Massachusetts Institute of Technology, Cambridge, Massachusetts, September 12-16, 1938, edited by J.P. den Hartog and H. Peters (one vol.), John Wiley and Sons, Inc. New York (USA), and Chapman and Hall Ltd. London (UK), 1939.

6th Congress, Paris (France), 22-29 September 1946.

Proceedings not published (was given in the hands of Gauthier-Villars, Paris).

7th Congress, London (UK), 5-11 September 1948.

Proceedings of the Seventh International Congress for Applied Mechanics, 1948, published by the Organizing Committee (Introduction, Vol. I, Vol. II - Parts 1 and 2, Vol. III, Vol. IV).

8th Congress, Istanbul (Turkey), 20-28 August 1952.

Proceedings published by the Organizing Committee (Vol. I, Vol. II). Faculty of Sciences, University of Istanbul, P.O. Box 245, Istanbul (Turkey), 1953.

9th Congress, Brussels (Belgium), 5-13 September 1956.

Proceedings published by the Organizing Committee (Vol. I to Vol. VIII). Free University of Brussels, 50, avenue Franklin-Roosevelt, Brussels (Belgium), 1957.

10th Congress, Stresa (Italy), 31 August-7 September 1960.

Proceedings published by the Consiglio Nazionale delle Ricerche, Piazzelle delle Scienze 7, Roma (Italia), printed by Elsevier Publishing Company, Amsterdam-New York, 1962.

11th International Congress on Theoretical and Applied Mechanics (ICTAM), Munich (Germany), 30 August-5 September 1964.

The Proceedings, edited by H. Görtler, have been published by Springer-Verlag, Heidelberger Platz 3, Berlin (Germany), 1966.

12th International Congress on Theoretical and Applied Mechanics (ICTAM), Stanford, Cal. (USA), 26-31 August 1968.

The Proceedings, edited by M. Hetényi and W.G. Vincenti, have been published by Springer-Verlag, Berlin (Germany), 1969.

13th International Congress on Theoretical and Applied Mechanics (ICTAM), Moscow (USSR), 21-26 August 1972.

The Proceedings, edited by E. Becker and G.K. Mikhailov, have been published by Springer-Verlag, Berlin (Germany), 1973.

14th International Congress on Theoretical and Applied Mechanics (ICTAM), Delft (Netherlands), 30 August-4 September 1976.

The Proceedings, edited by W.T. Koiter, have been published by North-Holland Publishing Company, Amsterdam-New York-Oxford, 1976, 1977.

15th International Congress on Theoretical and Applied Mechanics (ICTAM), Toronto (Canada), 17-23 August 1980

The Proceedings, edited by F.P.J. Rimrott and B. Tabarrok, have been published by North-Holland Publishing Company, Amsterdam-New York-Oxford 1980.

16th International Congress on Theoretical and Applied Mechanics (ICTAM),
Lyngby (Denmark), 19-25 August 1984.

The Proceedings, edited by F.I. Niordson and N. Olhoff, have been published by Elsevier Science Publishers (North-Holland), Amsterdam, 1985.

17th International Congress on Theoretical and Applied Mechanics (ICTAM),
Grenoble (France), 21-27 August 1988.

The Proceedings, edited by P. Germain, M. Piau and D. Caillerie, have been published by North-Holland, Elsevier Science Publishers, Amsterdam, 1989. ISBN 0-444-87302-3.

18th International Congress on Theoretical and Applied Mechanics (ICTAM),
Haifa (Israel), 22-28 August 1992.

The Proceedings, edited by S.R. Bodner, J. Singer, A. Solan and Z. Hashin, have been published by Elsevier Science Publishers, Amsterdam, 1993.
ISBN 0-444-88889-6.

19th International Congress on Theoretical and Applied Mechanics (ICTAM),
Kyoto (Japan), 25-31 August 1996.

The Proceedings, edited by T. Tatsumi, E. Watanabe, T. Kambe, have been published by Elsevier Science Publishers, Amsterdam, 1997.
ISBN 0-444-82446-4.

20th International Congress on Theoretical and Applied Mechanics (ICTAM),
Chicago (USA), 27 August-2 September 2000.

The Proceedings, entitled "Mechanics for a new Millenium and edited by H.Aref and J.W.Phillips, have been published by Kluwer Academic Publishers, Dordrecht, The Netherlands, 2001. ISBN 0-7923-7156-9.

21th International Congress on Theoretical and Applied Mechanics (ICTAM),
Warsaw (Poland), 15-21 August 2004.

The Proceedings, entitled "Mechanics of the 21st Century" and edited by W. Gutkowski and T.A. Kowaleski, have been published by Springer, Dordrecht, The Netherlands, 2005. ISBN 1-4020-3456-3.

Publications on the history of IUTAM*IUTAM - A Short History,*

edited by S. Juhasz, has been published by Springer-Verlag, Berlin, Germany, 1988. ISBN 3-540-50043-X.

The short history is dedicated to the memory of Professor Theodore von Karman who had an essential role in the formation of IUTAM. Contributions by S. Juhasz, Sir James Lighthill, G. Battimelli, J. Hult, N.J. Hoff, D.C. Drucker and F.I. Niordson are included in the book.

Mechanics at the Turn of the Century,

edited by W. Schiehlen and L. van Wijngaarden, has been published by Shaker Verlag, Aachen, Germany, 2000. ISBN 3-8265-7714-0.

This Report is the result of an initiative of the Bureau of IUTAM to provide some landmarks on the developments in Mechanics during the 20th Century, to report on the 50 years of impulse to Mechanics by the International Union of Theoretical and Applied Mechanics (IUTAM), to visualize by a poster Meters of Motion on the occasion of the 20th International Congress of Theoretical and Applied Mechanics (ICTAM), to look ahead on a very personal basis and to show the broad international involvement of scientists in IUTAM in recent years.

The booklet “Mechanics at the Turn of the Century” is accessible free of charge on the website of Shaker Verlag. The internet address is www.shaker.de and search for Schiehlen as the author. Moreover, this booklet is available upon request at the IUTAM Secretariat

Please note again:

The publications listed above, with the exception of the Annual Reports over the last five years and the booklet “Mechanics at the Turn of the Century”, are not available at the IUTAM Secretariat. Please order directly from the publisher.

Details of all IUTAM publications may be found at

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

List of Addresses

Abe, Prof. M. (Masato)

Kanagawa Institute of Technology, 1030 Shimoogino, 243-0292 Atsugi-shi, Japan,
email: abe@sd.kanagawa-it.ac.jp

Abrahams, Prof. I.D. (David)

University of Manchester, School of Mathematics, Oxford Road, M13 9PL Manchester,
UK, email: i.d.abrahams@manchester.ac.uk

Achenbach, Prof. J.D. (Jan)

Northwestern University, Department of Mechanical Engineering, 2145 Sheridan Road,
IL 60208-3 Evanston, USA, email: achenbach@northwestern.edu

Acrivos, Prof. A. (Andreas)

Office: Levich Institute, Steinman Hall, City College of CUNY, 140th Street & Convent
Avenue, New York, NY 10031 Home: 788 Cedro Way, Stanford, CA 94305-1032, USA,
email: acrivos@sci.ccny.cuny.edu

Adams, Prof. N.A. (Nikolaus)

Technische Universität München, Fakultät Maschinenwesen, Boltzmannstrasse 15,
D-85748 Garching bei München, Germany, email: nikolaus.adams@tum.de

Adrian, Prof. R.J. (Ronald)

Arizona State University, Mechanical and Aerospace Engineering, POB 876106,
AZ 85287-6 Tempe, USA, email: ronald.adrian@asu.edu

Ahzi, Prof. S. (Said)

University Louis Pasteur, IPST-ULP, IMFS-UMR 7507, 15-17 Rue du Marechal
Lefebvre, F 67100 Strasbourg, France, email: Said.Ahzi@ipst-ulp.u-strasbg.fr

Aköz, Prof. Y. (Yalcin)

Istanbul Technical University, Faculty of Engineering, Anabilim Daly 80626-Maslak,
Istanbul, Turkey, email: akoz@itu.edu.tr

Al-Athel, Dr. S.A. (Saleh)

King Abdulaziz City for Science and Technology, P.O. Box 6086, Riyadh 11442,
Saudi Arabia, email: athel@kacst.edu.sa

Alfirevic, Prof. I. (Ivo)

University of Zagreb, Faculty of Mechanical Engineering and Naval Architecture,
Institute of Applied Mechanics, Ivana Lucica 5, HR-10000 Zagreb, Croatia, email:
ivo.alfirevic@fsb.hr

Allix, Prof. O. (Olivier)

Ecole Normale Supérieure de Cachan, LMT Cachan, 61, avenue du Président Wilson, F-94235 Cachan Cedex, France, email: allix@lmt.ens-cachan.fr

Al-Suwaiyel, Dr. M.I. (Mohammed ibn Ibrahim)

King Abdullaziz City for Science and Technology, Directorate of Technology and International Cooperation, P.O. Box 6086, 11442 Riyadh, Saudi Arabia, email: int_coop@kacst.edu.sa

Anderson, Dr. P.D. (Patrick)

Eindhoven University of Technology, Materials Technology, WH 4.142, PO Box 513, 5600 MB Eindhoven, Netherlands, email: info@dysol.nl

Aranha, Prof. J.A.P. (José)

Escola Politécnica da USP, Mechanical Engineering, NDF Laboratory, Cidade Universitária, Sao Paulo, Brazil, email: japan@usp.br

Arantes e Oliveira, Prof. R. (Eduardo) de

Technical University of Lisbon, Department of Civil Engineering, Instituto Superior Technico, Av. Rovisco Pais, 1049-001 Lisboa, Portugal, email: arantes@civil.ist.utl.pt

Aref, Prof. H. (Hassan)

Virginia Tech, College of Engineering, 333 Norris Hall (0217), VA 24061 Blacksburg, USA, email: haref@vt.edu

Arinc, Prof. F. (Faruk)

Middle East Technical University, Department of Mechanical Engineering, E 104, 06531 Ankara, Turkey, email: farinc@ichmt.org

Arruda, Prof. E. (Ellen)

University of Michigan, Department of Mechanical Engineering, 2350 Hayward, Ann Arbor, MI 48109, USA, email: arruda@umich.edu

Asai, Prof. S. (Shigeo)

Nagoya University, Department of Materials Science and Engineering, Electromagnetic Processing of Materials, Furo-cho, Chikusa-ku, 464-8603 Nagoya, Japan, email: c42538a@nucc.cc.nagoya-u.ac.jp

Ashida, Prof. F. (Fumihito)

Shimane University, Department of Electronic and Control Systems Engineering, 1060 Nishikawatsu-cho, 690-8504 Matsue, Japan, email: ashida@ecs.shimane-u.ac.jp

Aubry, Prof. N. (Nadine)

Carnegie Mellon University, Department of Mechanical Engineering, 5000 Forbes Avenue Scaife Hall 401, PA 15213 Pittsburgh, PA, USA, email: aubry@andrew.cmu.edu

Bai, Prof. Y. (Yi-long)

Chinese Academy of Sciences, Institute of Mechanics, 15 Zhong Guan Cun Road, Beijing 100080, China, email: baiyl@lnm.imech.ac.cn

Bajer, Dr. K. (Konrad)

Warsaw University, Institute of Geophysics, ul. Pasteura 7, 02-093 Warszawa, Poland, email: kbajer@fuw.edu.pl

Balachandar, Prof. S. (Bala)

University of Florida College of Engineering, Department of Mechanical and Aerospace Engineering, MAE-A 231 POB 116250, FL 32611 Gainesville, USA, email: bala1s@ufl.edu

Baltov, Prof. A. (Anguel)

Bulgarian Academy of Sciences, Institute of Mechanics, 1, 15 novembre street, 1040 Sofia, Bulgaria, email: baltov@eagle.cu.bas.bg

Barthès-Biesel, Prof. D. (Dominique)

Université de Technologie de Compiègne, Génie Biologique, BP 20529, F-60 205 Compiègne Cedex, France, email:

Battjes, Prof. J.A. (Jurjen)

Delft University of Technology, Department of Civil Engineering, Stevinweg 1, NL-2628 CN Delft, Netherlands, email: j.battjes@ct.tudelft.nl

Bearman, Prof. P.W. (Peter)

Imperial College of Science, Technology and Medicine, Department of Aeronautics, Department of Aeronautics Imperial College, SW7 2AZ London, UK, email: p.bearman@imperial.ac.uk

Bechtold, Prof. J.E. (Joan)

University of Minnesota, Department of Orthopedic Surgery, Hennepin County Medical Center, 701 Park Avenue S, Minneapolis, MN 55415, USA, email: bechtol@attglobal.net

Belyaev, Prof. A. (Alexander)

Russian Academy of Sciences, Institute of Problems in Mechanical Engineering, V.O., Bolshoi pr. 61, St. Petersburg 199178, Russia, email: belyaev@director.ipme.ru

Belytschko, Prof. T. (Ted)

Northwestern University, Department of Mechanical Engineering, 2145 Sheridan Road, Evanston, IL 60208-3111, USA, email: tedbelytschko@northwestern.edu

Benallal, Prof. A. (Ahmed)

Ecole Normale Supérieure de Cachan, Laboratoire de Mécanique et Technologie, 61 av du Président Wilson, 94235 Cachan Cedex, France, email: benallal@lmt.ens-cachan.fr

Benaroya, Prof. (Haym)

Rutgers University, Department of Mech. and Aerospace Engineering, 98 Brett Road, NJ 08854 Piscataway, USA, email: benaroya@rci.rutgers.edu

Bendsøe, Prof. M.P (Martin)

Technical University of Denmark, Department of Mathematics, Building 303, DK-2800 Lyngby, Denmark, email: m.p.Bendsoe@mat.dtu.dk

Beris, Prof. A.N. (Antony)

University of Delaware, Chemical Engineering Faculty, 265 CLB, Colburn Laboratory, 150 Academy Street, Newark, Delaware, 19716, USA, email: beris@udel.edu

Beskos, Prof. D.E. (Dimitri)

University of Patras, Department of Civil Engineering, Structural Engineering Division, GR- 26500 Patras, Greece, email: d.e.beskos@upatras.gr

Bevilacqua, Prof. L. (Luiz)

National Laboratory for Scientific Computing (LNCC), Department of Mechanics, Av. Getúlio Vargas, 333 Quitandinha, Petropolis, 25651-070 Rio de Janeiro, Brazil, email: bevilacqua@abc.org.br

Prof. D. (Davide) Bigoni

University of Trento, Dipartimento di Ingegneria Meccanica e Strutturale, via Mesiano, 77 I-38050 Trento, Italy, email: bigoni@ing.unitn.it

Biswas, Prof. G. (Gautam)

Indian Institute of Technology, Department of Mechanical Engineering, 208016 Kanpur, India, email: gtm@iitk.ac.in

Blake, Prof. J. (John)

University of Birmingham, School of Mathematics and Statistics, Edgbaston, B15 2TT Birmingham, UK, email: j.r.blake@bham.ac.uk

Bodner, Prof. S.R. (Sol)

Technion - Israel Institute of Technology, Faculty of Mechanical Engineering, Technion City, Haifa 32000, Israel, email: mersbod@technion.ac.il

Boger, Prof. D.V. (David)

The University of Melbourne, Chemical & Biomolecular Engineering, Victoria, 3010, Australia, email: dvboger@unimelb.edu.au

Bogy, Prof. D.B. (David)

University of California Berkeley, Department of Mechanical Engineering, 6195 Etcheverry Hall, CA 94720-1 Berkeley, USA, email: dbogy@cml.me.berkeley.edu

Böhm, Prof. H.J. (Helmut)

Vienna University of Technology, Institute of Light Weight Design and Structural Biomechanics (E317), Gusshausstrasse 27-29, A-1040 Vienna, Austria, email: hjb@ilsb.tuwien.ac.at

Boley, Prof. B. (Bruno)

Columbia University, Department of Civil Engineering and Engineering Mechanics, School of Engineering and Applied Science, 610 S.W. Mudd Building, New York, NY 10027, USA, email: boley@civil.columbia.edu

Bonnecaze, Prof. R.T. (Roger)

The University of Texas at Austin, Department of Chemical Engineering, Austin, TX 78712, USA, email: rtb@che.utexas.edu

Bonnet, Prof. M. (Marc)

CNRS et Ecole Polytechnique, Laboratoire de Mecanique des Solides, 91128 Palaiseau cedex, France, email: bonnet@lms.polytechnique.fr

Borodich, Prof. F.M. (Feodor)

Cardiff University, School of Engineering, Institute of Theoretical, Applied and Computational Mechanics, Queen's Buildings, The Parade, CF24 3AA Cardiff, UK, email: BorodichFM@Cardiff.ac.uk

Borst, Prof. R (René) de

Eindhoven University of Technology, Department of Mechanical Engineering, P.O. Box 513, WH 1.125, 5600 MB Eindhoven, Netherlands, email: r.d.borst@tue.nl

Boström, Prof. A. (Anders)

Chalmers University of Technology, Department of Applied Mechanics, S- 412 96 Göteborg, Sweden, email: anders.bostrom@chalmers.se

Boulanger, Prof. P. (Philippe)

Université Libre de Bruxelles, Departement de Mathematique, U.L.B. Campus Plane CP 218 / 1, B-1050 Bruxelles, Belgium, email: phboul@ulb.ac.be

Brändli, Dr. S. (Sebastian)

ETH Zürich, Stab ETH-Rat HAA F 3, Haldeliweg 15/17, 8092 Zürich, Switzerland, email: braendli@ethrat.ch

Braza, Dr. M. (Marianna)

Unite Mixte de Recherche 5502 CNRS-INPT/ENSEEIH-UPS, Institut de Mecanique des Fluides de Toulouse, Avenue du Professeur Camille Soula, F-31400 Toulouse, France, email: braza@imft.fr

Brechet, Prof. Y. (Yves)

INP Grenoble - ENSEEG, CNRS - LTPCM, Domaine Universitaire 1130 rue de la Piscine, B.P. 75,, 38 402 Saint Martin d-Heres Cedex, France, email: ybrechet@ltpcm.inpg.fr

Breuning-Madsen, Prof. H. (Henrik)

University of Copenhagen, Goegrafsk Institut, Oster Voldgade 10, D-1350 Copenhagen, Denmark, email: hbm@geogr.ku.dk

Burczynski, Prof. T. (Tadeusz)

Silesian University of Technology, Dept. for Strength of Materials and Computational Mechanics, Faculty of Mechanical EngineeringI, Konarskiego 18a, PL-44-100 Gliwice, Poland, email: burczyns@zeus.polsl.gliwice.pl

Burgess, Mrs. M. (Marion)

UNSW@ADFA, Acoustics Vibration Unit, ACT 2600, Canberra, Australia, email: m.burgess@adfa.edu.au

Busso, Prof. E.P. (Esteban)

Ecole des Mines de Paris, Director, Centre des Materiaux, B.P. 87, 91003 Evry CEDEX, France, email: Esteban.Busso@ensmp.fr

Calladine, Prof. C.R. (Christopher)

University of Cambridge, Department of Engineering, Trumpington Street, CB2 1PZ Cambridge, UK, email: crc@eng.cam.ac.uk

Campen, Prof. D.H. (Dick) van

Eindhoven University of Technology, Department of Mechanical Engineering, Den Dolech 2, WH 2.115, PO Box 513, 5600 MB Eindhoven, Netherlands, email: D.H.v.Campen@tue.nl

Candel, Prof. S. (Sébastien)

Ecole Centrale Paris and Institut Universitaire de France, Laboratoire EM2C, CNRS, Ecole Centrale Paris, Grande Voie des Vignes, F 92295 Chatenay-Malabry Cedex, France, email: candel@em2c.ecp.fr

Cardon, Prof. A.H. (Albert)

Free University of Brussels (V.U.B.), Dept. Mechanics of Materials and Constructions (MEMC), V.U.B. -TW(KB) - MEMC Pleinlaan 2, B-1050 Brussels, Belgium, email: mbourlau@vub.ac.be

Carpinteri, Prof. A. (Alberto)

Politecnico di Torino, Department of Structural Engineering, Corso Duca degli Abruzzi 24, 10129 Torino, Italy, email: alberto.carpinteri@polito.it

Cercignani, Prof. C. (Carlo)

Politecnico di Milano, Dipartimento di Matematica, Piazza Leonardo da Vinci, 32, I-20133 Milano, Italy, email: carcer@mate.polimi.it

Chang, Prof. H.C. (Hsueh-Chia)

University of Notre Dame, Department of Chemical Engineering, IN 46556 Notre Dame, USA, email: chang.2@nd.edu

Chen, Prof. W.-H. (Wen-Hwa)

National Tsing Hua University, Department of Power Mechanical Engineering, Hsinchu, China-Taipei, email: whchen@pme.nthu.edu.tw

Cheng, Prof. C.-H. (Chin-Hsiang)

National Cheng Kung University, Institute of Aeronautics and Astronautics, Tainan 701 Taiwan (R.O.C.), China-Taipei, email: chcheng@mail.ncku.edu.tw

Cheng, Prof. G.-D. (Gengdong)

Dalian University of Technology, Dalian 116024, China, email: chenggd@dlut.edu.cn

Chernousko, Prof. F.L. (Felix)

Russian Academy of Sciences, Institute for Problems in Mechanics, pr. Vernadskogo 101-1, 119526 Moscow, Russia, email: chern@ipmnet.ru

Chernyi, Prof. G.G. (Gorimir)

Moscow State University, Institute of Mechanics, 1, Michurinski Prospect, 117192 Moscow, Russia, email: ggcher@imec.msu.ru

Cheung, Prof. Y.K.

University of Hong Kong, Department of Civil Engineering, Room 6-18A, Haking Wong Building Pokfulam Road, Hong Kong, China-Hong Kong, email: hreccyk@hkucc.hku.hk

Prof. K.K. (Kyung) Choi

University of Iowa, College of Engineering, 2134 SC, MIE Department, Iowa City, IA 52242-1527, USA, email: kkchoi@engineering.uiowa.edu

Cinquini, Prof. C. (Carlo)

Università degli Studi di Pavia, Dipartimento di Meccanica Strutturale, Via Ferrata 1, 27100 Pavia, Italy, email: carlo.cinquini@unipv.it

Combescure, Prof. A. (Alain)

INSA de Lyon, LaMCos UMR 5514, 18-20, Allée des Sciences INSA de Lyon, F-69621 Villeurbanne Cedex, France, email: alain.combescure@insa-lyon.fr

Comissiong, Dr. D. M. G. (Donna)

University of The West Indies (UWI), Department of Mathematics and Computer Science, St. Augustine, Trinidad and Tobago, email: dcomissiong@fsa.uwi.tt

Cowin, Prof. S.C. (Stephen)

The City University of New York, School of Engineering, New York Center for Biomedical Engineering, 2166 Broadway Apartment 12D, 10024 New York, NY, USA, email: scowin@earthlink.net

Crandall, Prof. S.H. (Stephen)

Massachusetts Institute of Technology, Department of Mechanical Engineering, 3-360 MIT, MA 02139 Cambridge, USA, email: crandall@mit.edu

Cristescu, Prof. N.D. (Nicolaie)

University of Florida, Dept. of Aerospace Eng., Mechanics and Eng. Science, 231 Aerospace Building P.O. Box 116250, Fl. 32611-6250 Gainesville, USA, email: ndc@mae.ufl.edu

Crocker, Prof. M.J. (Malcolm)

Auburn University, Department of Mechanical Engineering, 201 Ross Hall, AL 36849 Auburn, USA, email: mcrocker@eng.auburn.edu

Cruse, Prof. T.A. (Thomas)

Vanderbilt University, Department of Mechanical Engineering, TN 37235 Nashville, USA, email: tcruse@woh.rr.com

Cui, Prof. E. (Er-jie)

Beijing Institute of Aerodynamics (BIA), P.O. Box 7201, Beijing 100074, China, email: ejcui@httx.com.cn

Cumo, Prof. M. (Maurizio)

University of Rome, Post-graduate School for Safety and Protection, Palazzo Baleani Corso Vittorio Emanuele II, 244, 00186 Roma, Italy, email: maurizio.cumo@uniroma1.it

Cveticanin, Prof. L.J. (Livija)

University of Novi Sad, Faculty of Technical Sciences, Trg D. Obradovica 6, 21000 Novi Sad, Serbia, email: cveticanin@uns.ns.ac.yu

Daigle, Dr. G.A. (Gilles)

National Research Council, Institute for Microstructural Sciences, 1191 Montreal Road, K1A 0R6 Ottawa, Canada, email: gilles.daigle@nrc.ca

Dattaguru, Prof. B.

Indian Institute of Science, Bangalore, Department of Aerospace Engineering,
Bangalore 560 012, India, email: datgur@aero.iisc.ernet.in

Davidson, Prof. L. (Lars)

Chalmers University of Technology, Department of Thermo and Fluid Dynamics, 412 96
Göteborg, Sweden, email: lada@tfd.chalmers.se

Delale, Prof. C.F. (Can)

Istanbul Technical University, Faculty of Aeronautics and Astronautics, 34469 Maslak,
34469 Istanbul, Turkey, email: delale@itu.edu.tr

Dempsey, Prof. J.P. (John)

Clarkson University, Department of Civil and Environmental Engineering, 8 Clarkson
Avenue CEE, Box 5710, 13699-5710 Potsdam, NY, USA, email:
jdempsey@clarkson.edu

Denier, Dr. J.P. (Jim)

The University of Adelaide, School of Mathematical Sciences; Department of Applied
Mathematics, Room 123, Mathematics Building, SA 5005 Adelaide, Australia, email:
James.Denier@adelaide.edu.au

Deshpande, Prof. S.M. (Suresh)

Indian Institute of Science, AR & DB Centre of Excellence in Aerospace CFD,
Department of Aerospace, 560012 Bangalore, India, email: suresh@aero.iisc.ernet.in

Dias, Prof. L. (Frederic)

Ecole Normale Supérieure de Cachan, Centre de Mathématiques et de Leurs Applications,
F-94235 Cachan Cedex, France, email: Frederic.Dias@cmla.ens-cachan.fr

Dick, Prof. E. (Erik)

Universiteit Gent, Department of Flow, Heat and Combustion Mechanics, vakgroep
TW03 Sint-Pietersnieuwstraat 41, 9000 Gent, Belgium, email: Erik.Dick@UGent.be

Dijksman, Dr. J.F. (Frits)

Philips Research Laboratories, Group Mechanics, Heat & Particle Optics, Prof. Holstlaan
4 (WB-1-57), NL-5656 AA Eindhoven, Netherlands, email: frits.dijksman@philips.com

Dowell, Prof. E.H. (Earl)

Duke University, Department of Mechanical Engineering and Materials Science,
185 Hudson Hall, NC 27708 Durham, USA, email: dowell@ee.duke.edu

Dritschel, Prof. D.G. (David)

University of St. Andrews, Department of Applied Mathematics, North Haugh,
St Andrews KY16 9SS, UK, email: dgd@mcs.st-and.ac.uk

Dual, Prof. J. (Jürg)

Swiss Federal Institute of Technology (ETH), Institute of Mechanical Systems,
CLA J 23.2 ETH - Zentrum, CH-8092 Zürich, Switzerland, email:
juerg.dual@imes.mavt.ethz.ch

Durban, Prof. D. (David)

Technion-Israel Institute of Technology, Department of Aeronautics and Space
Engineering, Technion City, 32000 Haifa, Israel, email: aer6903@tx.technion.ac.il

Dvorák, Dr. R. (Rudolf)

Institute of Thermomechanics, Academy of Sciences of the Czech Republic,
Fluid Dynamics Division, Dolejškova 5, CZ-18200 Praha, Czech Republic, email:
dvorak@it.cas.cz

Eberhard, Prof. P. (Peter)

University of Stuttgart, Institute of Engineering and Computational Mechanics,
Pfaffenwaldring 9, 70569 Stuttgart, Germany, email: eberhard@itm.uni-stuttgart.de

Ehlers, Prof. W. (Wolfgang)

University of Stuttgart, Institute of Applied Mechanics, Pfaffenwaldring 7, D-70569
Stuttgart, Germany, email: ehlers@mechbau.uni-stuttgart.de

Ellyin, Prof. F. (Fernand)

University of Alberta, TransCanada/NSERC Senior Industrial Research Chair, Rm. 4-9
Mechanical Engineering Bldg., T6G 2G8 Edmonton, Alberta, Canada, email:
Fernand.Ellyin@ualberta.ca

Engelbrecht, Prof. J. (Juri)

Institute of Cybernetics, Department of Mechanics and Applied Mathematics,
Akadeemia 21, EE-12618 Tallinn, Estonia, email: je@ioc.ee

Estorff, Prof. O. (Otto) von

Hamburg University of Technology, Institute of Modelling and Computation,
Denickestraße 17, D-21073 Hamburg, Germany, email: estorff@tu-harburg.de

Fang, Prof. J. (Jing)

Beijing University, Department of Mechanics & Engineering Science, 100871 Beijing,
China, email: jfang@pku.edu.cn

Fasel, Prof. H. (Hermann)

University of Arizona, Tucson, AZ, USA, email: faselh@u.arizona.edu

Fenchel, Prof. T. (Tom)

University of Copenhagen, Marine Biological Laboratory, Strandpromenaden 5,
DK-3000 Helsingør, Denmark, email: tfenchel@bi.ku.dk

Fennel, Prof. W. (Wolfgang)

Institut für Ostseeforschung Warnemuende (IOW), D-18119 Rostock, Germany, email: wolfgang.fennel@io-warnemuende.de

Fernholz, Prof. H.-H. (Hans)

Technische Universität Berlin, Hermann-Föttinger Institut für Strömungsmechanik, Müller-Breslau Strasse 8, D-10623 Berlin, Germany, email: fernholz@pi.tu-berlin.de

Fish, Prof. J. (Jacob)

Rensselaer Polytechnic Institute, Department of Mechanica, Aerospace and Nuclear Engineering, CII, rm 7129 110 8th Street, Troy, NY 12180, USA, email: fishj@rpi.edu

Fleck, Prof. N.A. (Norman)

Cambridge University, Department of Engineering, Trumpington St., CB2 1PZ Cambridge, UK, email: naf1@eng.cam.ac.uk

Freund, Prof. L.B. (Ben)

Brown University, Division of Engineering, 182 Hope Street, RI 02912 Providence, USA, email: freund@brown.edu

Garikipati, Prof. K. (Krishna)

University of Michigan, Department of Mechanical Engineering, 2350 Hayward, Ann Arbor, MI 48109, USA, email: krishna@umich.edu

Geers, Prof. M.G.D. (Marc)

Eindhoven University of Technology, Department of Mechanical Engineering, P.O. Box 513, 5600 MB Eindhoven, Netherlands, email: m.g.d.geers@tue.nl

Geers, Prof. T.L. (Thomas)

University of Colorado, Department of Mechanical engineering, USA, email: Geers@spot.colorado.edu

Georgiadis, Prof. H.G. (Haralambos)

National Technical University of Athens, Department of Applied Sciences, Mechanics Division, GR-15773 Zografou, Greece, email: georgiad@central.ntua.gr

Gerges, Prof. S.N.Y. (Samir)

Universidade Federal de Santa Catarina, Departamento de Engenharia Mecânica, Cx.P 476, Florianópolis SC, Brazil, email: samir@emc.ufsc.br

Germain, Prof. P. (Paul)

Academie des Sciences, 23 Quai de Conti, 75006 Paris, France, email: seances@academie-sciences.fr

Giessen, Prof. E. (Erik) van der
University of Groningen, Department of Applied Physics, Micromechanics of Materials
Group, Nijenborgh 4, 9747 AG Groningen, Netherlands, email:
E.van.der.Giessen@rug.nl

Gilchrist, Prof. M.D. (Michael)
University College Dublin, Department of Mechanical Engineering, Belfield, Dublin 4,
Ireland, email: michael.gilchrist@ucd.ie

Gjevik, Prof. B.N. (Bjorn)
University of Oslo, Department of Mathematics, Box 1053 Blindern, N 0316 Oslo,
Norway, email: bjorn@math.uio.no

Gladwell, Prof. G.M.L. (Graham)
University of Waterloo, Department of Civil Engineering, N2L 3G1 Waterloo, Canada,
email: ggladwel@uwaterloo.ca

Gledhill, Dr. I. M. A. (Igle)
CSIR, Defence, Peace, Safety and Security, PO Box 395, 0001 Pretoria, South Africa,
email: igledhil@csir.co.za

Goddard, Prof. D. (Joe)
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

Goldhirsch, Prof. I. (Isaac)
Tel Aviv University, Dept. of Fluid Mechanics and Heat Transfer, The Iby and Aladar
Fleischman Faculty of Engineering, 69978 Ramat Aviv, Israel, email:
isaac@eng.tau.ac.il

Goldstein Junior, Prof. L. (Leonardo)
Unicamp, Faculdade de Engenharia Mecanica, Departamento de Engenharia Térmica e
de Fluidos, Caixa Postal 6122, CEP 13083- Campinas - SP, Brazil, email:
leonardo@fem.unicamp.br

Goryacheva, Prof. I.G. (Irina)
Russian Academy of Sciences, Institute of Problems in Mechanics, Vernadskogo
prospect 101, 1, 119526 Moscow, Russia, email: goryache@ipmnet.ru

Govindarajan, Prof. R. (Rama)
Jawaharal Nehru Centre for Advanced Scientific Research, Engineering Mechanics
Unit, Jakkur, 560 064 Bangalore, India, email: rama@jncasr.ac.in

Grannell, Dr. J.J. (James)

National University of Ireland, Department of Applied Mathematics, Cork, Ireland,
email: j.grannell@ucc.ie

Grue, Prof. J. (John)

University of Oslo, Mechanics Division, Department of Mathematics, PO Box 1053
Blindern, N 0316 Oslo, Norway, email: johng@math.uio.no

Gudmundson, Prof. P. (Peter)

Royal Institute of Technology (KTH), Department of Solid Mechanics, S 10044
Stockholm, Sweden, email: peter@hallf.kth.se

Gupta, Prof. N.K. (Narinder)

Indian Institute of Technology, Delhi, Dept. of Applied Mechanics, IIT Delhi, Hauz
Khas, 110 016 New Delhi, India, email: nkgupta@am.iitd.ernet.in

Gupta, Prof. K.

Indian Institute of Technology, Delhi, Mechanical Engineering Department,
PO: IIT Haus Khas, 10016 New Delhi, India, email: kgupta@mech.iitd.ernet.in

Gutkowski, Prof. W. (Witold)

Institute of Fundamental Technological Research, Center of Mechanics and Information
Technology, ul. Swietokrzyska 21, PL 00-049 Warszawa, Poland, email:
witold.gutkowski@ippt.gov.pl

Guz, Prof. A.N. (Alexandr)

The National Academy of Sciences of Ukraine, Timoshenko Institute of Mechanics, 3
Nesterov Street, 252680 Kyiv, Ukraine, email: ang@imech.freenet.kiev.ua

Hackl, Prof. K. (Klaus)

Ruhr University Bochum, Lehrstuhl fuer Allgemeine Mechanik, 44780 Bochum,
Germany, email: hackl@am.bi.ruhr-uni-bochum.de

Hansen, Prof. J.S. (Jorn)

University of Toronto, Institute for Aerospace Studies, 4925 Dufferin Street,
M3H 5T6 Toronto, Canada, email: hansen@utias.utoronto.ca

Hashin, Prof. Z. (Zvi)

Tel Aviv University, Faculty of Engineering, Ramat Aviv, 69978 Tel Aviv, Israel,
email: hashin@eng.tau.ac.il

Hassan, Prof. M.H.A. (Mohammed)

Third World Academy of Sciences (TWAS), c/o The Abdus Salam International Centre
for Theoretical Physics (ICTP), Strada Costiera 11, 34014 Trieste, Italy, email:
mhassan@twas.org

Hayes, Prof. M.A. (Michael)

University College Dublin, Department of Mechanical Engineering, 314 Engineering Building Belfield, 4 Dublin, Ireland, email: michael.hayes@ucd.ie

He, Prof. Y.-S. (You-Sheng)

Shanghai Jiao Tong University, Department of Engineering Mechanics, School of Civil Engineering and Mechanics, 1954 Hua Shan Road, 200030 Shanghai, China, email: yshe@mail.sjtu.edu.cn

Henningson, Prof. D. (Dan)

Royal Institute of Technology (KTH), Department of Mechanics, Osquars Backe 18, SE-10044 Stockholm, Sweden, email: henning@mech.kth.se

Herakovich, Prof. C.T. (Carl)

University of Virginia, 720 Garthfield Lane, VA 22901 Charlottesville, USA, email: herak@virginia.edu

Hetnarski, Prof. R.B. (Richard)

St. Raphael, Apt. 1209, 7117 Pelican Bay Blvd., FL 34108 Naples, USA, email: 632hetna@ritvax.isc.rit.edu

Hewitt, G.F. (Geoffrey)

Imperial College of London, Faculty of Engineering, Department of Chemical Engineering and Chemical Technology, London, email: g.hewitt@ic.ac.uk

Ho, Prof. C.-M. (Chih-Ming)

University of California, Los Angeles, School of Engineering and Applied Science, Los Angeles, CA 90095-1597, USA, email: chihming@ucla.edu

Hodge, Prof. P.G. (Philip)

Stanford University, Dept. of Applied Mechanics, School of Engineering, 580 Arastradero Rd. Apt #701, 94306-3948 Palo Alto CA, USA, email: philip@kellys.org

Hodnett, Prof. P.F. (Frank)

University of Limerick, Department of Mathematics and Statistics, Limerick, Ireland, email: frank.hodnett@ul.ie

Holzzapfel, Prof. G.A. (Gerhard)

Graz University of Technology, Center for Biomedical Engineering, Kronesgasse 5, 8010 Graz, Austria, email: gh@biomech.tu-graz.ac.at

Homsy, Prof. G.M. (George)

University of California at Santa Barbara, Department of Mechanical and Environmental Engineering, Engineering II Building, Santa Barbara, CA 93106-5070, USA, email: bud@engineering.ucsb.edu

Hopfinger, Prof. E.J. (Emil)

LEGI/IMG, Domaine Universitaire B.P. Box 53, F-38041 Grenoble Cedex 09, France,
email: emil.hopfinger@hmg.inpg.fr

Hoshide, Prof. T. (Toshihiko)

Kyoto University, Department of Energy Conversion Science, Yoshida-Honmachi,
Sakyo-ku, 606-8501 Kyoto, Japan, email: hoshide@energy.kyoto-u.ac.jp

Hourigan, Prof. K (Kerry)

Monash University, Department of Mechanical Engineering, Fluids Laboratory for
Aeronautical and Industrial Research (FLAIR) Wellington Road, 3800 Clayton,
Australia, email: kerry.hourigan@eng.monash.edu.au

Hu, Prof. H. (Haiyan)

Nanjing University of Aeronautics and Astronautics, Presidential Office, 29 Yudao
Street, 210016 Nanjing, China, email: hhyae@nuaa.edu.cn

Huang, Prof. Y. (Yonggang)

University of Illinois at Urbana-Champaign, Dept. of Mechanical and Industrial
Engineering, 362e meb, mc 244 1206 w green, Urbana, IL 61801, USA, email:
huang9@uiuc.edu

Huerre, Prof. P. (Patrick)

CNRS-Ecole Polytechnique, Laboratoire d'Hydrodynamique, F-9 1128, Palaiseau
Cedex, France, email: patrick.huerre@ladhyx.polytechnique.fr

Hult, Prof. J. (Jan)

Chalmers University of Technology, Department of Applied Mechanics, S-41296
Gothenburg, Sweden, email: jan.hult@chalmers.se

Hunt, Prof. J.C.R. (Julian)

University College London, Centre for Polar Observation & Modelling, Gower Street,
WC1E 6BT London, UK, email: jcrh@cpom.ucl.ac.uk

Huraib, Mr. F.S. (Fahad)

Directorate of International Cooperation, P.o. Box 6086, 11442 Riyadh, Saudi Arabia,
email: int_coop@kacst.edu.sa

Hutchinson, Prof. J.W. (John)

Harvard University, Division of Applied Mechanics, 315 Pierce Hall 29 Oxford Street,
Cambridge, MA 02138, USA, email: hutchinson@husm.harvard.edu

Huyghe, Dr. J.M. (Jacques)

Eindhoven University of Technology, Department of Biomedical Engineering, PO Box
513, 5600 MB Eindhoven, Netherlands, email: J.M.R.Huyghe@tue.nl

Hyun, Prof. J.C. (Jae Chun)

Korea University, Republic of Korea, email: jchyun@grtrkr.korea.ac.kr

Idelsohn, Dr. S. R. (Sergio)

CIMEC, Guemes 3450, 3000 Santa Fe, Argentina, email: sergio@ceride.gov.ar

Inoue, Prof. T. (Tatsuo)

Fukuyama University, Faculty of Engineering, Department of Mechanical Systems Engineering, Gakuen-cho 1-Sanzo Fukuyama city, 729-0292 Hiroshima, Japan, email: inoue@fume.fukuyama-u.ac.jp

Iooss, Prof. G. (Gérard)

Université Nice, Institut Non Linéaire de Nice - UMR 6618 CNRS, 1361, Route des Lucioles SOPHIA ANTIPOLIS, F-06560 Valbonne, France, email: gerard.iooss@inln.cnrs.fr

Ismail, Prof. M.K. (Mohamed)

Academy of Scientific Research and Technology, Egypton Committee of Theoretical and Applied Mechanics, 5 Dessouk Street, Heliopolis, Cairo, Egypt, email: ismaism@yahoo.com

Ito, Prof. M. (Manabu)

Takushoku University, Faculty of Engineering, 5-45-2 Sendagi Bunkyo-ku, 113 Tokyo, Japan, email: ito-manabu@amy.hi-ho.ne.jp

Iyengar, Prof. R.N. (Narayana)

Indian Institute of Science, Department of Civil Engineering, 560012 Bangalore, India, email: rni@civil.iisc.ernet.in

Jaiani, Prof. G. (George)

Iv. Javakhishvili Tbilisi State University, I. Vekua Institute of Applied Mathematics, 2 University Str., 0186 Tbilisi, Georgia, email: jaiani@viam.sci.tsu.ge

James, Prof. D.F. (David)

University of Toronto, Department of Mechanical and Industrial Engineering, 5 King's College Road, M5S 3G8 Toronto, Ontario, Canada, email: david.james@utoronto.ca

Jiménez, Prof. J. (Javier)

Universidad Politecnica de Madrid, Motopropulsion y Termofluidodinamica E.T.S.I. Aeronauticos, Plaza Cardenal Cisneros 3, E 28040 Madrid, Spain, email: jimenez@torroja.dmt.upm.es

Josefson, Prof. L (Lennart)

Chalmers University of Technology, Solid Mechanics, 412 96 Göteborg, Sweden, email: lejo@solid.chalmers.se

Joseph, Prof. D.D. (Daniel)

University of Minnesota, Department of Aerospace Engineering and Mechanics, 107 Akerman Hall 110 Union Street S.E., MN 55455 Minneapolis, USA, email: joseph@aem.umn.edu

Kaliszky, Prof. S. (Sandor)

Budapest University of Technology and Economics, Department of Strutral Mechanics, Muegyetem rpt. 3, 1521 Budapest, Hungary, email: logo@ep-mech.me.bme.hu

Kambe, Prof. T. (Tsutomu)

IDS, Higashi-yama 2-11-3 Meguro-ku, 153-0043 Tokyo, Japan, email: kambe@ruby.dti.ne.jp

Kaneda, Prof. Y. (Yukio)

Nagoya University, Department of Computational Science, Graduate School of Engineering, Chikusa-ku, 464-8603 Nagoya, Japan, email: kaneda@cse.nagoya-u.ac.jp

Kant, Prof. T. (Tarun)

Indian Institute of Technology Bombay, Department of Civil Engineering, Powai, 400 076 Mumbai, India, email: tkant@civil.iitb.ac.in

Karihaloo, Prof. B.L. (Bhushan)

Cardiff University, School of Engineering, Queen's Buildings The Parade, CF24 3AA Cardiff, UK, email: karihaloob@Cardiff.ac.uk

Katsikadelis, Prof. J.T. (John)

National Technical University of Athens, Institute of Structural Analysis and Seismic Research, Zografou Campus, GR 15773 Athens, Greece, email: jkats@central.ntua.gr

Kerr, Prof. R.M. (Robert)

University of Warwick, School of Engineering, Gibbet Hill Road, VC4 7AL Coventry, UK, email: Robert.Kerr@warwick.ac.uk

Kessissoglou, N.J. (Nicole)

The University of New South Wales, School of Mechanical and Manufacturing Engineering, Sydney, NSW 2052, Australia, email: n.kessissoglou@unsw.edu.au

Keunings, Prof. R. (Roland)

Universite Catholique de Louvain, Centre for Systems Engineering and Applied Mechanics (CESAME), Batiment Euler Av. Georges Lemaitre, 4, B-1348 Louvain-la-Neuve, Belgium, email: roland.keunings@inma.ucl.ac.be

Kida, Prof. S. (Shigeo)

Kyoto University, Department of Mechanical Engineering, Graduate School of Engineering, Yoshida-Honmachi, Sakyo-ku, Kyoto 606-8501, Japan, email: kida@mech.kyoto-u.ac.jp

Kim, Prof. S.J. (Seung Jo)

Seoul National University, School of Mechanical and Aerospace Engineering, San 56-1 Shillim-dong, Kwanak-gu, 151-742 Seoul, Republic of Korea, email: sjkim@snu.ac.kr

Kimura, Prof. Y. (Yoshifumi)

Nagoya University, School of Mathematics, Nagoya, Japan, email: kimura@math.nagoya-u.ac.jp

Kitagawa, Prof. H. (Hiroshi)

Osaka University, Graduate School of Engineering, Department of Adaptive Machine Systems, 2-1 Yamada-oka, Suita, Osaka, 565-0871, Japan, email:

Kitagawa, Dr. M. (Masaki)

Ishikawajima-Harima Heavy Industries Co., Ltd., Technical Development Division, 3-2-16 Toyosu Kotoku, 135-8733 Tokyo, Japan, email:

Kiya, Prof. M. (Masaru)

Kushiro National College of Technology, Kushiro 084-0916, Japan, email: kiya@office.kushiro-ct.ac.jp

Klimov, Prof. D.M. (Dmitry)

Institute for Problems in Mechanics, Prospect Vernadskogo 101, bldg 1., 117526 Moscow, Russia, email: klimov@ipmnet.ru

Kluwick, Prof. A. (Alfred)

Technische Universität Wien, Institut für Strömungslehre und Wärmeübertragung, Resselgasse 3/1/3, A-1040 Wien, Austria, email: alfred.kluwick@tuwien.ac.at

Knauss, Prof. W.G. (Wolfgang)

California Institute of Technology, Faculty of Aeronautics and Applied Mechanics, M/C 105-50, 91125 Pasadena, CA, USA, email: wkg@caltech.edu

Kobayashi, Prof. T. (Toshio)

University of Tokyo, Institute of Industrial Science, Department of Mechanical Engineering and Naval Architecture, 4-6-1 Komaba, Meguro-ku, 153-8505 Tokyo, Japan, email: kobaya@iis.u-tokyo.ac.jp

Kounadis, Prof. A.N. (Anthony)

National Technical University of Athens, School of Civil Engineering, Patission Street 42, GR-10682 Athens, Greece, email: kounadis@central.ntua.gr

Kowalewski, Prof. T.A. (Tomasz)

Institute of Fundamental Technological Research, Department of Mechanics and Physics of Fluids, Polish Academy of Sciences ul. Swietokrzyska 21, PL 00-049 Warszawa, Poland, email: tkowale@ippt.gov.pl

Kozlov, Prof. V.V. (Valery)

Russian Academy of Sciences, 14 Leninsky Prospect, 119991 Moscow, Russia, email: Kozlov@ras.ru

Krause, Prof. E. (Egon)

Aerodynamisches Institut, Rheinisch- Westfälische Technische Hochschule (RWTH) Aachen, Wullnerstrasse 5-7, D-52062 Aachen, Germany, email: ek@aia.rwth-aachen.de

Kreuzer, Prof. E.J. (Edwin)

Hamburg University of Technology, Institute of Mechanics and Ocean Engineering, Eissendorfer Str. 42, D-21071 Hamburg, Germany, email: Kreuzer@tu-harburg.de

Kuhn, Prof. G.R. (Günther)

Universität Erlangen-Nuremberg, Institute for Applied Mechanics, Egerlandstrasse 5, D 91058 Erlangen, Germany, email: guenther.kuhn@itm.uni-erlangen.de

Kuna, Prof. M. (Meinhard)

Technische Universitaet Bergakademie Freiberg, Institute of Mechanics and Fluid Dynamics, 09596 Freiberg, Germany, email: Meinhard.Kuna@imfd.tu-freiberg.de

Kuwano, Prof. S. (Sonoko)

Osaka University, Graduate School of Human Sciences, Dept. of Environmental Psychology, 1-2 Yamadaoka, Suita, 565-0871 Osaka, Japan, email: kuwano@see.eng.osaka-u.ac.jp

Kuyumdzhev, Prof. H.N. (Hristo)

University of Rousse, Department of Mechanics, 8, Studentska Street, BG 7017 Rousse, Bulgaria, email: hnk@ru.acad.bg

Kuzmanovic, Prof. D.S. (Dragoslav)

University of Belgrade, Faculty of Transport and traffic Engineering, Vojvode Stepe 305, 11000 Belgrade, Serbia, email: d.kuzmanovic@sf.bg.ac.yu

Kwak, Prof. B.M. (Byung)

Korea Advanced Institute of Science and Technology, Department of Mechanical Engineering, 373-1 Guseong-dong Yuseong-gu, 305-701 Deajeon, Republic of Korea, email: bmkwak@khp.kaist.ac.kr

Kyriakides, Prof. S. (Stelios)

University of Texas at Austin, Center for Mechanics of Solids, Structures and Materials, WRW 110 C0600, TX 78712-1 Austin, USA, email: skk@mail.utexas.edu

Ladevèze, Prof. P. (Pierre)

Ecole Normale Supérieure de Cachan, Laboratoire de Mécanique et Technologie, 61 av du Président Wilson, 94235 Cachan Cedex, France, email: ladeveze@lmt.ens-cachan.fr

Lagarde, Prof. A. (Alexis)

Université de Poitiers, Faculté des Sciences, France, email: secret@lms.univ-poitiers.fr

Langley, Prof. R. (Robin)

University of Cambridge, Engineering Department, Cambridge CB2 1TN, UK, email: rs121@cam.ac.uk

Lavendelis, Prof. E. (E.)

Riga Technical University, Institute of Mechanics, 1 Kalku Street, LV-1658 Riga, Latvia, email: lavendel@parks.lv

Le Treut, Prof. H. (Hervé)

Université de Paris 6; Ecole Polytechnique et Ecole Normale Supérieure, Laboratoire de Météorologie Dynamique, Tour 45-55, 3ème étage; Case Postale 99; 4, place Jussieu, F-75252 Paris Cedex 05, France, email: letreut@lmd.jussieu.fr

Leal, Prof. L.G. (Gary)

University of California at Santa Barbara, Department of Chemical Engineering, Santa Barbara, CA 93106-5080, USA, email: lg120@engineering.ucsb.edu

Leblond, Prof. J.B. (Jean-Baptiste)

University Pierre et Marie Curie, Laboratoire de Modélisation en Mécanique, Lab. de Modélisation en Mécanique, Univ. Pierre et Marie Curie, Tour 65-55 4 place Jussieu, 75252 Paris Cedex 05, France, email: leblond@lmm.jussieu.fr

Lee, Dr. Y.-K. (Yi-Kuen)

Hong Kong University of Science and Technology, Department of Mechanical Engineering, Clear Water Bay, Kowloon, Hong Kong, China-Hong Kong, email: meyklee@ust.hk

Leung, Prof. A.Y.T. (Andrew)

City University of Hong Kong, Department of Building and Construction, 83 Tat Chee Avenue, Kowloon, Hong Kong SAR, China, email: andrew.leung@cityu.edu.hk

Leweke, Dr. T. (Thomas)

CNRS / Universites Aix- Marseille I & II, Institut de Recherche sur les Phenomenes Hors Equilibre (IRPHE), 49, rue F. Joliot-Curie - B.P. 146, F-13384 Marseille Cedex 13, France, email: Thomas.Leweke@irphe.univ-mrs.fr

Li, Prof. Y. (Yulong)

Northwestern Polytechnical University, Department of Aircraft Engineering, Xi'an, Shannxi, 710072, China, email: liyulong@nwpu.edu.cn

Li, Prof. J. (Jiachun)

Chinese Academy of Sciences, Institute of Mechanics, No. 15, North Sihuanxi Rd, 100080 Beijing, China, email: jcli05@imech.ac.cn

Lin, Prof. Y.K. (Mike)

Florida Atlantic University, Center for Applied Stochastics Research, 777 Glades Rd., Boca Raton, FL 33431, USA, email: linyk@fau.edu

Linden, Prof. P.F. (Paul)

University of California, San Diego, Department of Mechanical & Aerospace Engineering, 9500 Gilman Drive, La Jolla, CA 92093-0411, USA, email: pflinden@ucsd.edu

Lugner, Prof. P. (Peter)

Technische Universitat Wien, Institut fur Mechanik E 325, Wiedner Hauptstr. 8-10, A 1040 Wien, Austria, email: p.lugner@tuwien.ac.at

Lund, Prof. F. (Fernando)

Universidad de Chile, Departamento de Fisica, Facultad de Ciencias Fisicas y Matematicas, Casilla 487-3, Santiago, Chile, email: flund@cimat.cl

Lundberg, Prof. B. (Bengt)

Uppsala University, Department of Engineering Sciences, The Angstrom Laboratory, Box 534, SE-751 21 Uppsala, Sweden, email: bengt.lundberg@angstrom.uu.se

Lundström, Prof. S. (Staffan)

Luleå University of Technology, Division of Fluid Mechanics, SE-971 87 Luleå, Sweden, email: staffan.lundstrom@ltu.se

Ma, Prof. C.-C. (Chien-Ching)

National Taiwan University, Institute of Mechanical Engineering, No. 1 Sec. 4 Roosevelt Road, Taipei, 106 Taiwan, China-Taipei, email: ccma@ntu.edu.tw

Määttänen, Prof. M. (Mauri)

Helsinki University of Technology, Department of Mechanical Engineering, Laboratory for Mechanics of Materials, Puumiehenkuja 5A, 02150 Espoo P.O. Box 4300, FIN-02015 TKK, Finland, email: mauri.maattanen@hut.fi

Maier, Prof. G. (Giulio)

Politecnico di Milano, Dipartimento di Ingegneria Strutturale, Piazza Leonardo da Vinci, 32, I-20133 Milano, Italy, email: giulio.maier@polimi.it

Mang, Prof. H.A. (Herbert)

Vienna University of Technology, Institute for Mechanics of Materials and Structures, Karlsplatz 13, A-1040 Vienna, Austria, email: herbert.mang@tuwien.ac.at

Marinoschi, Dr. G. (Gabriela)

Romanian Academy, Institute of Mathematical Statistics and Applied Mathematics, email: gmarino@aix.acad.ro

Marn, Prof. J. (Jure)

University of Maribor, Faculty of Mechanical Engineering, Smetonova ulica 17, 2000 Maribor, Slovenia, email: jure.marn@uni-mb.si

Martins, Prof. J. A. C. (João)

Technical University of Lisbon, Instituto Superior Tecnico, Departamento de Engenharia Civil e Arquitectura, Avenida Rovisco Pais, 1049-001 Lisboa, Portugal, email: jmartins@civil.ist.utl.pt

Matejicek, Prof. F. (Franjo)

Strojarski Fakultet, Mechanical Engineering, Trg Ivane Brlic -Mazuranic 18, 35000 Slavonski Brod, Croatia, email: Franjo.Matejicek@sfsb.hr

McMeeking, Prof. R.M. (Robert)

University of California Santa Barbara, Department of Mechanical and Environmental Engineering, CA 93106-5 Santa Barbara, USA, email: rmcm@engineering.ucsb.edu

McPhedran, Prof. R.C. (Ross)

University of Sydney, School of Physics, Sydney, Australia, email: r.mcphedran@physics.usyd.edu.au

Meier, Prof. G.E.A. (Gerd)

Deutsches Zentrum für Luft - und Raumfahrt (DLR), Institut für Experimentelle Stromungsmechanik, Bunsenstrasse 10, D 37073 Göttingen, Germany, email: g.e.a.meier@dlr.de

Mellowes, Dr. W. (W.)

University of the West Indies, Department of Chemical Engineering, St. Augustine, Trinidad, West Indies, email:

Miehe, Prof. C. (Christian)

University of Stuttgart, Institute of Applied Mechanics (Chair I), Pfaffenwaldring 7,
70550 Stuttgart, Germany, email: miehe@mechbau.uni-stuttgart.de

Mijuca, Dr. D.M. (Dubravka)

University of Belgrade, Faculty of Mathematics, Studentski Trg 16 P.O. Box 550, 11000
Belgrade, Serbia, email: dmijuca@matf.bg.ac.yu

Mikhailov, Prof. G.K. (Gleb)

Lomonosovsky Pr. 14, Apt 97, 119296 Moscow, Russia, email: gkmikh@proc.ru

Moffatt, Prof. H.K. (Keith)

University of Cambridge, Department of Applied Mathematics and Theoretical Physics,
Centre for Mathematical Sciences, Wilberforce Road, CB3 0WA Cambridge, UK, email:
H.K.Moffatt@damtp.cam.ac.uk

Monkewitz, Prof. P.A. (Peter)

Swiss Federal Institute of Technology Lausanne (EPFL), Laboratory of Fluid Mechanics
(LMF), ME B2 485 (building ME) Station 9, CH-1015 Lausanne, Switzerland, email:
peter.monkewitz@epfl.ch

Montanaro, Prof. A. (Adriano)

Università di Padova, Dipartimento di Metodi e Modelli Matematici per le Scienze
Applicate, Via Trieste, 63, 35131 Padova, Italy, email: montanaro@dmsa.unipd.it

Moratilla, Mr. A. (Angel)

Instituto Nacional de Tecnica Aeroespacial, Carretera de Ajalvir km. 4,00 Torrejon de
Ardoz, 28850 Madrid, Spain, email: moratillara@inta.es

Moreau, Prof. R. (René)

Institut National Polytechnique de Grenoble (INPG), ENSHM de Grenoble, B.P. 95,
F-38402 Saint Martin d'Herès, Cedex, France, email: Rene.Moreau@hmg.inpg.fr

Morozov, Prof. N.F. (Nikita)

St. Petersburg State University, Math&Mech Faculty, Elasticity Dept., Vereiskaya Str.
22-24, apt. 15, St. Petersburg 198013, Russia, email: morozov@nm1016.spb.edu

Morrison, Prof. J.F. (Jonathan)

Imperial College, Department Aeronautics, South Kensington Campus, SW7 2AZ
London, UK, email: j.morrison@imperial.ac.uk

Morro, Prof. A. (Angelo)

University of Genova, Dipartimento di Ingegneria Biofisica ed Elettronica, Via Opera
Pia 11a, 16145 Genova, Italy, email: morro@dibe.unige.it

Mota Soares, Prof. C.A. (Carlos)

Instituto Superior Tecnico, Instituto de Engenharia Mecanica, Av.Rovisco Pais 1,
1096 Lisboa Codex, Portugal, email: carlosmotasoaes@dem.ist.utl.pt

Movchan, Prof. A.B (Alexander)

University of Liverpool, Department of Mathematical Sciences, M & O Building,
L69 3BX Liverpool, UK, email: abm@maths.liv.ac.uk

Müller, Prof. I. (Ingo)

Technische Universität Berlin, Fakultät für Prozesswissenschaften, Fasanenstrasse 90,
10623 Berlin, Germany, email: ingo.mueller@alumni.tu-berlin.de

Mullin, Prof. T. (Tom)

Manchester University, Department of Physics, M13 9PL Manchester, UK, email:
tom.mullin@man.ac.uk

Munjal, Prof. M.L. (Manohar)

Indian Institute of Science, Dept. of Mechanical Engineering, Faculty for Research in
Technical Acoustics (FRITA), Department of mechanical Engineering, 560 012
Bangalore, India, email: munjal@mecheng.iisc.ernet.in

Murad, Prof. M.A. (Marcio Arab)

National Laboratory for Scientific Computing, Av. Getulio Vargas, 333, 25651-075
Quitandinha, Petrópolis-RJ, Brazil, email: murad@lncc.br

Murakami, Prof. S.M. (Sumio)

Aichi University of Technology, Dept. of Mechanical Systems Engineering,
Nishihazama-cho, 443-0047 Gamagori-city, Aichi-prefecture, Japan, email:
murakami@aut.ac.jp

Nakra, Prof. B.C. (Bahadur)

Indian Institute of Technology, Department of Mechanical Engineering, Hauz Khas, 110
016 New Delhi, India, email: bcnakra@mech.iitd.ernet.in

Nam, Prof. S.W. (Soo Woo)

Korea Advanced Institute of Science and Technology, Department of Materials Science
and Engineering, 373-1 Kuseong-dong Yuseong-gu, Daejeon, Republic of Korea, email:
namsw@kaist.ac.kr

Namachchivaya, Prof. N. Sri (Navaratnam)

University of Illinois at Urbana- Champaign, Department of Aerospace Engineering,
306 Talbot Laboratory, MC-236 104 South Wright Street, IL 61801 Urbana, USA, email:
navam@uiuc.edu

Naprstek, Dr. J. (Jiri)

Academy of Sciences of the Czech Republic, Institute of Theoretical and Applied Mechanics, Prosecka 809/76, 190 00 Prague, Czech Republic, email: Naprstek@ITAM.CAS.CZ

Narasimha, Prof. R. (Roddam)

Jawaharlal Nehru Centre for Advanced Scientific Research, Engineering Mechanics Unit, Jakkur P O, Bangalore 560 094, India, email: roddam@caos.iisc.ernet.in

Narayanan, Prof. S. (S.)

Indian Institute of Science, Department of Applied Mechanics, Chennai, 600 036, Madras, India, email: mcdyn@iitn.ernet.in

Needleman, Prof. A. (Alan)

Brown University, Division of Engineering, 182 Hope Street, RI 02912 Providence, USA, email: Alan_Needleman@Brown.EDU

Nelson, Prof. P.A. (Philip)

University of Southampton, Institute of Sound and Vibration Research, Highfield, SO17 BJ Southampton, UK, email: pan@isvr.soton.ac.uk

Ng, Dr. C.O.

The University of Hong Kong, Dept. of Mechanical Engineering, 7/F Haking Wong Building Pokfulam Road, Hong Kong, China-Hong Kong, email: cong@hkucc.hku.hk

Nguygen, Prof. Q.S.

Ecole Polytechnique, Laboratoire de Mécanique des Solides, F-91128 Palaiseau. Cédex, France, email:

Nickels, Dr. T.B. (Timothy)

University of Cambridge, Engineering Department, Trumpington Street, Cambridge CB2 1PZ, UK, email: tbn22@eng.cam.ac.uk

Niordson, Prof. F. (Frithiof)

Technical University of Denmark, Department of Solid Mechanics, Building 404, DK-2800 Lyngby, Denmark, email: frithiof@niordson.com

Oden, Prof. J.T. (John Tinsley)

University of Texas at Austin, Director, Institute for Computational Engineering and Sciences, 1 University Station, C0200 201 E. 24th Street, ACE Bldg. 4.102, TX 78712 Austin, USA, email: oden@ices.utexas.edu

O-Donoghue, Prof. P.E. (Padraic)

National University of Ireland Galway, Dept. of Civil Engineering, Galway, Ireland, email: Padraic.ODonoghue@nuigalway.ie

Oever, Mrs. W.P.J.M. (Ine) van den
Eindhoven University of Technology, Department of Mechanical Engineering,
P.O. Box 513, 5600 MB Eindhoven, Netherlands, email: w.p.j.m.v.d.oever@tue.nl

Ogden, Prof. R.W. (Ray)
University of Glasgow, Department of Mathematics, University Gardens, G12 8QW
Glasgow, UK, email: rwo@maths.gla.ac.uk

Ohashi, Prof. H. (Hideo)
Kogakuin University, 1-24-2 Nishi-Shinjuku Shinjuku-ku, 163-8677 Tokyo, Japan,
email: ohashi@cc.kogakuin.ac.jp

Ohno, Prof. N. (Nobutada)
Nagoya University, Department of Mechanical Engineering, Furo-cho, Chikasu-Ku,
464-8603 Nagoya, Japan, email: ohno@mech.nagoya-u.ac.jp

Okrouhlik, Prof. M. (Miloslav)
Academy of Sciences of the Czech Republic, Mechanics and Solids Department,
Institute of Thermomechanics, Dolejskova 5, 182 00 Prague 8, Czech Republic,
email: ok@it.cas.cz

Olhoff, Prof. N. (Niels)
Aalborg University, Department of Mechanical Engineering, Pontoppidanstraede 101,
DK-9220 Aalborg East, Denmark, email: no@ime.aau.dk

Oñate, Prof. E. (Eugenio)
International Center for Numerical Methods in Engineering (CIMNE), Edificio C-1,
Building C1 2nd. Floor Campus Nord UPC Gran Capitan s/n, 08034 Barcelona, Spain,
email: onate@cimne.upc.edu

Paavola, Prof. J. (Juha)
Helsinki University of Technology, Department of Civil and Environmental Engineering,
P.O. Box 2100, FIN-02015 HUT, Finland, email: paavola@cc.hut.fi

Peake, Prof. N. (Nigel)
University of Cambridge, Department of Applied Mathematics & Theoretical Physics,
Center for Mathematical Sciences, Wilberforce Road, CB3 0WA Cambridge, UK,
email: N.Peake@damtp.cam.ac.uk

Pearson, Prof. J.R.A. (Anthony)
25 Chaucer Road, CB2 2EB Cambridge, UK, email: jrap@pearson.co.uk

Pedley, Prof. T.J. (Timothy)

University of Cambridge, Department of Applied Mathematics and Theoretical Physics,
Centre for Mathematical Sciences, Wilberforce Road, Cambridge CB3 0WA, UK,
email: t.j.pedley@damtp.cam.ac.uk

Pellegrino, Prof. S. (Sergio)

University of Cambridge, Department of Engineering, Trumpington Street,
CB2 1PZ Cambridge, UK, email: pellegrino@eng.cam.ac.uk

Pfeiffer, Prof. F. (Friedrich)

Technical University of Munich, Institute for Applied Mechanics, Boltzmannstr.15,
D-85748 Garching, Germany, email: pfeiffer@amm.mw.tu-muenchen.de

Phan-Thien, Prof. N. (Nhan)

National University of Singapore, Division of Bioengineering, Faculty of Engineering, 9,
Engineering Drive 1, 117576 Singapore, Singapore, email: nhan@nus.edu.sg

Phillips, Prof. J.W. (James)

University of Illinois at Urbana-Champaign, Department of Theoretical and Applied
Mechanics, 216 Talbot Laboratory 104 South Wright Street, 61801-2983 Urbana,
IL, USA, email: jwp@uiuc.edu

Pilipenko, Prof. V.V. (Victor)

National Academy of Sciences of Ukraine and National Space Agency Of Ukraine,
Institute of Technical Mechanics, 15, Leshko-Popel Street, 49005 Dniepropetrovsk,
Ukraine, email: pilipenko@pvv.dp.ua

Pister, Prof. K.S. (Karl)

University of California at Berkeley, Dept. of Civil & Environmental Engineering,
828 Solana Drive, 94549 Lafayette, CA, USA, email: karl@pister.net

Pitteri, Prof. M. (Mario)

Universita degli Studi di Padova, Dipartimento di Metodi e Modelli Matematici per le
Scienze Applicate, Via Trieste 63, 35121 Padova, Italy, email: pitteri@dmsa.unipd.it

Podio-Guidugli, Prof. P. (Paolo)

Universita' di Roma, Dipartimento di Ingegneria Civile, Via Politecnico 1, I-00133
Rome, Italy, email: ppg@uniroma2.it

Pollard, Prof. A. (Andrew)

Queen's University at Kingston, Department of Mechanical Engineering, Computational
and Experimental Fluid Dynamics Lab., K7L 3N6 Kingston, ON, Canada, email:
pollard@me.queensu.ca

Prosperetti, Prof. A. (Andrea)

Johns Hopkins University, Department of Mechanical Engineering, 34th & Charles Streets 122 Latrobe Hall, MD 21218 Baltimore, USA, email: prosperetti@jhu.edu

Pyrz, Prof. R. (Ryszard)

Aalborg University, Department of Mechanical Engineering, Pontoppidanstraede 101, 9200 Aalborg East, email: rp@ime.aau.dk

Ramkissoon, Prof. H. (Harold)

University of the West Indies, Department of Mathematics and Computer Science, St. Augustine, Trinidad, Zambia, email: hramkissoon@fsa.uwi.tt

Rammerstorfer, Prof. F.G. (Franz)

Vienna University of Technology (TU Wien), Institute of Lightweight Design and Structural Biomechanics, Gusshausstrasse 25-29/E317, A-1040 Vienna, Austria, email: ra@ilsb.tuwien.ac.at

Ravi-Chandar, Prof. K. (Krishnaswamy)

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

Reddy, Prof. B.D. (Daya)

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

Reeks, Prof. M.W. (Mike)

University of Newcastle upon Tyne, School of Mechanical and Systems Engineering, Stephenson Building, Claremont Rd, NE1 7RU Newcastle upon Tyne, UK, email: mike.reeks@ncl.ac.uk

Rega, Prof. G. (Giuseppe)

Universita di Roma La Sapienza, Dipartimento di Ingegneria Strutturale e Geotecnica, Via Antonio Gramsci 53, I 00197 Roma, Italy, email: giuseppe.rega@uniroma1.it

Ritchie, Prof. R.O. (Robert)

University of California at Berkeley, Department of Materials Science and Engineering, 577 Evans Hall, MC 1760, CA 94720-1 Berkeley, USA, email: roritchie@lbl.gov

Rodin, Prof. G.J. (Gregory)

The University of Texas at Austin, Department of Aerospace Engineering and Engineering Mechanics, TICAM, C0200, TX 78712 Austin, USA, email: gjr@ticam.utexas.edu

Rosato, Prof. A. D. (Anthony)

New Jersey Institute of Technology, Mechanical Engineering Department, University Heights, NJ 07102 Newark, USA, email: rosato@njit.edu

Rose, Dr. F. (Francis)

Platform Sciences, Laboratory DSTO, 506 Lorimer St., VIC 3207 Fishermans Bend, Australia, email: francis.rose@dsto.defence.gov.au

Rothhammer Engel, Dr. F. (Francisco)

Universidad de Chile, Chile, email: frothham@machi.med.uchile.cl

Rozvany, Prof. G. (George)

Budapest University of Technology and Economics, Faculty of Civil Engineering, Department of Structural Mechanics, Muegyetem rkp. 3 Kmf 35, H-1521 Budapest, Hungary, email: rozvany@eik.bme.hu

Rubin, Prof. M.B. (Miles)

Technion - Israel Institute of Technology, Faculty of Mechanical Engineering, Technion City, 32000 Haifa, Israel, email: mbrubin@tx.technion.ac.il

Rudnicki, Prof. J.W. (John)

Northwestern University, Department of Civil and Environmental Engineering and Department of Mechanical Engineering, 2145 Sheridan Road, Evanston, IL 60208-3109, USA, email: jwrudn@northwestern.edu

Rushchitsky, Prof. J.J. (Jeremiah)

S.P. Timoshenko Institute of Mechanics, Secretary-General of the National Committee of Ukraine on Theoretical and Applied Mechanics, Nesterov str.3, 03680 Kyiv, Ukraine, email:

Ruzic, Prof. D.D. (Dobroslov)

University of Belgrade, Faculty of Mechanical Engineering, Applied Mechanics and Theory of Structures, Kraljice Marije 16, 11120 Belgrade, Serbia, email: druzic@mas.bg.ac.yu

Sadowski, Prof. T. (Tomasz)

Lublin University of Technology, Faculty of Civil and Sanitary Engineering, Department of Solid Mechanics, Nadbystrzycka Str. 40, PL 20-618 Lublin, Poland, email: sadowski@akropolis.pol.lublin.pl

Salençon, Prof. J. (Jean)

Ecole Polytechnique, Laboratoire des Mécanique des Solides, F-91128 Palaiseau Cedex, France, email: jean.salencon@polytechnique.org

Saric, Prof. W.S. (William)

Texas A&M University, Department of Aerospace Engineering, P.O. Box 876106,
85287-6106 Tempe, AZ, USA, email: saric@tamu.edu

Savage, Prof. S.B. (Stuart)

McGill University, Department of Civil Engineering and Applied Mechanics,
817 Sherbrooke Street West, H3A 2K6 Montreal, Quebec, Canada, email:
stuart.savage@mcgill.ca

Sayir, Prof. M.B. (Mahir)

Swiss Federal Institute of Technology (ETH), Department of Mechanical and Process
Engineering, ETH-Zentrum, CH-8092 Zürich, Switzerland, email:
mahir.sayir@imes.mavt.ethz.ch

Schiehlen, Prof. W. (Werner)

University of Stuttgart, Institute of Engineering and Computational Mechanics,
Pfaffenwaldring 9, 70550 Stuttgart, Germany, email: schiehlen@itm.uni-stuttgart.de

Dr. F. (Fritz) Schiesser

ETH-Rat, Präsidium und Mitglieder, HAA F 5.1, Haldeliweg 15/17, 8092 Zürich,
Switzerland, email: fritz.schiesser@ethrat.ch

Schrefler, Prof. B.A. (Bernhard)

University of Padova, Faculty of Engineering, Dipartimento di Costruzioni e Trasporti,
Via F. Marzolo 9, 35131 Padova, Italy, email: bas@dic.unipd.it

Schröder, Prof. W. (Wolfgang)

Rheinisch-Westfälische Technische Hochschule (RWTH) Aachen, Aerodynamisches
Institut, Wuellnerstrasse 5-7, D-52062 Aachen, Germany, email: office@aia.rwth-
aachen.de

Shaqfeh, Prof. E.S.G. (Eric)

Stanford University, Department of Chemical Engineering, 207 Stauffer III 381 North-
South Mall, Stanford, CA 94305-5025, USA, email: esgs@stanford.edu

Sharp, Prof. R.S. (Robin)

Imperial College London, Electrical and Electronic Engineering, South Kensington
Campus Exhibition Road, SW7 2AZ London, UK, email: robin.sharp@imperial.ac.uk

Shen, Prof. H.H. (Hayleyh)

Clarkson University, Department of Civil and Environmental Engineering, Potsdam,
NY 13699-5710, USA, email: hhshen@clarkson.edu

Shibutani, Prof. Y. (Yoji)

Osaka University, Department of Mechanical Engineering, 2-1, Yamadaoka, Suita,
565-0871 Osaka, Japan, email: sibutani@mech.eng.osaka-u.ac.jp

Shrivastava, Prof. S. (Suresh)

McGill University, Department of Civil Engineering & Applied Mechanics,
817 Sherbrooke St. West, Montréal, QC H3A 2K6, Canada, email:
suresh.shrivastava@mcgill.ca

Sigmund, Prof. O. (Ole)

Technical University of Denmark, Department of Mechanical Engineering, Section of
Solid Mechanics, Nils Koppels Alle, Building 404, DK-2800 Lyngby, Denmark,
email: sigmund@mek.dtu.dk

Singh, Prof. D.V.

1002, Sunbreeze Appartments, Tower II Vaishali, Sector V, Plot 3, Ghaziabad-201 010,
India

Skerget, Prof. L. (Leopold)

University of Maribor, Faculty of Mechanical Engineering, Smetanova 17, 2000
Maribor, Slovenia, email: leo@uni-mb.si

Sladek, Prof. J. (Jan)

Slovak Academy of Engineering Sciences, SK 813 68 Bratislava, Slovakia,
email: jan.sladek@savba.sk

Smits, Prof. A.J. (Alexander)

Princeton University, Department of Mechanical and Aerospace Engineering, Olden
Street, NJ 08544 Princeton, USA, email: asmits@princeton.edu

Snidle, Prof. R.W. (Ray)

Cardiff University, Cardiff School of Engineering, The Parade, CF24 3AA Cardiff, UK,
email: snidler@cf.ac.uk

Sobczyk, Prof. K. (Kazimierz)

Institute of Fundamental Technological Research (IPPT), Department of Dynamics of
Complex Systems, Swietokrzyska 21, 00-049 Warsaw, Poland, email:
ksobcz@ippt.gov.pl

Sobieczky, Prof. H. (Helmut)

DLR German Aerospace Center, Bunsenstrasse 10, D 37073 Göttingen, Germany, email:
helmut.sobieczky@dlr.de

Prof. A.K. Soh

The University of Hong Kong, Dept. of Mechanical Engineering, 7/F Haking Wong Building, Pokfulam Road, Hong Kong, China-Hong Kong, email: aksoh@hku.hk

Soldati, Prof. A. (Alfredo)

Università degli Studi di Udine, Centro Interdipartimentale di Fluidodinamica e Idraulica, Dipartimento di Energetica e Macchine, Via delle Scienze 208, 33100 Udine, Italy, email: soldati@uniud.it

Sørensen, Prof. J.N. (Jens Nørkær)

Technical University of Denmark, Department of Mechanical Engineering, Fluid Mechanics Section, Building 403, DK-2800 Lyngby, Denmark, email: jns@mek.dtu.dk

Sreenivasan, Prof. K. R. (Katepalli)

International Centre for Theoretical Physics, Strada Costiera 11, 34014 Trieste, Italy, email: krs@ictp.it

Sridhar, Prof. T. (Tam)

Monash University, Faculty of Engineering, VIC 3800, Australia, email: Tam.Sridhar@eng.monash.edu.au

Srinivasan, Prof. J.

Indian Institute of Science, Centre for Atmospheric and Oceanic Sciences, Bangalore 560012, India, email: jayes@caos.iisc.ernet.in

Ståhle, Prof. P. (Per)

Malmö University, Professor of Solid Mechanics, SE 205 06 Malmö, Sweden, email: per.stahle@ts.mah.se

Steenhoven, Prof. A.A. (Anton) van

Eindhoven University of Technology, Department of Mechanical Engineering, Den Dolech 2 PO Box 513, 5600 MB Eindhoven, Netherlands, email: A.A.v.Steenhoven@tue.nl

Steffen Jr., Prof. V. (Valder)

Universidade Federal de Uberlândia, Faculdade de Engenharia Mecânica, Campus Santa Monica, 38400902 Ueberlândia, MG, Brazil, email: vsteffen@mecanica.ufu.br

Stein, Prof. E. (Erwin)

University of Hannover, Institut für Baumechanik und Numerische Mechanik (IBNM), Appelstraße 9A, D-30167 Hannover, Germany, email: stein@ibnm.uni-hannover.de

Steinmann, Prof. P. (Paul)

University of Kaiserslautern, Applied Mechanics, Gottlieb-Daimler-Strasse, 67653 Kaiserslautern, Germany, email: ps@rhrk.uni-kl.de

Stépán, Prof. G. (Gábor)

Technical University of Budapest, Department of Applied Mechanics, Muegyetem rkp 3, H-1521 Budapest, Hungary, email: stepan@mm.bme.hu

Stiassnie, Prof. M.A. (Michael)

Technion - Israel Institute of Technology, Faculty of Civil and Environmental Engineering, Haifa 32000, Israel, email: miky@technion.ac.il

Storåkers, Prof. B. (Bertil)

Royal Institute of Technology (KTH), Department of Solid Mechanics, Osquars Backe 1, S-10044 Stockholm, Sweden, email: bertil@half.kth.se

Styczek, Prof. A. (Andrzej)

Warsaw University of Technology, Institute of Aeronautics and Applied Mechanics, 24 Nowowiejska Str., 00-665 Warsaw, Poland, email: jack@meil.pw.edu.pl

Suhubi, Prof. E.S. (Erdogan)

Istanbul Technical University, Department of Engineering Sciences, Maslak 80626, Istanbul, Turkey, email: suhubi@itu.edu.tr

Sumarac, Prof. D.M. (Dragoslav)

University of Belgrade, Faculty of Civil Engineering, Bulevar kralja Aleksandra 73 / I, 11000 Belgrad, Serbia, email: sumi@grf.bg.ac.yu

Sun, Prof. Q.P. (Qing-Ping)

Hong Kong University of Science and Technology, Department of Mechanical Engineering, Clear Water Bay, Kowloon, Hong Kong, China, email: meqpsun@ust.hk

Suo, Prof. Z. (Zhigang)

Harvard School of Engineering and Applied Sciences, Professor of Mechanics and Materials, Room 309, Pierce Hall, 29 Oxford Street, 02138 Cambridge Massachusetts, USA, email: suo@seas.harvard.edu

Suquet, Prof. P. (Pierre)

Centre National de Recherche Scientifique (CNRS), Laboratoire de Mécanique et d'Acoustique, 31 Chemin Joseph Aiguier, 13402 Marseille Cedex 20, France, email: suquet@lma.cnrs-mrs.fr

Szefer, Prof. G. (Gwidon)

Krakow University of Technology, Institute of Structural Mechanics, ul. Warszawska 24, 31-155 Krakow, Poland, email: szefer@limba.wil.pk.edu.pl

Tamuzs, Prof. V. (Vitauts)

University of Latvia, Institute of Polymer Mechanics, Aizkraukles iela 23, Lv-1006 Riga, Latvia, email: tamuzs@pmi.lv

Tanishita, Prof. K. (Kazuo)

Keio University, Department of System Design Engineering, Kohoko-ku, Hiyoshi 3-14-1, 223-8522 Yokohama, Japan, email: tanishita@sd.keio.ac.jp

Tanner, Prof. R.I. (Roger)

University of Sydney, Faculty of Engineering, School of Aerospace, Mechanical and Mechatronic Engineering, Building J07, NSW 2600 Sydney, Australia, email: rit@aeromech.usyd.edu.au

Tasdemir, Prof. M.A. (Mehmet Ali)

Istanbul Teknik Universitesi, Fen-Edebiyat Facultesi, 80626, Maslak, Istanbul, Turkey, email: tasdemir@mim.itu.edu.tr

Tatsumi, Prof. T. (Tomomasa)

Kyoto University (Emeritus Professor), 26-6 Chikuzendai, Momoyama, Fushimi, 612-8032 Kyoto, Japan, email: tatsumi@skyblue.ocn.ne.jp

Tauchert, Prof. T.R. (Theodore)

University of Kentucky, College of Engineering, Mechanical Engineering Department, 263 RGAN Bldg., KY 40506-0 Lexington, USA, email: tauchert@engr.uky.edu

Thess, Prof. A. (André)

Ilmenau University of Technology, Department of Mechanical Engineering, P.O. Box 100565, D 98684 Ilmenau, Germany, email: thess@tu-ilmenau.de

Thomas, Dr. P. (Luis)

Universidad Nacional del Centro de la Pcia. de Buenos Aires, Facultad de Ciencias Exactas, Instituto de Fisica Arroyo Seco, Geophysical Flow Dynamics, Pinto 399, B7000GHG Tandil, Argentina, email: lthomas@exa.unicen.edu.ar

Toit, Prof. C.G. (Charl) du

North-West University, Potchefstroom Campus, School of Mechanical Engineering, Private Bag X6001, 2520 Potchefstroom, South Africa, email: Jat.DuToit@nwu.ac.za

Tomizuka, Prof. M. (Masayoshi)

University of California at Berkeley, Department of Mechanical Engineering, 5100B Etcheverry Hall, CA 94720-1 Berkeley, USA, email: tomizuka@me.berkeley.edu

Tong, Prof. P. (Pin)

Hong Kong University of Science and Technology, Department of Mechanical Engineering, Clear Water Bay, Kowloon, Hong Kong, China, email: pintong@ust.hk

Triantafyllidis, Prof. N. (Nicolas)

University of Michigan, Department of Aerospace Engineering, MI 48109 Ann Arbor, USA, email: nick@engin.umich.edu

Troger, Prof. H. (Hans)

Technical University of Wien, Institut für Allgemeine Mechanik, Wiedner Hauptstrasse 8-325, 1040 Wien, Austria, email: hans.troger@tuwien.ac.at

True, Prof. H. (Hans)

Technical University of Denmark, Informatics and Mathematic Modelling, Building 321 Richard Petersens Plads, DK-2800 Kgs.Lyngby, Denmark, email: ht@imm.dtu.dk

Prof. L. (Lev) Truskinovsky

CNRS - École Polytechnique, Laboratoire de Mécanique des Solides, F-91128 Palaiseau Cedex, France, email: trusk@lms.polytechnique.fr

Dr. E. (Evtim) Ttoshev

Bulgarian Academy of Sciences, Institute of Mechanics, 1113 Sofia, Bulgaria

Tuck, Prof. E.O. (Ernie)

The University of Adelaide, School of Mathematical Sciences; Department of Applied Mathematics, Room 110, Mathematics Building, SA 5005 Adelaide, Australia, email: etuck@maths.adelaide.edu.au

Tucker III, Prof. C.L. (Charles)

University of Illinois at Urbana-Champaign, Department of Mechanical Science and Engineering, 346 Mechanical Engineering Building, 1206 West Green Street, IL 61801 Urbana, USA, email: ctucker@illinois.edu

Turkalj, Prof. G. (Goran)

University of Rijeka, Faculty of Engineering, Department of Engineering Mechanics, Vukovarska 58, HR-51000 Rijeka, Croatia, email: goran.turkalj@riteh.hr

Tvergaard, Prof. V. (Viggo)

Technical University of Denmark, Department of Mechanical Engineering, Solid Mechanics, Nils Koppels Alle, Building 404, DK-2800 Lyngby, Denmark, email: viggo@mek.dtu.dk

Uetani, Prof. K. (Koji)

Kyoto University, Dept. of Architecture & Architectural Engineering, Graduate School of Engineering, KyotodaigakuKatsura Nishikyo, Kyoto, 615-8540, Japan, email: uetani@archi.kyoto-u.ac.jp

Ulbrich, Prof. H. (Heinz)

TU München, Lehrstuhl für Agewandte Mechanik, Boltzmannstrasse 15, D-85748 Garching, Germany, email: ulbrich@amm.mw.tu-muenchen.de

Ureta Aravena, Dr. T. (Tito)

Universidad de Chile, Facultad de Ciencias, Las Palmeras 3425, Nunoa, Santiago, Chile,
email: tiureta@uchile.cl

Valásek, Prof. M. (Michael)

Czech Technical University of Prague, Faculty of Mechanical Engineering, Dept. of
Mechanics, Karlovo Nanesti 13, CZ-12135 Praha 2, Czech Republic, email:
valasek@fsik.cvut.cz

Vandepitte, Prof. D.V.H. (Dirk)

K.U. Leuven, PMA Division, Kasteelpark Arenberg 41, B-3001 Leuven, Belgium,
email: Dirk.Vandepitte@mech.kuleuven.be

Van Diep, Prof. N. (Nguyen)

Institute of Mechanics, 264 Doi Can, Hanoi, Viet Nam, email: nvdiep@imech.ac.vn

Vardoulakis, Prof. I. (Ioannis)

National Technical University of Athens, School of Mathematical and Physical Sciences,
Laboratory of Geomaterials, Iroon Polytechniou 5, Zografos-15700, Athens, Greece,
email: I.Vardoulakis@mechan.ntua.gr

Vatta, Prof. F. (Furio)

Politecnico di Torino, Dipartimento di Meccanica, Corso Duca degli Abruzzi 24,
10129 Torino, Italy, email: furio.vatta@polito.it

Velarde, Prof. M.G. (Manuel)

Universidad Complutense de Madrid, Instituto Pluridisciplinar, Madrid, Spain,
email: velarde@fluidos.pluri.ucm.es

Vlassopoulos, Prof. D. (Dimitri)

University of Crete, Department of Materials Science and Technology, Heraklion, Crete,
Greece, email: dvlasso@iesl.forth.gr

Vollmann, Dr. J. (Jacqueline)

Swiss Federal Institute of Technology, Institute of Mechanical Systems, ETH Zürich
CLA H 21.1, CH 8092 Zürich, Switzerland, email: vollmann@imes.mavt.ethz.ch

Wagner, Prof. S.N.W. (Siegfried)

University of Stuttgart, Department of Aerospace Engineering, Pfaffenwaldring 21,
D-70550 Stuttgart, Germany, email: wagner@iag.uni-stuttgart.de

Wagner, Prof. M.H. (Manfred)

Technische Universität Berlin, Polymertechnik/Polymerphysik, Fasanenstrasse 90,
D-10623 Berlin, Germany, email: manfred.wagner@tu-berlin.de

Walters, Prof. K. (Ken)

University of Wales, Department of Mathematics, SY23 3BZ Aberystwyth, UK,
email: kew@aber.ac.uk

Wang, Prof. J.-X. (Jianxiang)

Peking University, Dept. of Mechanics & Engineering Science, 100871 Beijing, China,
email: jxwang@pku.edu.cn

Wang, Prof. W.-C. (Wei-Chung)

National Tsing Hua University, Dept. of Power Mechanical Eng., No. 101, Sec. 2, Kuang Fu Road, 30013 Hsinchu, Taiwan, China-Taipei, email: wawang@pme.nthu.edu.tw

Watanabe, Prof. K. (Kazumi)

Yamagata University, School of Engineering, Department of Mechanical Engineering, Yonezawa, 992-8510 Yamagata, Japan

Watanabe, Prof. E. (Eiichi)

Kyoto University, 6-24 Ohike-2-Chome Ibaraki, 567-0826 Osaka, Japan,
email: wataei@circus.ocn.ne.jp

Watanabe, Prof. H. (Hiroshi)

Kyoto University, Institute for Chemical Research, Laboratory of Molecular Rheology, Kyoto, Japan, email: hiroshi@scl.kyoto-u.ac.jp

Watson, Dr. R. (Richard)

National University of Ireland Maynooth, Department of Mathematics, Co. Kildare, Maynooth, Ireland, email: richard.watson@may.ie

Weaver, Prof. D. (David)

McMaster University, Department of Mechanical Engineering, 1280 Main Street West, Ont. L8S 4 Hamilton, Canada, email: weaverds@mcmaster.ca

Weir, Dr. G. (Graham)

Industrial Research Limited, P.O. Box 31-310, Lower Hutt, New Zealand, email: g.weir@irl.cri.nz

Wijngaarden, Prof. L. (Leen) van

University of Twente, VLF, ME, P.O. Box 217, 7500 AE Enschede, Netherlands, email: L.vanWijngaarden@tnw.utwente.nl

Williamson, Prof. C.H.K. (Charles)

Cornell University, Department of Mechanical and Aerospace Engineering, 252 Upson Hall, NY 14853-7 Ithaca, USA, email: cw26@cornell.edu

Willis, Prof. J. (John)

University of Cambridge, DAMTP, Centre for Mathematical Sciences, Wilberforce Road, Cambridge CB3 0WA, UK, email: J.R.Willis@damtp.cam.ac.uk

Wilmanski, Prof. K. (Krzysztof)

Weierstrass Institute for Applied Analysis and Stochastics, Mohrenstr. 39, 10117 Berlin, Germany, email: wilmansk@wias-berlin.de

Worster, Prof. M.G. (Grae)

University of Cambridge, Dept. of Applied Mathematics and Theoretical Physics, Centre for Mathematical Sciences, Centre for Mathematical Sciences Wilberforce Road, CB3 0WA Cambridge, UK, email: grae@damtp.cam.ac.uk

Wriggers, Prof. P. (Peter)

Universität Hannover, Institut für Baumechanik und Numerische Mechanik, Appelstrasse 9A, 30167 Hannover, Germany, email: wriggers@ibnm.uni-hannover.de

Wu, Prof. T.-T. (Tsung-Tsong)

National Taiwan University, Institute of Applied Mechanics, Taipei 106, China-Taipei, email: wutt@ndt.iam.ntu.edu.tw

Wu, Prof. W.-F. (Wen-Fang)

National Taiwan University, Dept. of Mechanical Engineering, No. 1, Sec. 4, Roosevelt Road, 10617 Taipei, China-Taipei, email: wfwu@ntu.edu.tw

Yabuno, Prof. H.Y. (Hiroshi)

University of Tsukuba, Graduate School of Systems and Information Engineering, 1-1-1, Ten-no-dai, Tsukuba, Ibaraki, 305-8573, Japan, email: yabuno@esys.tsukuba.ac.jp

Yagawa, Prof. G. (Genki)

Toyo University, Center for Computational Mechanics Research, 2-36-5, Hakusan, Bunkyo-ku Post Code 112-0001, Tokyo, Japan, email: yagawa@eng.toyo.ac.jp

Yang, Prof. W. (Wei)

Tsinghua University, Department of Engineering Mechanics, 100084 Beijing, China, email: yw-dem@tsinghua.edu.cn

Yeh, Prof. C.-S. (Chau-Shiung)

National Taiwan University, Institute of Applied Mechanics, No. 1 Sec. 4 Roosevelt Road, Taipei, 106 Taiwan, China-Taipei, email: csyeh@spring.iam.ntu.edu.tw

Yoo, Prof. J.Y. (Jung Yul)

Seoul National University, School of Mechanical and Aerospace Engineering, San 56-1, Shilim-dong, Kwanak-Ku, Seoul 151-742, Republic of Korea, email: jyyoo@snu.ac.kr

Yoon, Prof. S.W. (Suk Wang)

Sung Kyun Kwan University, Department of Physics, 300 Chunchun-dong, 440-746 Suwon, Republic of Korea, email: swyoon@skku.ac.kr

Yu, Prof. T.X. (Tongxi)

Hong Kong University of Science and Technology, Department of Mechanical Engineering, Clear Water Bay, Kowloon, Hong Kong, China-Hong Kong, email: metxyu@ust.hk

Yuan, Prof. M.W. (Mingwu)

Peking University, Dept of Mechanics and Engineering Science, Beijing, 100871, China, email: yuanmw@pku.edu.cn

Zaleski, Prof. S. (Stéphane)

Universite Pierre et Marie Curie, LMM, UPMC, 4, place Jussieu Case 162, 75252 Paris Cedex 05, France, email: zal@ccr.jussieu.fr

Zaoui, Prof. A. (André)

ENSAM / LIM, Laboratoire d'Ingénierie des Matériaux, 151 Boulevard de l'Hôpital, 75013 Paris, France, email: andre.zaoui@paris.ensam.fr

Zehnder, Prof. A.J.B. (Alexander)

ETH Zürich, Board of the Federal Institutes of Technology (ETH-Rat), ETH Centrum, CH 8092 Zürich, Switzerland, email: zehnder@ethrat.ch

Zenit, Dr. J.R. (Roberto)

Universidad Nacional Autónoma de México, Instituto de Investigaciones en Materiales, Apdo-Postal 70-360 Cd. Universitaria, D.F. 04510 Mexico, Mexico, email: zenit@servidor.unam.mx

Zhao, Prof. H. (Han)

LMT-Cachan, 61, Avenue du Président Wilson, 94235 Cachan Cedex, France, email: zhao@lmt.ens-cachan.fr

Zheng, Prof. Z. (Zhemin)

Chinese Academy of Sciences, Institute of Mechanics, 15 Bei Si Huan Xi Lu Road, 100080 Beijing, China, email: zhengzm@imech.ac.cn

Zhong, Prof. W.X. (Wanxie)

Dalian University of Technology, Research Institute of Engineering Mechanics, 116024 Dalian, China, email: zwoffice@dlut.edu.cn

Zhou, Prof. H. (Heng)

Tianjin University, Department of Mechanics, No.92 Weijin Road, Tianjin 300072, China, email: hzhou1@tju.edu.cn

Zhuang, Prof. F.-G. (Feng-Gan)

China Aerospace Corporation, Science and Technology Council, P.O. BOX 849,
100830 Beijing, China, email: zhuangfg@public.bta.net.cn

Ziegler, Prof. F. (Franz)

Technische Universitaet Wien, Center of Mechanics and Structural Dynamics,
Karlsplatz 13/E2063, A-1040 Wien, Austria, email: franz.ziegler@tuwien.ac.at

Zu, Prof. J.W. (Jean)

University of Toronto, Department of Mechanical and Industrial Engineering,
5 King's College Road, Toronto, Ontario M5S 3G8, Canada, email: zu@mie.utoronto.ca

<http://www.iutam.net>
<http://www.iutam.org>
<http://www.iutam.info>

**A catalogue record is available from the Library of the Eindhoven University of
Technology**

ISBN: 978-90-386-1330-7

