

EUROMECH

Newsletter 1
August 1992

This is the first of a regular series of Newsletters from EUROMECH – European Mechanics Council. EUROMECH Newsletters will provide information to researchers in mechanics throughout Europe on forthcoming EUROMECH Colloquia and Conferences, and on a broad range of other activities and issues affecting research in mechanics.

EUROMECH Newsletter 1 is being made freely available to all participants in the IUTAM International Congress on Theoretical and Applied Mechanics, to be held in Haifa, Israel, in August 1992, and to all participants in EUROMECH Colloquia and Conferences in 1993. It includes a Reply Form for those who wish to receive future Newsletters, and to enable the European Mechanics Council to build up a database of researchers in mechanics in Europe.

D.G. Crighton
Chairman, European Mechanics Council

EUROMECH Newsletter 1

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EUROMECH – European Mechanics Council

The European Mechanics Council was set up in 1964, under the title European Mechanics Committee, to organise the set of activities in mechanics in Europe widely known as EUROMECH Colloquia and Conferences.

EUROMECH Colloquium 1 was held in Berlin in April 1965, with the title “Boundary layers and jets along highly curved walls – Coanda effect” and with R. Wille as Chairman; EUROMECH Colloquium 300 will be held in Istanbul in September 1993, with the title

“Interaction between vorticity fields and boundaries”, with C.R. Kaykayoglu as Chairman. These Colloquia – specialised meetings for between 30 and 70 participants at the invitation of a Chairman appointed by the Council – have ranged very widely over fluid and solid mechanics (dealing with theoretical, experimental and computational approaches to both fundamental and applied mechanics), and very widely over the geographical area of Europe, from Helsinki, Luleå and St Petersburg in the North to Reggio Calabria, Palermo and Rhodos in the South, from Lisbon and Bordeaux in the West to Nizhny Novgorod and Perm in the East (actually on a ship sailing from Perm to Moscow). Participation in EUROMECH Colloquia by scientists from Eastern Europe has always been a strong feature, 30 Colloquia having been held in Poland alone, and Colloquia now being regularly held in countries of the former USSR. The Colloquia have proved themselves to be scientifically effective, and provide excellent opportunities for the establishment of congenial scientific and social interactions between scientists in Europe.

The European Mechanics Council now also runs regular series of Conferences on a much larger scale. European Turbulence Conferences have been held every two years since 1986, each attracting about 200 participants, and a series of European Nonlinear Oscillations Conferences, with about the same number of participants, will begin in 1993. Possibilities for other series of such conferences in broad central themes in mechanics are also under discussion – for example conferences concentrating on two-phase flow, and composite materials. In addition, the Council has organised conferences each attracting about 400 participants, under the titles European Fluid Mechanics Conference, and European Solid Mechanics Conference, and proposes now to make these the first of two series of Conferences at three-year intervals. The first of these were held in September 1991, in Cambridge and in Munich respectively, and the second of each series will take place in September 1994, in Warsaw and in Genoa, respectively.

Proposals for EUROMECH Colloquia are received each year by the Council at its April meeting, for Colloquia to be held in the following calendar year. There is considerable competition to organise these Colloquia, and the Council has to make a selection – of 17 for 1993, for example – from a larger number of proposals submitted. Once approved, the subsequent organisation of a EUROMECH Colloquium is entrusted entirely to a Chairman (possibly with a Co-Chairman) appointed by the Council. The organisation of each of the series of Conferences is in the hands of a Standing Committee, appointed by the Council. Members of both the Council and of the Standing Committees are drawn from all countries of Europe on the basis of their individual scientific reputations, and with the needs for adequate scientific and geographical representation in mind. Lists of the members are given later in this Newsletter. The Standing Committee is in charge of the overall scientific planning and programme of a Conference, and is assisted by a Local Organising Committee which makes detailed arrangements for the implementation of those plans.

The Council is always pleased to receive proposals for EUROMECH Colloquia; a simple proposal form is available from the Secretary and should be submitted by the end of January in the year before that in which the Colloquium is to be held, in order for any problems to be resolved before the proposal is considered by the Council in April. The Council is also happy to receive, from any scientist in mechanics in Europe, suggestions

for the broadening and improvement of its programme, and in particular for suggestions for topics, locations and suitable Chairmen for Colloquia, and of broader scientific themes which might form the basis for a useful series of larger Conferences. All correspondence on these matters should be directed to the Chairman or Secretary.

EUROMECH Correspondents

Chairmen of EUROMECH Colloquia need information on the interests and activities of scientists in all European countries in order to make the best selection of participants in their Colloquia. For Conferences, open to all interested scientists, there is a need to make information about the Conferences available throughout Europe. To help Chairmen and the Council in these tasks, a network of EUROMECH Correspondents has been established, with Correspondents qualified in fluid and in solid mechanics in virtually every country in Europe, and more than 70 Correspondents in all. A particular duty of these Correspondents is to identify, in their own – or any other – country, talented young scientists who may not yet be known to a Chairman, but who should be encouraged and helped to attend Colloquia and Conferences. Correspondents are also involved in making recommendations to the Council for action, and have been much involved in recent discussions of proposals for the transformation of the Council into a Society (of which more below). It is hoped that these Newsletters will assist Correspondents in making information about EUROMECH activities more widely and fully known.

EUROMECH – European Mechanics Society

Mechanics is a long-established branch of science, with a rich history in the course of which many important developments have occurred in Europe. Mechanics is also a distinctive branch of science, to be distinguished from physics, from mathematics, and from engineering – and it is an outward-looking subject, still in a phase of very strong research development, and with applications and interactions with many other branches of physical, biological and engineering science. Mechanics is important to all countries in Europe, not least because it is a relatively inexpensive subject in which all European countries can participate at a good scientific level at modest expense, and because of its technological importance for the industries of all European countries. Other areas of science for which comparable claims may be made now have a voice to speak for them at a European level, in the form of bodies such as the European Physical Society, the European Mathematical Society and the European Geophysical Society. The subject of mechanics is not yet represented by such a Society, and it can be argued that if it is not, it will be spoken for by organisations representing physics, or mathematics, or geophysics, or some branch of engineering science. One consequence of this might be a loss of funding to mechanics, especially in the context of new European funding mechanisms for scientific research and collaboration, but a more serious long-term consequence could be a systematic decline in the perceived importance of mechanics in university education and scientific research programmes generally.

The European Mechanics Council has been giving much thought to these and related issues, and has written first to all EUROMECH Correspondents, and then more recently to

all national organisations in mechanics in Europe, seeking their views first on the question of whether a Society is needed for mechanics in Europe, and second as to whether EUROMECH itself is best placed to create such a Society through transformation of itself. Replies from Correspondents have been overwhelmingly in favour both of the establishment of a Society, and of the transformation of the Council into the governing body of that Society. This response was considered by the Council at a meeting in Berlin in February 1992, and after extensive discussion, the Council resolved unanimously to begin the process of transformation into a Society, with the appropriate structure in place by the beginning of 1995. A Working Group has met to draft Statutes and other constitutional documents, and these will be considered, along with the comments of national organisations, at a Council meeting in October. The proposed organisational arrangements for the Society will be published in Newsletter 2, in June 1993.

The name of the Society will include the word EUROMECH, to imply the continuing development and expansion of activities extending over nearly 30 years. The phrase "European Mechanics Society" will be appended, as an explanatory phrase, so that the title of the Society will read

EUROMECH – European Mechanics Society.

The first activities of the Society will involve the extension of the programme of Colloquia and Conferences, to broaden their coverage and scope, to arrange for the organisation of such meetings throughout Europe, and to have the fullest participation in them of all qualified European scientists. EUROMECH Newsletters will be distributed by the Society to its members on a regular basis, and will develop systematic means of publicising activities in mechanics research throughout Europe. Consideration will be given to new activities, involving, for example, funding of research programmes and conferences in mechanics and educational issues relating to the position of mechanics in the university curriculum. In all these activities, the Society will strive to complement existing national and fully international activities in a harmonious way.

The work of the Society will require financial support at a higher level than under present arrangements (where members of the Council and of Standing Committees must meet their own expenses through their institution or national organisation). This support must come largely from the members of the Society, and membership will therefore involve payment of a modest annual fee. The level of the fee and arrangements for payment are under discussion, and will be set out in Newsletter 2.

EUROMECH Meetings 1993 & 1994

The European Mechanics Council has overall responsibility for EUROMECH Colloquia and EUROMECH Conferences. The latter presently comprise the European Fluid Mechanics Conference, the European Solid Mechanics Conference, the European Turbulence Conference and the the European Nonlinear Oscillations Conference. General information about Colloquia and Conferences can be obtained from the Secretary of the European Mechanics Council, Prof. B. Lundberg, Dept. of Mechanical Engineering, Luleå University of Technology, S-951 87 Luleå, Sweden before November 1992, and then Dept. of Technology, School of Engineering, Uppsala University, Box 534, S-751 21 Uppsala, Sweden.

EUROMECH Colloquia

EUROMECH Colloquia are informal meetings on specialised topics. Participation is restricted to a small number of European research workers actively engaged in the field of each Colloquium. The organisation of each Colloquium, including the selection of participants for invitation, is entrusted to a Chairman. Proceedings are not normally published. Those who are interested in taking part in a Colloquium should write to the appropriate Chairman. EUROMECH Number, Title, Chairmen, Dates and Location for the EUROMECH Colloquia in 1993 are given below. Information about EUROMECH Colloquia in 1994 will be available in EUROMECH Newsletter 2 (June 1993).

290. *Mechanics of swelling*

Prof. T.K. Karalis, Democritus University of Thrace, 67100 Xanthi, Greece
Prof. A. Silberberg, Rehovot, and Prof. D. Barthes-Biesel, Compiègne
23–27 August 1993, Rhodos, Greece

299. *Impact damage in composites*

Dr C. Ruiz, UTC for Solid Mechanics, Department of Engineering Science,
Oxford University, Parks Road, Oxford OX1 3PJ, England
Dr J. Harding, Oxford
24–26 March 1993, Oxford, England

300. *Interaction between vorticity fields and boundaries*

Prof. C.R. Kaykayoglu, Istanbul Technical University, Faculty of
Aeronautics and Astronautics, Maslak 80626, Istanbul, Turkey
Prof. J.M.R. Graham, London
27–30 September 1993, Istanbul, Turkey

301. *Rheology of complex fluids: food processing and similar applications*

Prof. M. Lebouché, LEMTA – Université de Nancy I, BP 160,
F-54504 Vandoeuvre-lès-Nancy Cédex, France
25–27 May 1993, Nancy, France

302. *Spectral analysis of complex structures*

Prof. E. Sanchez-Palencia, Laboratoire de Modelisation en Mécanique,
Université Pierre et Marie Curie, Tour 66 – Case 162,
F-75252 Paris Cédex 05, France
12–14 May 1993, Paris, France

303. *Influence of microstructure on the constitutive equations of solids*

Prof. O.B. Naimark, Institute of the Mechanics of Continuous Media
of the Russian Academy of Sciences, 1 Akad. Korolev Str., 614061 Perm, Russia
Prof. K.P. Herrmann, Paderborn
1–5 June 1993, Perm (on ship on the Kama and Volga rivers), Russia

304. *Mechanics of microstructured materials*

Dr W.J. Stronge, Department of Engineering, University of Cambridge,
Trumpington Street, Cambridge CB2 1PZ, England
28–30 June 1993, Cambridge, England

305. *The dynamics and geometry of vortical structures*
 P. Orlandi, Dipartimento di Meccanica e Aeronautica, Via
 Eudossiana 16, I-00184 Rome, Italy
 Prof. E.J. Hopfinger, Grenoble
 28 June – 4 July 1993, Cortona, Italy
306. *Mechanics of contact impact*
 Dr M. Okrouhlik, Institute of Thermomechanics, Czechoslovak
 Academy of Sciences, Dolejskova 5, 18200 Prague 8, Czechoslovakia
 Dr I. Huneek, Prague
 7–9 September 1993, Prague, Czechoslovakia
307. *Walking machines*
 Prof. M. Frik, Department of Mechanical Engineering, Institute of
 Engineering Mechanics, University of Duisburg, Lotharstraße 1,
 D-4100 Duisburg, Germany
 Prof. F.R. Pfeiffer, Munich
 8–10 September 1993, Duisburg, Germany
308. *Chaos and noise in dynamical systems*
 Prof. T. Kapitaniak, Division of Control and Dynamics, Technical
 University of Łódź, Stefanowskiego 1/15, 90-924 Łódź, Poland
 Dr J. Brindley, Leeds
 20–25 September 1993, Łódź, Poland
309. *Optical flow diagnostics*
 Dr K.A. Bütetfisch, DLR Institute for Experimental Fluid Mechanics,
 Bunsenstraße 10, D-3400 Göttingen, Germany
 Dr J.R. Bonnet, Poitiers and Dr W.H. Beck, Göttingen
 28 September – 1 October 1993, Göttingen, Germany
310. *Sediment transport mechanisms in coastal environments and rivers*
 Prof. M.M. Belorgey, Laboratoire de Mécanique des Fluides,
 Université du Havre, Quai Frissard BP 265, F-76055 Le Havre Cédex,
 France
 Dr J.F.A. Sleath, Cambridge
 13–17 September 1993, Le Havre, France
311. *Blood-wall interaction*
 Prof. K. Affeld, Universitätsklinikum Rudolf Virchow, Spandauer
 Damm 130, D-1000 Berlin 19, Germany
 18–21 October 1993, Berlin, Germany
312. *Turbulence and vortices in hypersonic flows*
 Dr F.-R. Grosche, DLR Institute for Experimental Fluid Mechanics,
 Bunsenstraße 10, D-3400 Göttingen, Germany
 5–7 October 1993, Göttingen, Germany

313. *CFD in turbomachinery and experimental validation*
 Prof. J.L. Kueny, CREMHyG, BP 95, F-38402 Saint Martin d'Hères, France
 Prof. F. Leboeuf, Ecully
 9–10 December 1993, Val d'Isère (Rhones Alpes), France
314. *Effectiveness of shell-theory formulations for numerical solutions*
 Prof. E.L. Axelrad, Universität der Bundeswehr München,
 W.-Heisenberg-Weg 39, D-8014 Neubiberg, Germany
 Prof. F.A. Emmerling, Neubiberg
 14–18 September 1993, Munich-Neubiberg, Germany

EUROMECH Conferences

EUROMECH Conferences are broad in scientific scope. 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 from all parts of Europe to meet and discuss current research. The responsibility for each series of Conferences is delegated to a Standing Committee. The detailed organisational work is carried out by Local Organising Committees (LOC). Those who are interested in taking part in one of the Conferences should write to the Chairman of the appropriate LOC. Some information about the EUROMECH Conferences in 1993 and 1994 is given below:

1st European Nonlinear Oscillations Conference

Prof. E. Kreuzer, Meerestechnik II, Technische Universität Hamburg-Harburg, Eißendorfer Straße 42, D-2100 Hamburg 90, Germany
 16–20 August 1993, Hamburg, Germany

5th European Turbulence Conference

Summer 1994, Italy (details in Newsletter 2)

2nd European Solid Mechanics Conference

Prof. A. del Grosso, Istituto di Scienza delle Costruzioni, Università di Genova, Via Montallegro 1, I-16145 Genova, Italy
 12–16 September 1994, Genoa, Italy

2nd European Fluid Mechanics Conference

Prof. H. Zorski, Institute of Fundamental Technological Research,
 Polish Academy of Sciences, Swietokrzyska 21, 00-049 Warsaw, Poland
 20–24 September 1994, Warsaw, Poland

EUROMECH – Council and Standing Committee Members 1992

EUROPEAN MECHANICS COUNCIL

G.K. Batchelor (Cambridge)	F.R. Pfeiffer (Munich)
D.G. Crighton ((Cambridge), Chairman)	W. Schiehlen (Stuttgart)
J. Engelbrecht (Tallinn)	G. Seminara (Genoa)
E.J. Hopfinger (Grenoble)	F. Sidoroff (Lyon)

N. Jones (Liverpool)
B. Lundberg ((Uppsala), Secretary)
E.-A. Müller (Göttingen)

K. Sobczyk (Warsaw)
L. van Wijngaarden
((Twente), IUTAM Observer)

FLUID MECHANICS CONFERENCE COMMITTEE

G.I. Barenblatt (Moscow)
F.H. Bark (Stockholm)
G.K. Batchelor ((Cambridge), Chairman)
D.G. Crighton (Cambridge)
E.J. Hopfinger (Grenoble)

E.-A. Müller (Göttingen)
W. Schneider (Vienna)
G. Seminara (Genoa)
L. van Wijngaarden (Twente)
H. Zorski (Warsaw)

SOLID MECHANICS CONFERENCE COMMITTEE

J. Engelbrecht (Tallinn)
N. Jones (Liverpool)
J. Lemaitre (Paris)
B. Lundberg (Uppsala)
G. Maier (Milan)

F.R. Pfeiffer (Munich)
W. Schiehlen ((Stuttgart), Chairman)
F. Sidoroff (Paris)
L.I. Slepyan (St. Petersburg)
K. Sobczyk (Warsaw)

TURBULENCE CONFERENCE COMMITTEE

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G.K. Batchelor (Cambridge)
F. Busse (Bayreuth)
H. Fiedler (Berlin)
U. Frisch (Nice)

E.J. Hopfinger (Grenoble)
J. Jimenez (Madrid)
A.V. Johansson (Stockholm)
F.T.M. Nieuwstadt ((Delft), Chairman)
I. Ryhming (Lausanne)

NONLINEAR OSCILLATIONS CONFERENCE COMMITTEE

F.L. Chernousko (Moscow)
J. Engelbrecht (Tallinn)
R. Gutowski (Warsaw)
E. Kreuzer (Hamburg)
Yu. Mitropolski (Kiev)
F.R. Pfeiffer ((Munich), Chairman)
L. Pust (Prague)

G. Rega (L'Aquila)
M. Roseau (Paris)
G. Schmidt (Berlin)
K. Sobczyk (Warsaw)
J.M.T. Thompson (London)
H. Troger (Vienna)

European Mechanics Council

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Dept. of Technology,
School of Engineering,
Uppsala University,
Box 534, S-751 21 Uppsala, Sweden.

EUROMECH Newsletter – Reply Form

I would like to receive EUROMECH Newsletter 2 (available June 1993)

Family name/surname

First (given) name

Title (Prof., Dr., etc.)

Position

Work address

Phone

Fax

Research Interests

EUROMECH meetings you have attended

General comments on issues raised in this Newsletter

Signature

Please return this form to Prof. D.G. CRIGHTON, D.A.M.T.P., University of Cambridge, Silver Street, Cambridge CB3 9EW, UK.

