

RUNDBRIEF

DER

**GESELLSCHAFT FÜR ANGEWANDTE
MATHEMATIK UND MECHANIK**

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**Sekretär der GAMM
V. Ulbricht, Dresden**

Redaktion

M. Gründer, Dresden

2003 – Brief 2

GAMM-Vorstandsrat

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Vizepräsident:	Prof. Dr. G. Alefeld Universität Karlsruhe, Institut für Angewandte Mathematik D-76128 Karlsruhe
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Vizesekretär:	Prof. Dr.-Ing. R. Kienzler Universität Bremen, Fachbereich Produktionstechnik Postfach 330440, D-28334 Bremen
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Prof. Dr.-Ing. D. Gross Technische Universität Darmstadt Institut für Mechanik Hochschulstraße 1, D-64289 Darmstadt	Prof. Dr.-Ing. K. Popp Universität Hannover Institut für Mechanik Appelstraße 11, D-30167 Hannover
Prof. Dr. P.E. Kloeden Johann Wolfgang Goethe-Universität Fachbereich Mathematik D-60054 Frankfurt am Main	Prof. Dr. R. Rannacher Universität Heidelberg Institut für Angewandte Mathematik Im Neuenheimer Feld 293/294, D-69120 Heidelberg
Prof. Dr. techn. A. Kluwick Technische Universität Wien Institut für Strömungslehre und Wärmeübertragung Karlsplatz 13, A-1040 Wien	Prof. Dr. H.-G. Roos Technische Universität Dresden Institut für Numerische Mathematik Mommsenstr. 13, D-01062 Dresden
Prof. Dr.-Ing. R. Kreißig Technische Universität Chemnitz Institut für Mechanik Straße der Nationen 62, D-09111 Chemnitz	Prof. Dr. Ch. Schwab ETH Zürich Seminar für Angewandte Mathematik Rämistraße 101, CH-8092 Zürich
Prof. Dr. U. Langer Johannes-Kepler-Universität Linz Institut für Mathematik Altenbergerstraße 69, A-4040 Linz	Prof. Dr.-Ing. P. Wriggers Universität Hannover Institut für Baumechanik und Numerische Mechanik Appelstr. 9a, D-30167 Hannover

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Kassenprüfer

Prof. Dr. M. Heilmann Bergische Universität / GH Wuppertal	Prof. Dr. P.C. Müller Bergische Universität / GH Wuppertal
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Editorial

Die in diesem Rundbrief enthaltene Berichterstattung zur GAMM 2003 wird sicherlich beim Leser angenehme Erinnerungen an unsere diesjährige Jahrestagung wecken. Ich möchte daher meine ersten Worte einem herzlichen Dankeschön an unsere Gastgeber in Abano-Padua widmen. Die Kollegen Schrefler, Runggaldier und Zavarise sowie die weiteren Mitglieder und Helfer im Organisationsteam haben alle Probleme, die im Zusammenhang mit einer derartig großen wissenschaftlichen Veranstaltung stehen, mit hohem persönlichen Einsatz bewältigt. Allein der Fakt von ca. 700 Teilnehmern aus über 30 Ländern unterstreicht diese Aussage.

Die Einladung zur GAMM 2004 nach Dresden wird mit diesem Rundbrief offiziell ausgesprochen. Ich hoffe, dass das Interesse an dieser Jahrestagung in meiner Heimatstadt in einer ähnlichen Größenordnung liegt.

Die Jahrestagung 2005 wird, wie bereits bekannt gegeben, auf Einladung der Kollegen Malvetti und Belouettar in Luxemburg stattfinden. Ich möchte an dieser Stelle darüber informieren, dass die Abgeordnetenkammer des Großherzogtums Luxemburg im Juli dieses Jahres das Gesetz zur Gründung der Universität verabschiedet hat. Somit wird die naturwissenschaftlich-technische Fakultät der Université du Luxembourg unser Gastgeber sein.

Im Juli fand in Sidney der 5. ICIAM Congress statt. Ein Auszug aus dem Abschlussbericht wird auf Seite 32 wiedergegeben. Hervorheben möchte ich, dass im Rahmen der Eröffnungszeremonie der von der GAMM ausgelobte ICIAM Collatz Preis verliehen wurde.

Abschließend erlaube ich mir den Hinweis auf den Aufruf des Präsidenten zur Vorstandswahl 2004, der auf der Folgeseite veröffentlicht ist, verbunden mit der Bitte um die Einreichung zahlreicher Vorschläge bei der Geschäftsstelle.

Volker Ulbricht
Sekretär der GAMM

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Wahlen zum Vorstandsrat

Aufruf des Präsidenten zur Vorstandswahl 2004

Während der wissenschaftlichen Jahrestagung in Dresden findet am Mittwoch, den 24. 03. 2004, die Mitgliederversammlung der Gesellschaft für Angewandte Mathematik und Mechanik e.V. statt. Als Mitglied der GAMM erhalten Sie eine gesonderte Einladung. Aus dem Verzeichnis der Mitglieder des Vorstandsrats können Sie entnehmen, dass sieben Positionen zur Wahl stehen. Gemäß der Wahlordnung für die Wahlen zum Vorstandsrat der GAMM sind alle Mitglieder der GAMM eingeladen, persönlich an der Mitgliederversammlung in Dresden teilzunehmen und sich an der Wahl zu beteiligen.

Ab sofort haben Sie Gelegenheit, Wahlvorschläge in der Geschäftsstelle der GAMM einzureichen. Die an der Wahl teilnehmenden Delegierten der korporativen Mitglieder müssen dabei namentlich bekanntgegeben werden. Die Quorenregelung verlangt, dass der Wahlvorschlag für den Präsidenten von mindestens 25 Mitgliedern, der Wahlvorschlag für den Vizesekretär von mindestens 10 Mitgliedern und der Wahlvorschlag für die weiteren Mitglieder des Vorstandsrates von mindestens fünf Mitgliedern schriftlich unterstützt werden muss. Wahlvorschläge und Unterstützungserklärungen auch für eine Wiederwahl sind spätestens acht Wochen vor der Wahl, also bis **28.01.2004** an die Geschäftsstelle zu senden.

Es ist selbstverständlich, dass die Zielsetzungen der GAMM und der Wettbewerb mit anderen Gesellschaften entsprechend erfahrene, wissenschaftlich ausgewiesene und besonders aktive Kollegen für die Wahlvorschläge notwendig machen. Für den Wahlvorgang in Dresden erlaube ich mir deshalb einige Vorschläge zu unterbreiten. Die Kollegen Professoren Kienzler, Kluwick, Schwab und Wriggers empfehle ich wieder zu wählen. Sie haben bisher alle eine hervorragende Arbeit geleistet. Für die neu zu wählenden Vorstandsratsmitglieder bitte ich um regional und fachlich ausgewogene Vorschläge.

Friedrich Pfeiffer
Präsident

Mitglieder der Wahlkommission für die Vorstandsratswahlen 2004

Vorsitzender: G. Alefeld, Karlsruhe

Gewählte Mitglieder: H.-W. Engl, Linz
K. Kirchgässner, Stuttgart
O. Mahrenholtz, Hamburg-Harburg
W. Schneider, Wien

Mitglieder des Vorstandsrates 2004

- F. Pfeiffer** (Präsident), München, Festkörpermechanik, Amtszeit bis **2004**,
gemäß Satzung ab 2005 Vizepräsident
- G. Alefeld** (Vizepräsident), Karlsruhe, Numerische Analysis, Amtszeit bis **2004**,
gemäß Satzung ab 2005 beratendes Vorstandsratsmitglied
- V. Ulbricht** (Sekretär), Dresden, Festkörpermechanik, Amtszeit bis 2005,
- R. Kienzler** (Vizesekretär), Bremen, Festkörpermechanik, Amtszeit bis **2004**, wählbar,
- A. Frommer** (Schatzmeister), Wuppertal, Angewandte Mathematik, Amtszeit bis 2005,
- N. Aksel**, Bayreuth, Strömungsmechanik, 1. Amtszeit bis 2005,
- C. Carstensen**, Wien, Numerische Analysis, 1. Amtszeit bis 2006,
- D. Gross**, Darmstadt, Festkörpermechanik, 1. Amtszeit bis 2005,
- P. Kloeden**, Frankfurt a.M., Stochastik/Optimierung, 1. Amtszeit bis 2005,
- A. Kluwick**, Wien, Strömungsmechanik, 1. Amtszeit bis **2004**, wiederwählbar,
- R. Kreißig**, Chemnitz, Festkörpermechanik, 2. Amtszeit bis 2006,
- A. Mielke**, Stuttgart, Angewandte Analysis, 2. Amtszeit bis **2004**, nicht wiederwählbar,
- R. Rannacher**, Heidelberg, Numerische Analysis, 2. Amtszeit bis **2004**, nicht wiederwählbar,
- H.G. Roos**, Dresden, Angewandte Analysis, 2. Amtszeit bis 2006,
- Ch. Schwab**, Zürich, Analysis, 1. Amtszeit bis **2004**, wiederwählbar,
- H. Ulbrich**, München, Dynamik und Regelungstheorie, 1. Amtszeit bis 2006,
- P. Wriggers**, Hannover, Festkörpermechanik, 1. Amtszeit bis **2004**, wiederwählbar.

Anmerkung: Gemäß Satzung endet die Amtszeit am 31. Dezember des angegebenen Jahres. Die Amtszeit der auf der Hauptversammlung 2004 in Dresden wieder bzw. neu zu wählenden Mitglieder des Vorstandsrates beginnt am 1. Januar 2005.

GAMM-Mitteilungen

Komitees der GAMM

Programmkomitee der Jahrestagung 2005 – Luxemburg

A. Aksel,	Bayreuth	V. Mehrmann,	Berlin
G. Alefeld,	Karlsruhe	F. Otto,	Bonn
S. Belouettar,	Luxemburg	F. Pfeiffer,	München
C. Carstensen,	Wien	R. Rannacher,	Heidelberg
A. Frommer,	Wuppertal	G. Schneider,	Karlsruhe
D. Gross,	Darmstadt	W. Schneider,	Wien
R. Kienzler,	Bremen	P. Steinmann,	Kaiserslautern
P.E. Kloeden,	Frankfurt a.M.	H. Ulbrich,	München
K. Kunisch,	Graz	V. Ulbricht,	Dresden
M. Malvetti,	Luxemburg	D. Weichert,	Aachen
K. Marti,	München		

Anmerkung: Die Sitzung des Programmkomitees findet am 31. Januar und 01. Februar 2004 in Luxemburg statt.

PAMM-Proceedings in Applied Mathematics and Mechanics

GAMM-Conference Abano-Padua 2003

The proceedings of the Abano-Padua 2003 GAMM-Conference will be published in a new electronic journal PAMM "Proceedings in Applied Mathematics and Mechanics" which will be free of charge for GAMM members and subscribers of ZAMM - Journal for Applied Mathematics and Mechanics.

PAMM-Proceedings in Applied Mathematics and Mechanics will be part of Wiley InterScience (www.interscience.wiley.com), the dynamic online journals service from John Wiley & Sons. All members of the GAMM will obtain free access to the electronic publication as a part of their membership.

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Mitteilungen GAMM - Fachausschüsse

FA: Dynamik und Regelungstheorie

Jahresbericht 2002/2003

Dem Fachausschuss gehören derzeit an:

A. Ams, Freiberg	P.C. Müller, Wuppertal, Vorsitz
E. Brommundt, Braunschweig	G.P. Ostermeyer, Braunschweig
F. Colonius, Augsburg	K. Popp, Hannover
H. Hahn, Kassel	D. Prätzel-Wolters, Kaiserslautern
B. Heimann, Hannover	K. Reinschke, Dresden
U. Helmke, Würzburg	P. Rentrop, München
D. Hinrichsen, Bremen	J. Scheuerle, München
H.W. Knobloch, Würzburg	W. Schiehlen, Stuttgart
E. Kreuzer, Hamburg	K. Schlacher, Linz
R. März, Berlin	K.R. Schneider, Berlin
V. Mehrmann, Berlin	H. Troger, Wien
	W. Wedig, Karlsruhe

Zudem sind eine Reihe ständiger Gäste assoziiert, um unter anderem auch die Verbindungen zum Fachausschuss „Mathematische Analyse nichtlinearer Phänomene“ und zum VDI/VDE-GMA-Ausschuss 1.40 „Theoretische Verfahren der Regelungstechnik“ zu pflegen.

Die Kooperation mit dem genannten Ausschuss 1.40 der VDI/VDE-Gesellschaft für Mess- und Automatisierungstechnik (GMA) hat sich bewährt und drückt sich darin aus, dass nach dem gemeinsamen Workshop am 10./11.03.2002 in Kassel für März 2004 erneut ein gemeinsamer Workshop geplant ist.

Am 18./19.11.2002 fand am Weierstrass-Institut für Angewandte Analysis und Stochastik (WIAS), Berlin, ein gemeinsamer Workshop des Fachausschusses und des WIAS statt. 21 Vorträge zeigten die Spannweite der Interessengebiete des Ausschusses auf: Anwendungen und theoretische Ergebnisse aus den Bereichen der Schwingungs- und Regelungstechnik stießen auf Interesse und rege Diskussionen. Der Workshop war Herrn Professor Knobloch anlässlich seines 75. Geburtstages gewidmet worden.

Ein Schwerpunkt der Ausschusstätigkeit bezieht sich auf die Untersuchung von Deskriptorsystemen, d.h. von Regelungssystemen, die durch differential-algebraische Gleichungen beschrieben werden. Für diese spezielle Problematik wurde ein Workshop in Paderborn, 17. - 21. März 2003 durchgeführt. In diesem Workshop war es das Ziel, Wissenschaftler aus verschiedenen Gebieten wie der Numerischen Mathematik, der Regelungstechnik, der Elektronik und der Verfahrenstechnik zusammenzubringen, um über fachübergreifende Probleme der Simulation, der Analyse und der Synthese von Deskriptorsystemen zu diskutieren. Die Ergebnisse werden in einem Berichtsband mit Kopien der Vortragsfolien zusammengefasst, der vom FA-Vorsitzenden angefordert werden kann.

Auf der Sitzung am 18./19.11.2002 wurden überdies Vorschläge für Hauptvortragende, Minisymposien und Sektionsleiter für das Programm-Komitee der GAMM-Tagung 2004 erarbeitet.

Weitere Informationen können vom Vorsitzenden erhalten werden:
 mueller@srm.uni-wuppertal.de
 Peter. C. Müller, Wuppertal

FA: Analysis von Mikrostrukturen

Ab Oktober 2003 übernimmt Herr Hackl (Bochum) den Vorsitz in diesem Fachausschuss. Der Vorstandsrat dankt dem ausscheidenden Vorsitzenden, Herrn Carstensen, Wien, für seine Initiativen bei der Einrichtung und Leitung des Fachausschusses.

Volker Ulbricht
Sekretär

FA: Biomechanik

Neugründung

Von Herrn Ehlers, Stuttgart, wurde beim Präsidenten ein Antrag auf Einrichtung eines neuen GAMM-Fachausschusses zur Problematik Biomaterialien eingereicht. Inhaltliches Anliegen sind die Zusammenführung und Weiterentwicklung von Forschungsvorhaben zur kontinuumsmechanischen Modellierung biologischer Materialien unter Einbeziehung von Mehrfeldproblemen. Der engere Vorstandsrat begrüßte diese Initiative und bat Kollegen Ehlers die Konstituierung vorzubereiten. Satzungsgemäß wird der Vorstandsrat auf seiner nächsten Sitzung abschließend über die Einrichtung dieses neuen Fachausschusses der GAMM beschließen.

Volker Ulbricht
Sekretär

GAMM Jahrestagung Abano - Padua 2003

Eröffnungsrede der Tagungsleiter

Mister President of GAMM,
President of the Consortium of the Terme Euganee,
Chairman of the Italian Group of Computational Mechanics,
Ladies and Gentlemen

Welcome to the Annual Meeting of the Gesellschaft für Angewandte Mathematik und Mechanik (GAMM)! We are honoured to host this meeting in an area that is full of history and tradition. Abano is a renowned health spa since the Roman times due to its hot mud baths.

Padua, at a short distance from here, is one of the major cities of art in Italy (I just mention the Scrovegni Chapel with the best preserved frescoes of Giotto) and seat of one of the five oldest still existing Universities in the world.

Padua and its University have played a major role in the development of modern sciences, in particular medicine and mechanics. As far as medicine is concerned I would like to mention that the so called golden century of medicine originated here: we have in the main building of our University still the anatomical theatre of Fabrici d' Acquapendente dated 1594 which can be visited. Other famous names are Vesalius for Anatomy and Harvey for the blood circulation (predicted on the base of mechanical reasoning's).

As for Mechanics and Mathematics, Galilei laid the foundations to his most important work, the Dialogues concerning two new Sciences, during the eighteen best years of his life - those which he spent in Padua. Unfortunately for him he then moved to Florence. Later on there was Giovanni Poleni, one of the "four mathematicians" who solved the problem of the cracks in the cupola of the Saint Peter's dome in Rome and two Bernoullis: Daniel Bernoulli as student of Giambattista Morgagni, a famous anatomist, and Nicholas Bernoulli as Professor of Mathematics.

I also mention that the palm tree of Goethe which inspired him a theory of evolution, is still existing in the Botanical Garden, the first one created in 1548 in the western world. Talking about historical places, there is also Venice at a short distance from Abano. The rising sea level (partly due to subsidence) poses a threat to this city and therefore it was quite natural to have this issue addressed in the public lecture on Tuesday by Professor Andrea Rinaldo with the title "Will Venice survive?".

I strongly suggest you to visit the places mentioned and recall you that for Giotto reservation is compulsory.

Actually, when Professor Alefeld asked us to organize this meeting, we planned to hold it in Padua, but at the period when this Annual meeting usually takes place, all lecture rooms are occupied at the Universities and so the natural choice was Abano with all its facilities.

Concerning the scientific programme this meeting follows the tradition of the previous ones. It consists of plenary lectures, minisymposia and topical sessions. As in the Augsburg meeting, also this time minisymposia and sessions are completely separated. The meeting also follows the traditional privilege of GAMM to host the Ludwig Prandtl Memorial Lecture of the Deutsche Gesellschaft für Luft- und Raumfahrt (DGLR) that this year will be given by Professor Wolfgang Merzkirch on "Fluid mechanical problems in flow metering".

I give you now a few details on this meeting. Actually we have about 680 registered participants and several others are still expected to register onsite. Despite the unlucky geopolitical situation, if I may use this euphemism, we had very little cancellations WE had just to substitute the plenary lecture on Tuesday of Paolo Galluzzi by Franco Brezzi who accepted even in the last minute. A large majority of the participants comes from EU countries; however we have also roughly 15% from the Newly Associated States and from other Eastern Countries. Despite of the fact that because of the strained economical situation we received very little sponsoring we were able to support scientists and young researchers from those countries, either by waiving or reducing the registration fee or by direct support.

I have also to mention that we have participants from countries as far as Canada, China and Japan.

We would like to thank GAMM and its Program Committee for having chosen our area to hold this meeting and for the support given to us through its President Prof. Dr.-Ing. Friedrich Pfeiffer, Vice-President Prof. Dr. Goetz Alefeld and Secretary Prof. Dr.-Ing. Volker Ulbricht during the organization. Thanks go to all our sponsors, to the colleagues of the local organising committee and collaborators including the students doctoral students and post-docs you will see around these days, and in particular to dr. Lorenzo Sanavia and Prof. Giorgio Zavarise who have done most of the actual work with enormous dedication. Professor Zavarise who you certainly know through the many e-mails and phone calls you received, will give you same further practical details regarding the Conference. Thanks go finally also to Meet & Work, in particular to Mr. Mario Sbalchiero, for the efficient handling of the various organizational details.

We wish you a fruitful participation in the meeting and a great time in our area,

Bernhard Schrefler, Wolfgang Runggaldier.

Eröffnungsrede des Präsidenten der GAMM

Dear Ladies and Gentlemen,
Dear Colleagues,

opening the annual GAMM-Conference 2003 in Abano I welcome you very warmly and thank you for coming. I appreciate, that Professor Perego will welcome us on behalf of the President of the University of Padua, who is not able to come. Our colleagues and their co-workers have prepared this Conference in an excellent way. On behalf of all I want to mention the colleagues Prof. Bernhard Schrefler and Prof. Wolfgang Runggaldier, both from Padua, as well as Prof. Giorgio Zavarise from Torino, who have done an impressive job by preparing and realizing this Congress. My most sincere thanks to all of them, but also to their co-workers and assistants.

For many years the GAMM, "Society of Applied Mathematics and Mechanics" (in German "Gesellschaft für Angewandte Mathematik und Mechanik"), has fostered close relationships to the DGLR, the "German Society of Aerospace Sciences" or "Deutsche Gesellschaft für Luft- und Raumfahrt". Therefore I would like to welcome Prof. Rath, member of the Board and thus standing in for President Dr. Szodruch, who cannot be here. The close connection between these two Societies is underlined by the annual Ludwig-Prandtl-Memorial-Lecture and by many other contacts and cooperations.

With Padua/Abano our Society not only has chosen a three thousand year old place with an overwhelming history reflecting the development from the Romans to Europe of today, it has also chosen a city of Culture, of Science and of a strong desire for freedom. Famous names like Giotto, Donatello, Mantegna and Tizian are connected with this city, and these are only a few names, which you will proof when walking and looking around in Padua. With Galileo Galilei Padua represents one of the origins of modern Physical and especially Mechanical Sciences, hence the 2003-GAMM-Conference goes back to the roots, if I may say so. But it is not only Galilei alone. Everyone of us having studied Latin is acquainted with Titus Livius, one of the great classic historians and son of Patavium, who has written altogether 142 books on Roman history from the very beginning until into his days around two thousand years ago, amongst them the famous history of Hannibal. With Antonius of Padua we have another great son of this area. He was an outstanding and ingenious priest, a great public orator, and up to now he is the most popular saint for problems of everyday's life, preferably for those who tend to be forgetful. Padua possesses one of the oldest Universities of the world, being founded in 1222 by scholars and professors tied to noble families, open to the freedom and necessity of Science.

This brings us back to present times and to the situation of our Universities today. The medieval Universities started with two indisputable claims, freedom and independence. Scholars and students emigrated from places, where this could not be realized either by pressure of the Church, of the Nobility or of the Kaiser. Many famous new Universities were founded by these migrating scholars, and always in the middle of those cities, which guaranteed the mentioned claims. The last big process of that kind took place in the last century, when most of the Jewish European scholars emigrated to America.

But these are very rough and brutal events that strongly endanger the individual existence. On the other hand freedom and independence can also be undermined by slow and corrupting processes which come along very silently putting on the one side the citizens in a shrine to consumerism and materialism, and then retracting on the other side the basis of free and independent research and teaching in Universities by explosive and not comprehensible regulations. The present ones have names: ranking, evaluations, third party funds, which very

efficiently exterminate those leisure times necessary for developing thoughts, ideas and concepts for research and for teaching.

Please don't misunderstand me. I myself acquired a significant amount of funds from the German Research Foundation, from Industry and from other sources. But if that happens before the background of a dramatically underfinanced and with regard to personal possibilities bled to death University System, it is wrong. It is wrong also, to take this for a measure with respect to the abilities or the qualification of a Professor or even a scholar. If a Professor represents really the top of his Science, I mean the qualitative top, then who will evaluate him? His colleagues, who might have difficulties with their objectivity, or some administrators, who measure, if any, some quantities but not the qualities and the performance?

There are even more profound arguments. Wilhelm von Humboldt founded the Berlin University in 1810 and stated at this occasion, that education and scientific research should be interconnected in an inseparable way, and that the search for truth, without any prejudices, must be a fundamental imperative. Many people say, that all this represents the University of yesterday, and that modern Universities are completely different. I personally would like very much to learn, what concepts and principles determine the so-called modern Universities. I did not hear anything so far that makes sense.

A University, which conveys knowledge for short time applications and business but not the fundamentals for thinking in long time scales? A University, which interchanges knowledge with science, and which teaches skills but not abilities? A University, for which application counts much more than fundamental thinking, thus leading in many instances not only to an industrialisation of the university structures but also to a trivialisation in some fields? Again, engineers have no problems with applications and they need them. We educate students mostly for industry. Nevertheless, it is a difference trying to look behind the things on the one side or to act as a kind of workbench for industry on the other side. With respect to engineering we need both, but in a healthy proportion. Mere application is as wrong as mere foundation. The main goal of engineering is the transformation of the most modern foundations into the most modern applications. This requires freedom and independence also in Engineering Sciences, which is not provided by the present University System, at least not to a sufficient degree.

Let us put these considerations that way: We have to go back to the roots and the basic ideas of the University, which are in an astonishing agreement with the requirements of modern professional life expressed by features like long life learning, professional flexibility, expert and general knowledge. Teaching the structures behind things and building a fundament for long term thinking capabilities establishes a basis for a successful life, and that not only in a professional sense. Universities must offer topics which are difficult to learn outside their walls. They must lay a basis for thinking in long time-scales and not for trivial problems of today. They cannot guarantee a professional success, but they must generate the best starting conditions whatsoever. Intelligence starts at a point, where you know things which you have not learned, that's what I usually tell my doctoral students.

With this in mind let's go to our Society. The usual events and processes will be discussed during the GAMM General Assembly. There emerged in the course of the year some ideas and some problems, we should also address here.

The first point concerns the concept of the GAMM Society, which has been founded, as all of you know, with the goal to bring together Mathematicians on the one and Mechanicians on the other side. This goal is still relevant, I shall not discuss it now, because I have done so last year. An additional feature of every Society consists in bringing together as many members of a scientific community as possible, and this of course mainly for professional purposes, but also for private and individual contacts. This "Family-Idea" is positive, constructive, it exists

all over the world and makes many things much easier. On the other hand it affords engagement of everybody. And this is my cue.

We all make the observation, that young people, for example doctoral students, are frequently quite demanding when visiting Conferences and presenting papers. But they usually are much less demanding if they are asked to become a member of a Society. As they are consistent thinkers, hopefully in the above discussed sense, they should know that Conferences depend on the existence of Societies, that Societies depend on members, and that members should pay a certain fee to sustain the Societies. Otherwise no Conferences, no meetings, no Journals as a basis for publications. If all that would be completely commercialised, you can forget it. You would have a Conference Fee of more than 1000 Euros, and as a rule you would have to pay for all your publications. That this is not so, but you owe the existence of many colleagues who do an honorary job for you.

Furthermore we urgently need engagement for the GAMM-Mitteilungen, which usually have appeared twice a year and which at the time being, do not receive enough contributions. I do not want to go into details, why and where and what, I simply ask you to write some good and interesting articles for this GAMM – journal and to send it to our colleague, Prof. Mennicken in Regensburg.

An additional word to our GAMM-Conference. We have discussed often the underlying concept, where one important point was the participation of our young colleagues and young students. The GAMM was and always will be a platform, where young people are able, without pre-reviews and the like, to present a paper. For this purpose we have reduced the number of Minisymposia, and we have decided not so long ago to go on with not reviewing the papers. This has a price, if you see it so, but for me it is not a price, because the GAMM annual Conference is not a standard Conference of the type you find all over the world.

It is a Conference, where colleagues from Applied Mathematics and Mechanics meet on a professional and private basis, where the older ones might detect the one or the other upcoming talent with the result that they support them, and where we have selected surveys of special areas for mutual information and motivation. In addition, everybody ready to do that, might participate in discussions on GAMM-affairs, on the future of the Society and the Conference. The style of GAMM and its Conference as well as its Committees (Fachausschüsse) is purely individual and will not correspond to standard Conferences. We definitely do not want the situation, sometimes met in American Conferences, that participants come and go, maybe only for one day. On the other side everybody is welcome, who wants to stay for the whole Conference time renewing old and making new contacts. There exists a reason to speak about just that. And at this point I repeat my offer to discuss about any ideas concerning GAMM.

The GAMM, die Gesellschaft für Angewandte Mathematik und Mechanik, awards every year the Richard von Mises-Preis for outstanding contributions in the field of Applied Mathematics and Mechanics. In spite of many presentations of the life of Richard von Mises I would like to give here again some informations. I do thank Professor Zierrep for providing me with a detailed Vita and also with some historical data of the Prize itself.

Richard von Mises was born in Lemberg in the year 1883. He received a Doctoral degree in 1908 from the University of Vienna, and one year later at the the age of 26 he became Professor in Straßburg . After the first World War he became Professor in Dresden, in 1919, and just one year later, in 1920, in Berlin, where he founded the famous Institute of Applied Mathematics. In the year 1920 he also founded the ZAMM (Zeitschrift für Angewandte Mathematik und Mechanik) and was Editor-in-Chief until 1934. The political developments forced him to go to Istanbul in 1933, from where he finally emigrated to America. The Harvard University invited him 1939. At the same University he headed since 1943 the Institute of Aerodynamics and Applied Mathematics. He died 1953 in Boston.

The history of the Prize itself started with first ideas in the year 1986, when the possibility of such a prize was discussed by representatives of GAMM including Professors Ansorge, Bulirsch, Collatz, Lehmann, Kirchgässner, Schiehlen, Stetter and Zierep. After much of internal discussions the Prize was established in Stuttgart in 1987 and published in GAMM-Mitteilungen in 1988. The first Committee for evaluating the candidates was also founded in 1988 with Professor Collatz and Zierep as members. The first candidate to receive the Prize was our colleague Professor Mielke, at that time 15 years younger and not yet a Professor. In the meantime altogether 17 prizes have been awarded, and today we award the eighteenth.

For this year the Richard von Mises-Prize will go to Mrs. Dr. Barbara Niethammer from the University of Bonn.

May I ask you, Dr. Niethammer, to come up, and also I would like to ask Professor Dr. Stefan Müller from the Max-Planck-Institute for Mathematics in Natural Sciences in Leipzig to present his eulogy.

(Prof. Müller is speaking.)

The Prize-Document reads as follows:

Die Gesellschaft für Angewandte Mathematik und Mechanik verleiht den Richard von Mises-Preis 2003 für hervorragende wissenschaftliche Leistungen auf dem Gebiet der Angewandten Mathematik und Mechanik Frau Dr. rer. nat. Barbara Niethammer in Würdigung Ihrer Arbeiten auf dem Gebiet der Analysis der Ostwaldschen Reifung.

The Document is signed by the members of the Prize-Committee, the Professors and Colleagues Gaul, Mielke, Walter and Zierep as well as from the President of GAMM.. I am very grateful to the members of the Prize-Committee and to those participating in the evaluation of the candidates.

Finally I want to recall that the General Assembly of GAMM takes place on Wednesday. In addition to the usual annual reports we also shall have some elections to the Vorstandsrat. I invite all participants to attend the meeting.

I now declare the GAMM – Conference 2003 for opened.

Thank you very much.

Friedrich Pfeiffer

Laudatio auf Frau Dr. rer. nat. B. Niethammer
anlässlich der Verleihung des Richard von Mises-Preis 2003

Distinguished colleagues and guests,

it is a great honour and pleasure to introduce to you Dr. Barbara Niethammer who is about to receive the Richard von Mises-Prize. Barbara Niethammer was born in 1967 in Dortmund, grew up in Karlsruhe and received her mathematical education in the very strong group of H.W. Alt in Bonn. One striking feature of her career is that, despite coming from a very strong group she developed her own mathematical profile and her own taste for choosing problems very early. In her Ph.D. thesis she addressed a problem which has received enormous attention in physical chemistry and materials science but had been almost neglected by mathematicians, the problem of so-called Ostwald ripening.

Ostwald ripening, named after the Leipzig chemical physicist Ostwald, describes the late stages of the phase separation in a binary mixture. A typical example is the growth of solid particles in a slightly undercooled liquids, or the growth of precipitates in Ni Al superalloys, a very important class of materials for hightech applications.

One striking feature of this process is statistical self-similarity. If you take a snapshot of the particle distribution at different times and rescale space as $\text{time}^{-1/3}$ the rescaled pictures look nearly identical. In the 60's the physicists Lifshitz and Slyozov in the former Soviet Union and Wagner in Germany developed a theory which, for low volume fraction, passes the complex evolution of the phase boundaries and directly gives an evolution equation for the size distribution of the particles. These so-called LSW equations have a self-similar solution with the right scaling behaviour and predict a certain asymptotic distribution profile.

In her thesis Barbara Niethammer for the first time derived the LSW rigorously mathematically as a low volume fraction limit. She settled a long standing debate in the materials science literature whether for the limiting equations one should impose volume conservation or mass conservation.

This, however, was only the beginning of a long and very successful story. It is well known that the LSW self-similar solutions have the right scaling exponent, but the asymptotic size distribution of the LSW solution does not agree with experimental observations. There are many possible explanations discussed in the physical chemistry literature why this could be so. Barbara Niethammer has analyzed some important mechanisms such as screening and the build-up of correlations rigorously. Her vision, however, has not been restricted to trying to prove mathematically what had been predicted before by physicists. Indeed her work has revealed new and rather surprising feature of the LSW equations.

Let me just mention one example. Contrary to common belief she showed (in joint work with R.L. Pego) that there is not only one limiting profile infinitely many and that the large-time behaviour depends extremely sensitively on the initial size distribution.

In the last years Barbara Niethammer has also made profound contributions to a number of other topics, including the Becker-Döring equations, which describe the early stages of phase separation, polycrystalline shape-memory materials and the interpretation of phase separation problems as gradient flows with respect to the Wasserstein metric.

She has received high international recognition and has been in high demand as a visitor of internationally leading institutions such as the Courant Institute, Caltech and the Ecole Normal Supérieure in Paris.

I think Barbara Niethammer's work is a model for applied analysis: start from an important problem, study which hard questions are raised in the applied literature and develop mathematical tools to attack these problems. In this sense, I believe, she also stands in the best tradition of Richard von Mises, and I am delighted that she receives the Richard von Mises-Prize today.

Prof. Dr. Stefan Müller

Max-Planck-Institute for Mathematics in the Sciences, Leipzig

Bericht des Präsidenten an die Mitglieder

Meine Damen und Herren,
Liebe Kolleginnen und Kollegen,

ich begrüße Sie sehr herzlich zur diesjährigen Mitgliederversammlung der “Gesellschaft für Angewandte Mathematik und Mechanik e.V.”

1. Verstorbene Mitglieder

Wie immer wollen wir zunächst unserer verstorbenen Mitglieder gedenken (alle stehen auf). Es ist mir eine traurige Pflicht, Sie über das Ableben der folgenden Kollegen zu informieren:

Wir gedenken Herrn Prof. Dr. Heinz Bauer, zuletzt in Erlangen.

Wir gedenken Herrn Prof. Dr. Hans Bueckner, zuletzt in Niskayuna, USA.

Wir gedenken Herrn Prof. Andrzej Gawecki, zuletzt in Poznan, Polen.

Wir gedenken Herrn Prof. Dr. Josef Hoschek, zuletzt in Darmstadt.

Wir gedenken Herrn Prof. Dr. Werner Meyer-König, zuletzt in Freiburg i. Br..

Wir gedenken Herrn Prof. Dr. Theodor Meis, zuletzt in Köln.

Wir gedenken Herrn Prof. Dr. Mirlos Mirkolas, zuletzt in Budapest, Ungarn.

Wir gedenken Herrn Prof. Dr. Dr.h.c.mult. Hans Günther Natke, zuletzt in Hannover.

Wir gedenken Herrn Prof. Dr. Julius Siekmann, zuletzt in Essen
und zudem Schatzmeister der GAMM von 1984 – 1990.

Wir gedenken Herrn Prof. Dr. Leopold Vietoris, zuletzt in Innsbruck.
Er erreichte das biblische Alter von 110 Jahren.

Allen Verstorbenen wird die Gesellschaft für Angewandte Mathematik und Mechanik ein ehrendes Andenken bewahren.

Sie haben sich zum Zeichen der Trauer und Anteilnahme von Ihren Plätzen erhoben. Ich danke Ihnen.

2. Mitgliederbewegung

Anzahl der GAMM-Mitglieder	(Stand 28. 02. 2003)	2230
Anzahl der korporativen Mitglieder	(Stand 28. 02. 2003)	41
Anzahl der neuen Mitglieder	(1.02.02 bis 30.01.03)	27
Anzahl der Austritte	(1.02.02 bis 30.01.03)	36
Anzahl der Todesfälle	(1.02.02. bis 30.01.03)	10

Hinter diesen Zahlen verbirgt sich noch keine Katastrophe, aber eine deutlich ungünstige Entwicklung. Betrachtet man nämlich die entsprechenden Zahlen von 1997 bis heute, so lässt sich ein Mitgliederschwund von 10,44 % in sieben Jahren feststellen, wobei der Wert auf die Mitgliederzahl von 2490 im Jahre 1997 bezogen ist. Dies entspricht einer jährlichen Schwundrate von etwa 1,5 %.

Daher mein dringendes Petitum, im übrigen auch an mich selbst, wir alle müssen verstärkt Mitglieder, besonders junge Mitglieder werben.

3. Vorstandswahlen

Die Wahlen werden von unserem Vizepräsident, Herrn Kollegen Alefeld, durchgeführt. Die Namen der Kandidaten sind die folgenden:

Prof. C. Carstensen, Wien (Nachfolge U. Langer)	15 Nennungen,
Prof. H. Ulbrich, München (Nachfolge K. Popp)	14 Nennungen,
Prof. K. Kreißig, Chemnitz (zweite Amtszeit)	22 Nennungen,
Prof. G. Roos, Dresden (zweite Amtszeit)	17 Nennungen.

Von allen genannten Herren liegt eine Einverständniserklärung vor. Die Auswahl der Kandidaten erfolgte satzungsgemäß.

4. GAMM – Tagungen

a) GAMM – Tagung 2003

Es ist mir ein persönliches Anliegen, den Kollegen Schrefler und Runggaldier für die Übernahme der Tagungsleitung hier in Abano-Padua herzlich zu danken. Besonders gilt mein Dank auch Herrn Kollegen Zavarise aus Turin sowie allen an der Vorbereitung beteiligten Mitarbeiterinnen und Mitarbeitern, die unter komplizierten Umständen hervorragende Arbeit geleistet haben. Es ist sehr erfreulich, dass dank Ihrer Bemühungen eine große Gruppe von Teilnehmern aus den Ländern Ost- und Südosteuropas diese Konferenz besuchen können. Ohne Ihre Hilfe hätten das die meisten nicht geschafft.

Die guten Vorbereitungen verdienen Belohnung. Ich wünsche Ihnen deshalb auch für den Rest der Tagung einen ebenso glücklichen und reibungslosen Verlauf wie dies für die erste Tagungshälfte bereits der Fall war.

b) Weitere GAMM – Tagungen

Die wissenschaftliche Jahrestagung 2004 wird in Dresden vom 21. bis 27. März unter der Leitung der Kollegen Hardtke und Griewank stattfinden. Beide sind Professoren der TU Dresden. Eine erste vorbereitende Sitzung hat bereits im Januar dieses Jahres in Dresden stattgefunden. Es wurden je 7 Hauptvortragende aus der Mathematik und der Mechanik ausgewählt und informiert. Erste Zusagen liegen vor. Weiterhin wurden je 6 Minisymposien aus den beiden Gebieten ausgewählt. Damit ist ihre Zahl auf 12 begrenzt, was den Zielen der GAMM-Tagung in Form von mehr Chancen für junge Leute entgegenkommt. Darüberhinaus wird es insgesamt 24 Sektionen geben.

Für das Jahr 2005 liegt eine Einladung aus Luxemburg vor, das derzeit seine beiden Hochschulen "Centre Universitaire de Luxemburg" und das "Institut Supérieur de Technologie" in eine Universität umwandelt und gerne die GAMM-Tagung gewissermaßen als Auftakt organisieren möchte. Die Einladung kommt von Herrn Kollegen Malvetti, der auch als örtlicher Tagungsleiter tätig wird. Ein offizieller Einladungsbrief liegt von den beiden Präsidenten der jetzigen Hochschulen vor. Der Vorstandsrat hat beschlossen, diese Einladung anzunehmen.

Für die weiteren Jahre ist unter anderem Berlin im Gespräch.

5. Finanzabrechnung der Jahrestagungen und Organisationshilfen

Ich möchte hier noch einmal wiederholen, was ich bereits letztes Jahr angesprochen hatte, nämlich an die Verpflichtung der Tagungsleiter erinnern, innerhalb von 6 Monaten eine Finanzabrechnung beim Schatzmeister vorzulegen. Dies hat manchmal geklappt, aber nicht immer. Meiner eigenen Erfahrung nach dürfte dies jedoch kein Problem sein, da man bei externen Sponsoren ohnehin eine Abrechnung in angemessener Zeit vorzulegen hat.

Was die Hilfen bei Tagungsorganisationen anbelangt, so hat das von mir angebotene Buch "Der Kongress" doch einige Liebhaber gefunden. Je eine kopierfähige Version liegt in der Geschäftsstelle in Dresden und bei mir in Garching. Eine Kopie kann jederzeit abgerufen werden.

Ein äußerst kritisches und natürlich auch unangenehmes Problem besteht in der unerfreulichen Tatsache, dass inzwischen €26.000.- an nicht bezahlten Mitgliedsbeiträgen aufgelaufen sind. Rund 140 Mitglieder der GAMM kommen ihren Zahlungsverpflichtungen nicht nach. Da es nicht angehen kann, dass die zahlenden Mitglieder nicht nur diese Kollegen mitfinanzieren, sondern die GAMM selbst für sie auch noch Mitgliedsbeiträge an die EUROMECH-Organisation abführt ohne einen Gegenwert erhalten zu haben, wurde im Vorstandsrat folgendes Procedere beschlossen:

- 1) Die Kollegen werden in den nächsten zwei Monaten noch einmal persönlich gemahnt. (Termin Ende Mai)
- 2) Das erhoffte Ergebnis, nämlich die Zahlung, wird weitere zwei Monate abgewartet. (Termin Ende Juli)
- 3) Danach Ausschluss.
- 4) Es besteht für pensionierte oder finanzschwache Kollegen die Möglichkeit, einen Antrag auf Reduzierung des Mitgliedsbeitrages zu stellen. Darüber entscheidet für jeden Einzelfall der engere Vorstandsrat. Einen diesbezüglichen Automatismus wird es nicht geben.

6. Fachkollegien DFG

Die DFG hat alle wissenschaftlichen Gesellschaften aufgefordert, Vorschläge für die Kollegiaten zu machen. Ich möchte in diesem Zusammenhang ganz besonders unserem Kollegen Kuhn für seinen selbstlosen Einsatz in dieser Sache danken. Er hat unter nicht immer ganz einfachen Umständen dafür gesorgt, dass die Namensvorschläge rechtzeitig bei der DFG waren. Dabei ist es Herrn Kuhn als Vorsitzendem des Dekomech in hervorragender Weise gelungen, mehr Kandidaten als das notwendige Minimum zu überzeugen und aufzustellen. Er hat damit die Basis für einen demokratischen Auswahlprozess geschaffen, der sicherlich in unserem Sinne ist.

In gleicher Weise hat sich Herr Kollege Alefeld bei der Suche nach geeigneten Kandidaten in der Mathematik engagiert. Traditionsgemäß wird hierbei immer eine enge Abstimmung mit der DMV (Deutsche Mathematiker Vereinigung) angestrebt und auch verwirklicht. Dass es dabei nicht ohne intensive Diskussionen abgehen kann, versteht sich von selbst.

Ich bedanke mich bei beiden Kollegen sehr herzlich, Herrn Kuhn für die Schaffung einer breiten Auswahlbasis, Herrn Alefeld für den Einsatz bei der Harmonisierung DMV/GAMM.

7. Mitteilungen der GAMM

Die Mitteilungen der GAMM werden seit Jahren von Herrn Kollegen Mennicken aus Regensburg unter Mitwirkung der Kollegen Ansorge (Hamburg), Böhme (Hamburg), Mahrenholtz (Hamburg), Plum (Karlsruhe) und Stein (Hannover) herausgegeben. Derzeit gibt es Probleme, da sich nicht mehr genügend Kollegen gefunden haben, die bereit waren, einen Artikel für die Mitteilungen zu verfassen. Die Ausgaben für 2002 fehlen ganz, die Ausgabe für 2003 ist derzeit noch nicht in Sicht. Es kommen ständig Nachfragen seitens der Mitglieder und seitens der Bibliotheken auf uns zu. Wir müssen dies ändern. Aus diesem Grunde habe ich vor dieser Tagung den Kollegen Herausgeber und Mitherausgeber einen Brief mit der Bitte um Rat und Stellungnahme geschrieben.

Die "GAMM-Mitteilungen" sind ein wichtiges und für die informelle Kommunikation zwischen den GAMM-Mitgliedern ein unentbehrliches Instrument. Für mich persönlich waren sie auch immer eine Informationsquelle darüber, was andere Kollegen und andere Fachgebiete aus Mathematik und Mechanik so tun und voranbringen. Ich bitte daher dringend um Ihre Mitarbeit und um Beiträge.

8. Zuschüsse zu den Workshops

Der Zuschuss für Workshops beträgt maximal 1000 € Er ist ausschließlich und ohne "Wenn und Aber" für die Unterstützung junger Leute gedacht, vorzugsweise aus solchen Gebieten, denen es finanziell nicht gut geht.

In der Vergangenheit wurden in Ausnahmefällen auch mal mehr als 1000 € gezahlt, was in Zukunft nicht mehr möglich sein wird. Das Geld darf nicht für die Finanzierung der Reisekosten von Kollegen "in Amt und Würden" benutzt werden.

9. ZAMM – Angelegenheiten

Im Herbst dieses Jahres wird Herr Dr. Wessel, der langjährige "Manager im Editorial Office" der Zeitschrift für Angewandte Mathematik und Mechanik (ZAMM) in den Ruhestand treten und damit die ZAMM verlassen. Ich darf diese Tatsache zum Anlass nehmen, um Herrn Dr. Wessel auch im Namen der Gesellschaft für Angewandte Mathematik und Mechanik meinen herzlichen Dank für die geleistete Arbeit zu sagen. Herr Dr. Wessel, Sie haben über viele Jahre hinweg den Zielen der ZAMM aktiv und konstruktiv gedient und damit einen hervorragenden Beitrag zum internationalen Ansehen der ZAMM geleistet. Vielen Dank!

Mit Ihrem Ausscheiden entsteht ein Nachfolge-Problem, an dessen Lösung derzeit gearbeitet wird. Im Sommer letzten Jahres hat mir der Rektor der Universität Potsdam zugesagt, dass die Stelle am Lehrstuhl des Kollegen Holschneider weiterhin der ZAMM zur Verfügung steht. Inzwischen hat uns auch Herr Kollege Holschneider eine Liste von mehr als 20 Bewerbern für diese Stelle zur Verfügung gestellt. Eine engere Wahl ist derzeit dabei, sich zu konkretisieren. Der engere Vorstandsrat wird zusammen mit den drei Herausgebern alles tun, um eine vernünftige und für die ZAMM positive Lösung zustandezubringen.

10. ICIAM

Die GAMM ist nicht nur Gründungsmitglied der ICIAM, sie stellte nicht nur einen der Präsidenten dieser Gesellschaft, nämlich Herrn Kollegen Mennicken, sondern sie hat auch heute noch wesentlichen Einfluss auf die Aktivitäten und die Entwicklung der ICIAM. Die

diesjährige Tagung findet in Sidney statt, und trotz dieser großen Entfernung wird die GAMM mit vielen Vorträgen und einigen Minisymposien vertreten sein. Ich möchte allen, die sich hier engagiert haben, auch im Namen meiner Vorstandskollegen herzlich danken. Im übrigen wird der von der GAMM ausgelobte COLLATZ-Preis während der ICIAM-Tagung vergeben.

Für die ICIAM 2003 in Sidney sind bisher 853 Contributed Papers, 282 Minisymposien mit je 4 Vorträgen und insgesamt 1979 Abstracts eingegangen. Damit ist eine interessante und erfolgreiche Konferenz gesichert.

Die ICIAM 2007 wird in Zürich unter der Leitung unseres Kollegen Jeltsch stattfinden.

Als Ergänzung merkt Herr Kollege Mennicken, Regensburg, an, dass im "International Council of Industrial and Applied Mathematics (ICIAM)" die Professoren Alefeld, Karlsruhe, und Mennicken, Regensburg, vertreten sind. Für das Scientific Committee der ICIAM 2007 in Zürich wurde unter anderen Herr Kollege Popp aus Hannover nominiert.

11. Spenden für die Flutopfer

Auf Vorschlag einiger Mitglieder des Vorstandsrates hat sich die GAMM im Jahre 2002 entschlossen, den flutgeschädigten Kollegen in Dresden und in Prag mit einer Spende zu helfen.

Dem Institut für Mechanik sind im wahrsten Sinne des Wortes alle Versuchsanlagen im Keller ihres Gebäudes unter Wasser geraten, die Geräte waren nicht mehr zu gebrauchen. Wir haben der TU Dresden zweckorientiert eine Spende von €12 000 überwiesen.

In Prag verloren die Mathematiker ihre Bibliothek, die auch alte Bestände von erheblichem Wert enthielt. Wir haben €5000 bereitgestellt, um neue Bücher anzuschaffen. Die Bibliothek in Wuppertal hat diese Beschaffung dankenswerterweise übernommen, zu Universitätskonditionen. Dafür auch Herrn Kollegen Frommer meinen besten Dank. Er hat dies alles in die Wege geleitet.

Ich danke Ihnen für Ihre Aufmerksamkeit.
Friedrich Pfeiffer

Beschlussprotokoll zur GAMM Hauptversammlung 2003

Im Rahmen der GAMM-Jahrestagung 2003 fand in Abano Terme-Padua, am Mittwoch, den 24. März 2003 in der Zeit von 10.30 – 11.45 Uhr die Hauptversammlung der Gesellschaft für Angewandte Mathematik und Mechanik e.V. im Konferenzzentrum Teatro Congressi Pietro d' Abano statt.

Zu Beginn der Veranstaltung waren 111 Mitglieder anwesend.

Den Vorsitz der Hauptversammlung führte der Präsident, Herr F. Pfeiffer, das Protokoll führte der Sekretär, Herr V. Ulbricht.

Alle Mitglieder wurden satzungsgemäß unter Angabe der folgenden Tagungsordnung im Februar 2003 schriftlich eingeladen.

- 1. Bericht des Präsidenten**
- 2. Bericht des Schatzmeisters**
- 3. Bericht der Kassenprüfer**
- 4. Entlastung des Vorstandes**
- 5. Neuwahlen**

R. Kreißig, Chemnitz, 1. Amtsperiode, wiederwählbar
 U. Langer, Linz, 2. Amtsperiode, nicht wiederwählbar
 K. Popp, Hannover, 2. Amtsperiode, nicht wiederwählbar
 H.G. Roos, Dresden, 1. Amtsperiode, wiederwählbar

- 6. Mitgliedsbeiträge**
- 7. Fachausschüsse**
- 8. Verschiedenes**

Die vorgeschlagene Tagungsordnung wird einstimmig angenommen.

1. Bericht des Präsidenten

Der Präsident informiert über:

- das Ableben von Mitgliedern der Gesellschaft;
- die Mitgliederbewegung im Berichtszeitraum;
- die Vorbereitung der Vorstandsratswahlen;
- die Vorbereitung der GAMM-Tagungen;
- die Finanzabrechnung der Jahrestagungen und Organisationshilfen;
- die Fachkollegien DFG;
- die Mitteilungen der GAMM;
- die Zuschüsse zu den Workshops;
- die ZAMM-Angelegenheiten;
- die ICIAM-Tagungen (2003 in Sydney, 2007 in Zürich);
- die Spenden für die Beseitigung der Hochwasserschäden in Dresden und Prag.

2. Bericht des Schatzmeisters

Der Schatzmeister, Herr A. Frommer, stellt den Kassenbericht für den Zeitraum vom 01.01.2002 bis 31.12.2002 vor.

3. Bericht der Kassenprüfer

Herr P.C. Müller verliest den Bericht der Kassenprüfer für das Jahr 2002.

Die Überprüfung der Einnahmen und Ausgaben erfolgte stichprobenartig auf der Grundlage des Kassenberichtes des Schatzmeisters. Alle vorgelegten Unterlagen waren vollständig und es ergaben sich keine sachlichen Beanstandungen. Es wurde eine Empfehlung ausgesprochen.

Die Kassenprüfer beantragen die Entlastung des Schatzmeisters.

Der Schatzmeister wird einstimmig bei zwei Stimmenthaltungen entlastet.

4. Entlastung des Vorstandes

Auf Antrag von Herrn D. Besdo, Hannover, wird der Vorstandsrat einstimmig bei 5 Enthaltungen entlastet.

5. Neuwahlen

Der Vizepräsident und Vorsitzende der Wahlkommission, Herr G. Alefeld, leitet das Wahlverfahren. Er stellt die auf der Grundlage der Wahlordnung beschlossene Kandidatenliste vor und erläutert den Ablauf der Wahl.

Die geheime Abstimmung führt auf folgende Ergebnisse:

Erweiterter Vorstandsrat (Mathematik)

Hans-Görg Roos, Dresden	101 Stimmen
Carsten Carstensen, Wien	99 Stimmen

Erweiterter Vorstandsrat (Mechanik)

Reiner Kreißig, Chemnitz	104 Stimmen
Heinz Ulbrich, München	104 Stimmen

Damit sind die Herren Roos, Carstensen, Kreißig und Ulbrich gewählt. Ihre Amtszeit beginnt am 1. Januar 2004 und endet am 31. Dezember 2006.

Die für das Amt der Kassenprüfer vorgeschlagenen Frau Professor Dr. M. Heilmann und Herr Professor Dr.-Ing. P.C. Müller, beide Wuppertal, werden einstimmig von der Mitgliederversammlung für die Zeit vom 1. Januar 2003 bis 31. Dezember 2003 wiedergewählt.

6. Mitgliedsbeiträge

Die Mitgliedsbeiträge des Jahres 2002 werden auch im laufenden Jahr 2003 beibehalten.

7. Fachausschüsse

Ergänzungen oder Anfragen zu den im Rundbrief veröffentlichten Beiträgen liegen nicht vor.

8. Verschiedenes

Ein Vertreter der Technischen Universität Dresden sowie eine Vertreterin der Karls-Universität Prag bedanken sich für die Spenden zur Behebung der Hochwasserschäden an ihren Einrichtungen.

In der Aussprache werden

- die Ausstellung einer jährlichen Beitragsrechnung (Herr Ziegler),
- der Stand der Beitragsrückstände (Herr Pfeiffer),
- die Veröffentlichung der Proceedings (Herr Wauer),
- die Programmgestaltung der Jahrestagung (Frau Nastase)

angesprochen.

München, 09.06.2003
Friedrich Pfeiffer
Präsident

Dresden, 06.06.2003
Volker Ulbricht
Sekretär

Rede des Tagungsleiters zur Abschlussitzung

Mr. President, thank you very for you kind appreciation.

In the name of the organizing committee I wish to thank the plenary speakers, the mini symposia and the session organizing for their extremely helpful contribution to this conference.

But as our President all I have to thank the many authors and delegates without whom we would not have had a conference at all.

Thank you for your presentation and the discussions which contributed to make, what I think, interesting, lively and successful conference.

And then my thanks go to all the young people who in the session rooms and at the front desk contributed to a smooth running with we all appreciated.

And very sincere thanks again go to Professor Zavarise, Mr. Sanavia and Mr. Sbalchiero who watched like "Schutzengel" over all the activities.

For those who leave, I wish a good trip back and for those who stay for a few extra days a nice weekend.

But please, remember that there are still a few sessions running this afternoon – for this reason we did ask for some clouds so that the swimming pools would not be too tempting.

Thank you
Bernhard A. Schrefler

Bericht der Tagungsleiter über die Jahrestagung der GAMM 2003

Beginnen wir mit dem Wetter, das für die Jahreszeit wohl kaum besser sein konnte, auch spürte man schon deutlich die ersten Frühlingsanzeichen. Die diesjährige Tagung wurde wiederum außerhalb Deutschlands abgehalten, und zwar im Kongresszentrum des Thermalkurortes Abano. Die Thermalkuren in Abano werden vielfach von deutschen Kunden besucht und so war es auch von diesem Gesichtspunkt aus ein günstiger Ort. Es mag dies wohl das erste Mal sein, dass die GAMM-Tagung nicht direkt in einer Universitätsstadt abgehalten wurde. Abano liegt aber ganz nahe bei Padua, das als eine der ältesten Universitätsstädte gilt, mit einer deshalb sehr traditionsreichen und eher großen Universität.

An die 700 Wissenschaftler aus mehr als 30 Ländern folgten der Einladung der GAMM, davon fast 20% aus den Ländern Ost- und Südosteuropas.

Der Beginn mit der Registrierung am Sonntag war begleitet von einem Eröffnungs-Cocktail, das nebst Getränken auch etwas zum Essen zu bieten hatte. Der erste Tagungstag begann dann mit der Eröffnungssitzung, an der wir beide Verantwortlichen der örtlichen Tagungsleitung die Teilnehmer begrüßten. Der Rektor der Universität Padua konnte wegen der gleichzeitigen offiziellen Eröffnung des akademischen Jahres leider nicht persönlich gegenwärtig sein. Für die AIMETA, die italienische Vereinigung für Theoretische und Angewandte Mechanik, überbrachte Prof. Ing. Umberto Perego die Wünsche für eine erfolgreiche Tagung. Die offizielle Eröffnung nahm sodann der Präsident der GAMM, Prof. Dr.-Ing. Friedrich Pfeiffer vor. In seinem Bericht betonte er die Wichtigkeit der Ideale die zur Gründung der ersten Universitäten in Europa geführt haben und zwar Freiheit und Unabhängigkeit. Beide werden heute durch langsame und schleichende Prozesse gefährdet. Dabei handelt es sich auf der einen Seite um übertriebene Konsumbereitschaft und Materialismus, auf der anderen Seite um immer einschränkendere Normen, die Forschung und Unterricht betreffen. Dazu gehören im Besonderen Bewertung, Einstufung und Förderungsarten der Forschung, welche die Forschungsfreiheit beeinflussen. Es ist nötig, zu den alten Idealen der Universität zurückzukehren, die auch heute noch äußerst modern wirken.

Jedes Jahr wird im Rahmen der Eröffnungsveranstaltung der GAMM-Jahrestagung traditionsgemäß der Richard von Mises-Preis an eine/einen oder mehrere jüngere Wissenschaftlerinnen/Wissenschaftler verliehen, die bzw. der sich durch herausragende Forschungsleistungen im Bereich der Angewandten Mathematik und Mechanik ausgezeichnet hat bzw. haben. In Abano wurde ein Preis verliehen und zwar an Frau Dr. Niethammer. Die Laudatio wurde von Herrn Professor Dr. Stefan Müller gehalten.

Den Auftakt des wissenschaftlichen Programms bildete die traditionelle Ludwig-Prandtl-Gedächtnisvorlesung, die von Prof. Wolfgang Merzkirch der Universität Essen gehalten wurde. Die lange wissenschaftliche Erfahrung von Prof. Merzkirch erlaubte es ihm ein aktuelles Thema, nämlich strömungsmechanische Probleme bei der Durchflussmessung, auf einer klaren und interessanten Weise vorzutragen. Nebst der Ludwig-Prandtl-Gedächtnisvorlesung gab es, wie es ebenso Tradition geworden ist, einen öffentlichen Abendvortrag, dessen Thema die Bedeutung der Arbeitsgebiete der GAMM über die Grenzen der engeren Fachgebiete hinaus unterstreichen soll. Welches bessere Thema konnte man wählen als „Wird Venedig überleben?“ ? Der hervorragend besuchte Vortrag wurde am Dienstag vom Prof. Andrea Rinaldo von der Universität Padua gehalten, ein gebürtiger Venezianer und Direktor der hydraulischen Forschungsanstalt „Giovanni Poleni“ in Padua.

Den Kern des wissenschaftlichen Programms bildeten auch in diesem Jahr die Hauptvorträge, Minisymposien und Sektionen. Bei den interessanten Hauptvorträgen haben sich die

Vortragenden in lobenswerter Weise bemüht, einen allgemein zugänglichen Überblick zu geben über aktive und aktuelle Forschungsfelder der Angewandten Mathematik und Mechanik. Ebenso wie in Augsburg fanden alle zwölf Minisymposien am Nachmittag des Montags statt und somit ohne Überschneidung mit den Sektionen. Dieses System hat sich auch diesmal gut bewährt, nämlich den Minisymposien zu der ihnen gebührenden Aufmerksamkeit zu verhelfen. Dabei könnten allerdings Minisymposia mit nicht allzu traditionsgemäßen Themen etwas in Nachteil geraten, da am ersten Tag nicht alle Teilnehmer das Programm schon eingehend durchgesehen hatten.

Am Mittwoch fand ein Ausflug statt, der die Teilnehmer in die umliegende Hügellandschaft von vulkanischem Ursprung brachte. Dabei wurde in Arqua' Petrarca Halt gemacht, einem malerischen Dorf, das durch den berühmten mittelalterlichen Dichter Petrarca weithin bekannt geworden ist. Das Dinner am selben Abend fand in einer zwischen Abano und Padua gelegenen Palladischen Villa, nämlich „Villa Molin“, statt. Das gab den Teilnehmern die Möglichkeit, eine solche Villa auch von innen bestaunen zu können.

Verschiedene Gründe haben es bewirkt, dass die finanzielle Unterstützung leider nicht wie erhofft war. Trotzdem haben einige mehr oder weniger öffentliche Institutionen zur Beruhigung an dieser Front beigetragen. Ihnen allen gilt unser Dank.

Der Erfolg der GAMM-Jahrestagung wäre nicht möglich gewesen ohne den langen und unermüdlichen Einsatz vom Leiter des wissenschaftlichen Sekretariats, Prof. Giorgio Zavarise, der den Hauptteil der Arbeit fast alleine bewältigt hat. In der letzten Zeit wurde er unterstützt durch die Mitarbeit von jüngeren Mitgliedern des Departments für Bau- und Transportwesen, insbesondere Dr. Lorenzo Sanavia. Weitere jüngere Mitglieder von anderen Departments der Universität Padua haben uns während der Tagung in wesentlicher Form geholfen und wir sind ihnen allen sehr dankbar. Wesentliche Beihilfe in kritischen Fällen hat uns die GAMM-Geschäftsstelle geleistet, namentlich Prof. Volker Ulbricht und Martina Gründer. Eine nicht zu unterschätzende Erleichterung bei der Organisation der GAMM-Tagung war durch die Übergabe aller logistischen Aspekte an die Firma „Meet and Work“ von Abano gegeben, die unter der erfahrenen Leitung von Herrn Mario Sbalchiero einen hervorragenden Dienst geleistet hat.

Schließlich geht unser Dank an den GAMM-Vorstand, insbesondere an dessen Präsidenten Prof. Dr.-Ing. F. Pfeiffer und Vize-Präsidenten Prof. Dr. Götz Alefeld, für ihr Vertrauen an uns bei der Übergabe der Organisation der diesjährigen Tagung, an die Hauptvortragenden für ihre sorgfältig vorbereiteten Vorträge, an die Leiter der Minisymposia für die beträchtliche Arbeit bei der Zusammenstellung der Symposia, an die Leiter der Sektionen für ihre wertvolle Beihilfe und schließlich an alle Teilnehmer.

Bernhard A. Schrefler
Universität Padua

Wolfgang J. Runggaldier
Universität Padua

Bericht des Vorsitzenden des DEKOMECH

an die deutsche Sektion der GAMM

anlässlich der GAMM-Jahrestagung,
am 26. März 2003 in Abano Terme-Padua, Italien

Der auf der GAMM-Jahrestagung 2002 in Augsburg neu gewählte Vorstand hat am 01.01.2003 seine Arbeit aufgenommen. Der neue Vorstand setzt sich aus den Mitgliedern R. Kienzler (Bremen), E. Kreuzer (Hamburg-Harburg), *stellvertr. Vorsitzender*, G. Kuhn (Erlangen), *Vorsitzender*, A. Leder (Rostock) und P. Steinmann (Kaiserslautern), *Sekretär*, zusammen. Die Amtszeit des neu gewählten Vorstandes läuft bis 31.12.2005.

DEKOMECH:

Das Deutsche Komitee für Mechanik (DEKOMECH) wurde 1987 ins Leben gerufen und versteht sich gemäß § 8 Absatz 5 der Satzung der Gesellschaft für Angewandte Mathematik und Mechanik (GAMM) als organisatorische Untereinheit der deutschen Sektion der GAMM. Das DEKOMECH vertritt gemäß § 1 der Verfahrensordnung die Interessen der auf dem Gebiet der Mechanik tätigen Wissenschaftler der Bundesrepublik Deutschland in allen organisatorischen und wissenschaftlichen Angelegenheiten. Die Aufgaben des Vorstandes sind im § 3 der Verfahrensordnung geregelt.

IUTAM:

Das derzeitige IUTAM Bureau (2000–2004) setzt sich aus Prof. H.K. Moffatt, *President*, Prof. W. Schiehlen, *Vice-President*, Prof. D.H. van Campen, *Secretary General*, Prof. B. Freund, *Treasurer* sowie den weiteren Mitgliedern Prof. Cerignani, Prof. J. Engelbrecht, Prof. R. Narasimha und Prof. J. Salençon zusammen.

Auf der letzten Sitzung des General Assemble im August 2002 in Cambridge wurde Prof. E. Kreuzer als deutscher Vertreter in das Congress Committee gewählt. Ferner hat es Änderungen bei den deutschen Vertretern im General Assemble gegeben. Als Nachfolger von Prof. E. Krause wurde Prof. W. Schröder und anstelle von Prof. G. Kuhn wurde Prof. C. Miehe benannt. Damit sind von deutscher Seite derzeit die Kollegen Prof. U. Gabbert, Prof. C. Miehe, Prof. W. Schröder und Prof. S. Wagner im General Assemble vertreten. Ferner ist Prof. W. Ehlers Mitglied im *Symposia Panel (Solids)*.

Vom 02.-06. September 2002 fand in Göttingen das IUTAM Symposium *Transsonicum IV* statt. Chairman war Prof. H. Sobiechky.

In den Jahren 2004/2005 werden von deutscher Seite folgende Symposien durchgeführt:

1. IUTAM Symposium on *One Hundred Years of Boundary Layer Reserch*, Tagungsort: Göttingen, Chairman: Prof. G.E.A. Meier.
2. IUTAM Symposium on *Multiscale Problems in Multibody Systems*, Tagungsort: Stuttgart, Chairman: Prof. P. Eberhard.
3. IUTAM Symposium on *Vibration Control of Nonlinear Mechanisms and Structures*, Tagungsort: München, Chairman: Prof. H. Ulbrich.

Der 21. ICTAM (*International Congress of Theoretical and Applied Mechanics*) wird vom 15.- 21. August 2004 in Warschau stattfinden.

Weitere Informationen über IUTAM-Angelegenheiten finden sich auf der Homepage der IUTAM: <http://www.iutam.net>. Dort finden sich auch Informationen über laufende bzw. geplante IUTAM Symposien.

CISM:

Im *Scientific Council* des CISM sind derzeit von deutscher Seite die Kollegen Prof. H. Grundmann (München), Prof. G.E.A. Meier (Göttingen), zugleich CISM-Beauftragter für das DEKOMECH, und Prof. F. Pfeiffer (München) tätig. Die Teilnahme jüngerer Wissenschaftler an CISM-Kursen wird in der Regel von der Deutschen Forschungsgemeinschaft finanziell unterstützt. Ansprechpartner bei der DFG ist Herr Dr.-Ing. J. Hoefeld. Im Berichtszeitraum fanden drei Kurse mit deutschen Kollegen als Koordinatoren und zwei weitere Kurse mit deutschen Kollegen als Vortragende statt.

EUROMECH:

Von deutscher Seite sind Council-Members die Kollegen Prof. H.H. Fernholz (Berlin) als *Vice Präsident* und Prof. E. Kreuzer (Hamburg-Harburg) in seiner Eigenschaft als *Vorsitzender* des *Nonlinear Oscillations Conference Committee* sowie Prof. W. Schiehlen (Stuttgart) als *IUTAM-ObsERVER*. Die GAMM ist im *Advisory Board* durch seinen Präsidenten, Prof. F. Pfeiffer (München), vertreten. Die deutschen Kollegen werden gebeten, Vorschläge für die Durchführung von *EUROMECH-Kolloquien* an den Vizepräsidenten, Prof. H.H. Fernholz (Berlin) oder den Generalsekretär, Herrn Dr. M. Okrouhlik (Prag), zu richten.

Im Berichtszeitraum fanden vier EUROMECH-Kolloquien mit deutschen Koordinatoren statt. Die *5th EUROMECH Fluid Mechanics Conference* findet vom 24.-28. August 2003 in Toulouse, France, die *5th EUROMECH Solid Mechanics Conference* vom 17.-22. August 2003 in Thessaloniky, Greece, und die *7th European Mechanics of Material Conference (EMMC7)* vom 18.-23. Mai 2003 in Frejus, France, statt.

Weitere Informationen über EUROMECH-Angelegenheiten finden sich auf der Homepage des EUROMECH: <http://www.euromech.cz>. Dort finden sich auch Informationen über laufende bzw. geplante *EUROMECH-Konferenzen* und *-Kolloquien*.

ECCOMAS:

Im Managing Board sind von deutscher Seite die Kollegen Prof. O. Mahrenholtz (Hamburg-Harburg) in seiner Eigenschaft als *Past President* und Prof. E. Ramm (Stuttgart) vertreten. Herr Kollege Prof. E. Stein (Hannover) ist in seiner Eigenschaft als Vorsitzender des Fachausschusses für Computational Solid and Structural Mechanics (ECCSM) sowie als *Representative* von IACM co-optiertes Mitglied. Deutsche Mitglieder in der General Assembly sind kraft Amt Prof. F. Pfeiffer (GAMM-Präsident, München), pers. Vertreter Prof. G. Alefeld (GAMM-Vizepräsident, Karlsruhe) sowie die Kollegen Prof. E. Krause (Aachen), pers. Vertreter Prof. S. Wagner (Stuttgart) und Prof. E. Stein (Hannover), pers. Vertreter Prof. W. Wendland (Stuttgart) seitens der GAMM und Prof. E. Ramm (Stuttgart) seitens GACM.

Der „*5th European Congress on Computational Methods in Applied Sciences and Engineering*“ findet im Jahr 2004 in Jyväskylä, Finnland, statt. ECCOMAS vertritt u.a. auch die Interessen von IACM und ihrer 11 europäischen Tochtervereinigungen in Europa.

Weitere Informationen über ECCOMAS-Angelegenheiten finden sich auf der Homepage von ECCOMAS: <http://www.cimne.upc.es/eccomas/>.

IACM:

Von deutscher Seite ist Herr Kollege Prof. E. Ramm *corresponding Member* und die Kollegen Prof. E. Stein (Hannover) und Prof. W. Wunderlich (München) sind *honorary Members* des *Executive Council*. Mitglieder des General Council sind die Kollegen Prof. B. Kröplin (Stuttgart), Prof. E. Ramm (Stuttgart), Prof. E. Stein (Hannover) und Prof. W. Wunderlich (München).

Der „*IACM-5th World Congress on Computational Mechanics*“ (WCCM-5) fand vom 7.-12. Juli 2002 in Wien statt. Chairmen waren Prof. A. Mang und Prof. F.G. Rammerstorfer.

Der "IACM-6th World Congress on Computational Mechanics" (WCCM-6) findet vom 6.-11. September 2004 in Beijing, China, statt.

Weitere Informationen über IACM-Angelegenheiten finden sich auf der Homepage von IACM: <http://www.cimne.upc.es/iacm/>.

GACM:

Die German Association for Computational Mechanics ist Mitglied von IACM und ECCOMAS und ideell mit dem DEKOMECH verknüpft. Das Executive Council setzt sich aus den Kollegen Prof. G. Kuhn (Erlangen), Dr. G. Müller (München), Prof. E. Ramm (Stuttgart), *President*, Prof. M. Schäfer (Darmstadt), Dr. W.A. Wall (Stuttgart), *Secretary General*, Prof. W. Wagner (Karlsruhe), *Treasurer*, und Prof. P. Wriggers (Hannover), *Vice President*; zusammen.

Weitere Informationen finden sich auf der Homepage: <http://www.GACM.de>.

DFG:

Prof. W. Ehlers (Stuttgart) wurde als Nachfolger von Herrn Kollegen Prof. F. Pfeiffer in den Senat der DFG gewählt.

Die Mitgliederversammlung der DFG hat ein neues Konzept für die Begutachtung der Förderanträge verabschiedet. Der Einfluss der gewählten Fachgutachter soll gestärkt werden. Die gewählten Fachgutachter sind zukünftig Mitglieder von Fachkollegien. Folgende fünf Fachkollegien sind künftig für die Begutachtung von Anträgen aus dem Bereich der Mechanik und Strömungsmechanik zuständig:

Fachkolleg:

- 40 Wärmeenergietechnik,
Thermische Maschinen und Antriebe
- 42 Mechanik und Konstr. Maschinenbau
- 45 Bauwesen und Architektur
- 46 Systemtechnik

Fach:

- 40.3 Strömungsmechanik
- 42.2 Mechanik
- 42.3 Leichtbau, Textiltechnik
- 45.5 Kontinuumsmechanik, Statik, Dynamik
- 46.1 Automatisierungstechnik, Robotik

Das DEKOMECH war über die Deutsche Sektion der GAMM aufgefordert, für die im Jahr 2003 anstehende Wahl für diese Fachkollegs geeignete Wahlvorschläge vorzulegen. Dankenswerterweise haben sich insgesamt 28 Kolleginnen und Kollegen zur Kandidatur bereit erklärt. Damit ist sichergestellt, dass in jedem Fachkolleg, für welches das DEKOMECH vorschlagsberechtigt ist, mindestens doppelt so viele Kandidatinnen und Kandidaten zur Wahl stehen, als wählbar sind. Bei der Wahl sollte auf eine ausgewogene Vertretung der einzelnen Fachgebiete geachtet werden.

Prof. Dr. Günther Kuhn
Vorsitzender des DEKOMECH

ICIAM Congress 2003

Sydney

Final Report

Highlights and features

Invisible behind the scenes was a huge amount of work by many people. Satchel packing kept a team of volunteers busy for about two days. Each satchel had an envelope with tickets and registration details, Book of Abstract, Program Book, programs for special days, and literature from sponsors. The Registration Desk, set up on the morning of Sunday, 6 July, was a hive of activity in which most things went smoothly. This was a tribute to the ICMS Australasia staff.

As noted earlier, the Congress was held in two locations:

1. Sydney Convention and Exhibition Centre, which was the site for all invited lectures, the Special Days, the Exhibition and many minisymposia; and
2. the Haymarket campus of the University of Technology, Sydney, which was the site for most contributed lectures, three embedded meetings (ANZ Convention, CTAC, EMAC).

The two sites were about 750 metres apart, which would have been a worryingly large distance if the weather were unkind as it was the week before the Congress. Fortunately, the weather during ICIAM 2003 was fine and dry.

The Opening Ceremony on Monday was a carefully scripted affair, which involved rehearsals on Sunday afternoon and Monday morning. The Congress was opened by Her Excellency, Professor Marie Bashir AC, Governor of New South Wales, with a wise and warm speech. Highlights of the ceremony were singing and didgeridoo playing, and a smoke ceremony performed by Uncle Max Eulo.

Four ICIAM Prizes were awarded during the ceremony.

The beating heart of the Congress was the Exhibition in the Bayside Banquet Hall at the Sydney Convention and Exhibition Centre. This was also the location for lunch and morning/afternoon refreshments. The exhibition had an excellent mood to it: busy, interesting, and definitely the place to meet delegates from all corners of the world.

The Closing Ceremony on Friday afternoon was brief. Apart from the acknowledgements to sponsors and the organising team, three distinguished mathematicians (Hilary Ockendon, Masayasu Mimura, Gil Strang) presented their views on future development of the discipline.

Registrations

The categories of registration are given in below Table. Our view is that the Bali bombing, SARS and international tensions did not help us in attracting delegates. Sydney is a long way for international delegates to travel, and the International Council does not yet have in place any scheme for financial support. But we basically met the number of delegates envisaged in our marketing plan for three big countries (USA, UK and Germany) and we had exceptionally strong support from Australia, particularly for our embedded meetings and from the Defence Science and Technology Organisation (DSTO).

Provisional registrations by categories (data at 11 July 2003). The number of students was approximately 15% of the total of full plus student delegates:

Category	Number	Cumulative Total
Full delegates	1407	1407
Student delegates	247	1654
Other (including Industry and Education Days)	76	1730
Accompanying persons	72	1802
No shows	ca. 40	ca. 1842
Cancellations	ca. 75	ca. 1917

Invited speakers

We originally invited 27 speakers under the ICIAM banner, but one of these withdrew shortly before the Congress. The 26 who spoke at the Congress, mostly in three parallel sessions, were:

Yoshikazu Giga, Japan: Singular Diffusivity - Facets, Shocks and More.

Nancy Kopell, USA: Rhythms of the Nervous System - Biophysics and Dynamical Structure.

Tom Leighton, USA: The Challenges of Delivering Content and Applications on the Internet.

Ernie Tuck, Australia: Computation and Minimisation of Ship Waves.

Jennifer Tour Chayes, USA: Phase Transitions in Combinatorial Optimization.

David Donoho, USA: Geometric Multiscale Analysis and its Applications.

Marsha Berger, USA: Putting Together the Pieces: Grid Generation and Flow Solvers for Complex Geometries.

Alexander Mielke, Germany: A New Approach to Elastoplasticity using Energy and Dissipation Functionals.

Jonathan Keating, UK: Random Matrices and the Riemann Zeta Function.

Peter Markowich, Austria: Highly Oscillatory PDEs.

Henk van der Vorst, Netherlands: Iterative Solution Methods: Tools, Aims, Craftsmanship.

Yann Brenier, France: Optimal Transportation Theory via Geometric Partial Differential Equations.

Harald Niederreiter, Singapore: High-Dimensional Numerical Integration.

Mark Davis, UK: Valuation, Hedging and Investment in Incomplete Financial Markets.

Peter Deuhlhard, Germany: New Math for New Drugs against New Diseases.

Michael Ortiz, USA: Variational Problems in Mechanics and the Link between Microstructure and Macroscopic Behavior.

Alice Guionnet, France: Aging in Particle Systems.

Rupert Klein, Germany: An Applied Mathematical View of Meteorological Modelling.

Brian Anderson, Australia: Pulling the Information out of the Clutter.

Vladimir Zakharov, Russia: Analytical Study, Numerical Simulation, and Modelling of Wave Turbulence.

James Demmel, USA: Accurate and Efficient Algorithms for Floating Point Computation.

George Papanicolaou, USA: Imaging, Communications and Time-Reversal.

Ying Lung-an, China: Interface Problems and their Applications.

Franco Brezzi, Italy: Stability Revisited.

Philippe Toint, Belgium: How Mature is Nonlinear Optimization?

Tom Hou, USA: Multiscale Modelling and Computation of Incompressible Flow.

Other presentations

In all, ICIAM 2003 and its embedded meetings featured approximately 1700 presentations. These were

- invited speakers (see above);
- minisymposia: 256 in total, most with four speakers;
- contributed talks: more than 600, clumped in groups of four;
- posters: 46.

In all, 43 parallel sessions ran through most of the week of the Congress. These were held at both the Sydney Convention and Exhibition Centre (SCEC) and the Haymarket Campus of the University of Technology, Sydney.

Noel Barton
Director ICIAM 2003

ICIAM Lagrange Prize 2003

The ICIAM Lagrange Prize for 2003 is awarded to **Professor Enrico Magenes, Università di Pavia**, for his contributions to the development of Applied Mathematics at the worldwide level.

In a remarkable series of papers, followed and made complete in a three-volume book in cooperation with J.L. Lions (Nonhomogeneous Boundary Value Problems and Applications), he set the foundations for the modern treatment of partial differential equations, and in particular the ones mostly used in applications. This includes the systematic treatment of variational formulations, as well as the paradigmatic results-transposition-interpolation, and allows a fully detailed use of the properties of trace spaces. The book has been the reference book for more than thirty years, for the completeness of the results reported there, but even more for the strategy of approach to problems. After that, the scientific activity of Magenes moved even further in the direction of application. In the early seventies he founded the Institute of Numerical Analysis in Pavia, which he directed for more than twenty years, keeping it in close contact with the top level scientific institutions all over the world, and making it the source of a number of highly successful scientists and of several pioneering results.

Apart from his continuous inspirational influence, he contributed personally to the development of a totally new technique for treating free boundary problems by means of variational inequalities, with remarkable applications to several important problems such as the flow of fluids through porous media or the phase-change phenomena. But even if his own results have been of paramount importance, his major merit is surely in the impulse he gave, and the influence he had in starting, encouraging and sustaining a way of doing mathematics that joined the rigour, the elegance and the deepness of so-called pure mathematics with the real-life problems that have to be faced in applications. If the combination of pure mathematics and applications is what Applied Mathematics is nowadays, Magenes is surely among the ones that deserve most credit.

Professor Franco Brezzi accepted the prize on behalf of Enrico Magenes.

ICIAM Collatz Prize 2003

The ICIAM Collatz Prize for 2003 is awarded to **Professor Weinan E, Princeton University**, as a scientist under 42 years of age having already an outstanding scientific reputation in the field of industrial and applied mathematics.

Weinan E was born in 1963 in China where he also finished his bachelor and master degrees. He received his PhD from the University of California at Los Angeles in 1989 (under Björn Engquist). He was a long-term member of the Institute of Advanced Studies in Princeton from 1992 to 1994 and became a professor at the Courant Institute at New York University in 1994. In 1999, he moved to Princeton University where he holds a professorship in the Department of Mathematics and in the Program in Applied and Computational Mathematics. In 1996 he received the US Presidential Early Career Award for Scientists and Engineers, and in 1999 he was awarded the Feng Kang Prize for Scientific Computing.

The scientific work of Weinan E covers many areas of applied mathematics ranging from fluid dynamics to condensed matter physics, including incompressible flows, turbulence, statistical physics, superconductivity, liquid crystals and polymers, epitaxial growth, and micromagnetics. His early contributions were in the field of homogenization of fully nonlinear wave equations, and multiscale problems has remained one of his major fields until today. In his subsequent work on liquid crystals he provided a geometrically nonlinear continuum model, which allowed for a first explanation of the formation of filaments in the smectic-isotropic transition. In micromagnetics he devised, partially together with Garcia, Wang and Gimbutas, new numerical algorithms for finding solutions to the Landau-Lifshitz- Gilbert equation. Thus, for the first time fast-switching processes and the hysteresis effect in ferromagnetic materials can be simulated reliably and efficiently.

More recently, Weinan E developed new techniques for studying the occurrence of rare events in systems with complicated energy landscapes. Introducing stochastic perturbations, he was able to calculate transition rates between stable configurations. Using these ideas he was able to explain movements of phase boundaries in shape-memory alloys and switching phenomena in thin magnetic films.

Weinan E is a scientist of exceptional vision and scope. His work is a sophisticated combination of modeling, mathematical analysis, and numerics, and it is always devoted to providing new insights into real-world processes.

ICIAM Pioneer Prize 2003

The ICIAM Pioneer Prize for 2003 is awarded to **Professor Stanley Osher, University of California, Los Angeles**, in recognition of his outstanding contributions to applied mathematics and computational science-particularly his work on shock-capturing schemes, PDE-based image processing, and the level-set method.

Professor Osher's work on shock-capturing schemes for conservation laws has been extremely influential in computational fluid dynamics (CFD). In the late 1970s and early 1980s he developed, with various collaborators, monotone and total-variation-decreasing (TVD) schemes which quickly became very popular. Later, with collaborators, he introduced essentially-non-oscillatory (ENO) schemes, which have found widespread use in compressible CFD. Further developments include WENO schemes, and shock-capturing methods for solving Hamilton-Jacobi equations. Osher's work with L. Rudin on total-variation- based image restoration was among the first applications of PDE methods to image processing. This work has been very influential, stimulating mathematical research on PDE-based image analysis, and

leading to the development of related methods for various inverse problems. It has also had commercial success through the activities of Cognitech, a company founded by Osher and Rudin.

His work on level-set methods represents a fresh, very powerful approach to the numerical solution of evolutionary free-boundary problems. In the late 80's, with J. Sethian, Osher addressed the propagation of codimension-one fronts with curvature-dependent speed. Since then, with various collaborators, he has addressed a wide variety of related problems, developing techniques for handling nonlocal velocity laws, triple junctions, and higher-codimension sets. He has, moreover, demonstrated the value of these techniques by applying them to problems from materials science, geometry, and fluid dynamics.

This Pioneer Prize recognizes Professor Osher for his many deep and novel mathematical contributions, which have had remarkable impact on computational science.

ICIAM Maxwell Prize 2003

The ICIAM Maxwell Prize for 2003 is awarded to **Professor Martin D. Kruskal, Rutgers University**, for discovering the particle-like behaviour of solitary waves, which he named 'solitons'; for introducing the inverse scattering transform method of solving the initial-value problem for the KVD equation; and for many other contributions to applied mathematics.

Martin David Kruskal was born in New York in 1925. He did his first degree at the University of Chicago and obtained his PhD from New York University in 1952. He then moved to Princeton, first to Physics and later to Mathematics. Since 1989 he has held the David Hilbert Chair of Mathematics at Rutgers University.

Martin Kruskal is most famous for the invention of the inverse scattering transform method. The key discovery was the particle-like behaviour of solitary wave solutions of the Korteweg de Vries equation; Kruskal named these waves 'solitons' and showed how they could be used to solve initial value problems for a whole class of nonlinear partial differential equations. This work has led to a host of further developments by Kruskal and others and has transformed the theory of nonlinear partial differential equations. Kruskal has also done seminal work in plasma physics and astrophysics; in particular he has shown that the singularity of the Schwarzschild solution of Einstein's equations of general relativity is not an actual singularity of the geometry but is an apparent singularity due to the coordinate system. More recently he has returned to pure mathematics and the study of surreal numbers.

Kruskal's work has already been recognized; he is a member of the National Academy of Sciences, foreign member of the Royal Society of London and the Russian Academy of Natural Sciences and has been awarded a number of prizes including the President's National Medal of Science in 1993. It is very appropriate that the international applied mathematics community should now acknowledge Martin Kruskal's achievements by the award of the James Clerk Maxwell Prize.

Professor Nalini Joshi accepted the prize on behalf of Martin Kruskal.

Wissenschaftliche Veranstaltungen

IUTAM

International Union of Theoretical and Applied Mechanics

August 15 - 21, 2004

ICTAM 2004 International Congress of Theoretical and Applied Mechanics

Warsaw, Poland

General Information

The 21st International Congress of Theoretical and Applied Mechanics was invited by the:

- Polish National Committee of IUTAM,
- Institute of Fundamental Technological Research of the Polish Academy of Sciences,
- Warsaw University of Technology.

President of ICTAM 2004 and Chairman of the Local Organizing Committee is Prof. Witold Gutkowski.

Co-Chairmen are Prof. Michal Kleiber and Prof. Wlodzimierz Kurnik.

Secretary-General is Prof. Tomasz A. Kowalewski.

Scientific Program

The scientific program will start and end with the opening and closing lectures. The rest of the program will consist of sectional lectures, mini-symposia and contributed papers presented in lecture and seminar presentation sessions. Invitations to present contributed papers will be made on the recommendation of the International Papers Committee, based on their review of submitted abstracts and extended summaries.

Mini-Symposia and Chairs

- Smart materials and structures
N. Sottos (USA) Chair, J. Holnicki-Szulc (Poland) Co-Chair
- Tissue, cellular and molecular biomechanics
P. Janmey (USA) Chair, D. Barthes-Biesel (France), A. Hoger (USA) CoChairs
- Mechanics of thin films and nanostructures
K.S. Kim (USA) Chair, Z. Suo (USA), H.M. Jensen (Denmark) Co-Chairs
- Microfluidics
P. Tabeling (France) Chair, R.J. Adrian (USA), J. Santiago (USA) Co-Chairs
- Microgravity flow phenomena
J.C. Legros (Belgium) Chair, P. Neitzel (USA), J.I.D. Alexander (USA) Co-Chairs
- Atmosphere and ocean dynamics
J. Sommeria (France) Chair, M.E. McIntyre (U.K.) Co-Chair

Pre-Nominated Sessions

Fluid Mechanics, Biological fluid dynamics, Boundary layers, Combustion and flames, Complex and smart fluids, Compressible flow, Computational fluid dynamics (jointly with IACM), Convective phenomena, Drops and bubbles, Environmental fluid dynamics, Experimental methods in fluid mechanics, Flow control, Flow in porous media, Flow instability and transition, Flow in thin films, Fluid mechanics of materials

processing, Fluid mechanics of suspensions, Granular flows, Low-Reynolds-number flow, Magnetohydrodynamics, Multiphase flows, Solidification and crystal growth, Stirring and mixing, Topological fluid mechanics, Turbulence, Vortex dynamics, Waves.

Solid Mechanics

Computational solid mechanics (jointly with IACM), Contact and friction mechanics (jointly with IAVSD), Control of structures, Damage mechanics, Dynamic plasticity of structures, Elasticity, Experimental methods in solid mechanics, Fatigue, Fracture and crack mechanics (jointly with ICF), Functionally graded materials, Impact and wave propagation, Material instabilities, Mechanics of composites, Mechanics of phase transformations (jointly with IACM), Mechanics of porous materials, Mechatronics, Multibody dynamics, Plasticity and viscoplasticity, Plates and shells (jointly with IACM), Rock mechanics and geomechanics, Solid mechanics in manufacturing, Stability of structures, Stochastic micromechanics, Structural optimization (jointly with ISSMO), Structural vibrations, Vehicle dynamics, Viscoelasticity and creep.

Topics involving both fluid mechanics and solid mechanics

Acoustics, Chaos in fluid and solid mechanics, Continuum mechanics, Fluid-structure interaction, Mechanics of foams and cellular materials, Multiscale phenomena in mechanics.

Deadline

Abstract and Extended Summary: January 9, 2004.

Contributors will be informed of the decision of the International Papers Committee, and on the assignment of their paper to a session, by May 1, 2004. The author of a paper invited for presentation is expected to register and present the paper at the Congress.

Correspondence related to the Congress should be sent to:

ICTAM04 Secretary-General,
Prof. Tomasz A. Kowalewski,
Institute of Fundamental Technological Research,
Swietokrzyska 21, 00-049 Warszawa, Poland.

Phone: (+48 22) 826 9803
Fax: (+48 22) 826 9815
E-Mail: ictam04@ippt.gov.pl
Web: <http://ictam04.ippt.gov.pl>

IUTAM Symposia 2003

October 06 - 09, 2003

IUTAM Symposium on Mechanics and Rheology of Aqueous Foam
Boston, USA

Organization: IUTAM - International Union of Theoretical and Applied Mechanics
Symposium Chairman: Prof. R.G. Holt
IUTAM Representative on Scientific Committee: Prof. L. van Wijngaarden

IUTAM Symposia 2004

June 27 - July 02, 2004

IUTAM Symposium on Mechanics of Biological Tissue
Graz, Austria

Organization: IUTAM - International Union of Theoretical and Applied Mechanics
Symposium Chairman: Dr. G.A. Holzapfel
Symposium Co-Chairman: Prof. R.W. Ogden
IUTAM Representative on Scientific Committee: Prof. J. Engelbrecht

August 09 - 11, 2004

IUTAM Symposium on Non-Uniqueness of Solutions to the Navier-Stokes Equations and their Connection with Laminar-Turbulent Transition
Manchester, UK

Organization: IUTAM - International Union of Theoretical and Applied Mechanics
Symposium Chairman: Prof. T. Mullin
IUTAM Representative on Scientific Committee: Prof. W. Schiehlen

August 12 - 14, 2004

IUTAM Symposium on One Hundred Years of Boundary Layer Research
Göttingen, Germany

Organization: IUTAM - International Union of Theoretical and Applied Mechanics
Symposium Chairman: Prof. G.E.A. Meier
IUTAM Representative on Scientific Committee: Prof. H.K. Moffatt

September 01 - 03, 2004

IUTAM Symposium on Mechanics and Reliability of Actuating Materials
Beijing, China

Organization: IUTAM - International Union of Theoretical and Applied Mechanics
Symposium Chairman: Prof. W. Yang
IUTAM Representative on Scientific Committee: Prof. J. Salençon

October 26 - 28, 2004

IUTAM Symposium on Elementary Vortices and Coherent Structures: Significance in Turbulence Dynamics
Kyoto, Japan

Organization: IUTAM - International Union of Theoretical and Applied Mechanics
Symposium Chairman: Prof. S. Kida
IUTAM Representative on Scientific Committee: Prof. H.K. Moffatt

December 13 - 17, 2004

IUTAM Symposium on Laminar-Turbulent Transition

Bangalore, India

Organization: IUTAM - International Union of Theoretical and Applied Mechanics

Symposium Chairman: Dr. R. Govindarajan

IUTAM Representative on Scientific Committee: Prof. R. Narasimha

2004, *no exact dates available yet*

IUTAM Symposium on Recent Advances in Disperse Multiphase Flow Simulation

Urbana-Champaign, Illinois, USA

Organization: IUTAM - International Union of Theoretical and Applied Mechanics

Symposium Chairman: Prof. S. Balachandar

Symposium Co-Chairman: Prof. A. Prosperetti

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

2004, *no exact dates available yet*

IUTAM Symposium on Elastohydrodynamics of Rough Surfaces

Cardiff, UK

Organization: IUTAM - International Union of Theoretical and Applied Mechanics

Symposium Chairman: Prof. R.W. Snidle

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

2004, *no exact dates available yet*

IUTAM Symposium on Size Effects on Material and Structural Behavior at Micron- and Nanometer-Scales

Hong Kong, China

Organization: IUTAM - International Union of Theoretical and Applied Mechanics

Symposium Chairman: Prof. P. Tong

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

IUTAM Symposia 2005

2005, *no exact dates available ye*

IUTAM Symposium on Flow Control with Mems

London, UK

Organization: IUTAM - International Union of Theoretical and Applied Mechanics

Symposium Chairman: Dr. J.F. Morrison

IUTAM Representative on Scientific Committee: Prof. C. Cercignani

2005, *no exact dates available yet*

IUTAM Symposium on Mechanical Behavior and Micro-mechanics of Nanostructured Materials

Beijing, China

Organization: IUTAM - International Union of Theoretical and Applied Mechanics

Symposium Chairman: Prof. Y. Bai

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

2005, *no exact dates available yet*

IUTAM Symposium on Multiscale Problems in Multibody System Contacts

Stuttgart, Germany

Organization: IUTAM - International Union of Theoretical and Applied Mechanics

Symposium Chairman: Prof. P. Eberhard

IUTAM Representative on Scientific Committee: Prof. W. Schiehlen

2005, *no exact dates available yet*

IUTAM-IACM Symposium on Impact Biomechanics - From Fundamental Insights to Applications

Dublin, Ireland

Organization: IUTAM - International Union of Theoretical and Applied Mechanics and IACM - International Association for Computational Mechanics

Symposium Chairman: Dr. M. Gilchrist

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

2005, *no exact dates available yet*

IUTAM Symposium on Vibration Control of Nonlinear Mechanisms and Structures

München, Germany

Organization: IUTAM - International Union of Theoretical and Applied Mechanics

Symposium Chairman: Prof. H. Ulbrich

IUTAM Representative on Scientific Committee: Prof. W. Schiehlen

2005, *no exact dates available yet*

IUTAM Symposium on Topological Design Optimization of Structures, Machines and Materials - Status and Perspectives

Aalborg and Lyngby, Denmark

Organization: IUTAM - International Union of Theoretical and Applied Mechanics

Symposium Chairman: Prof. M.P Bendsøe

Symposium Co-Chairman: Prof. O. Sigmund, Prof. N. Olhoff

IUTAM Representative on Scientific Committee: Prof. N. Olhoff

The Future of Mathematics



New Format
A4

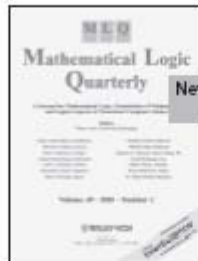
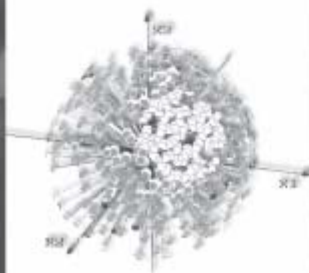
Mathematische Nachrichten

2003. Volumes 248-262
15 issues per year
ISSN 0025-584X print
ISSN 1522-2616 electronic

Mathematische Nachrichten publishes original papers on new results and methods that hold prospect for substantial progress in mathematics and its applications. All branches of analysis, algebra, number theory, geometry and topology, and theoretical aspects of stochastics are given special emphasis.

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- Current Contents/Physical, Chemical and Earth Sciences
- Mathematical Review
- Zentralblatt für Mathematik
- Math Database at STN International



New Format
A4

Mathematical Logic Quarterly

A Journal for Mathematical Logic, Foundations of Mathematics and Logical Aspects of Theoretical Computer Science

2003. Volume 49
6 issues per year
ISSN 0942-5616 print
ISSN 1521-3870 electronic

Mathematical Logic Quarterly (MLQ) is the continuation of the Journal "Zeitschrift für Mathematische Logik und Grundlagen der Mathematik", founded in 1954 by Günter Asser and Karl Schröter.

MLQ is an international journal for the publication of original research papers on mathematical logic, foundations of mathematics and related areas such as General Logic, Model Theory, Recursion Theory, Set Theory, Proof Theory and Constructive Mathematics, Algebraic Logic, Nonstandard Models, and Logical Aspects of Theoretical Computer Science.

MLQ is abstracted/indexed in:

- Mathematical Reviews
- Science Citation Index
- CompuMath Citation Index
- INSPEC
- Zentralblatt für Mathematik



Biometrical Journal

Journal of Mathematical Methods in Bioscience

Edited in co-operation with the German and the Austro-Swiss Region of the International Biometric Society

2003. Volume 45
8 issues per year
ISSN 0323-3847 print
ISSN 1521-4036 electronic

Biometrical Journal is an international journal for mathematical and statistical methods used in biological sciences in the widest sense: in biology, medicine, psychology, agriculture, forestry, ecology and others.

Biometrical Journal promotes new contributions to the mathematical and statistical theory as well as interesting and original applications of known theoretical methods in the field of biosciences.

The scope of **Biometrical Journal** includes the development of mathematical theory, the formulation and solution of biometrical problems, model building in biological systems and the consideration of computational aspects.

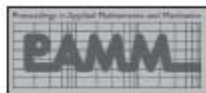


ZAMM

Journal of Applied Mathematics and Mechanics

2003, Volume 83
12 issues per year
(plus access to Vol. 2 of PAMM)
ISSN 0044-2267 print
ISSN 1521-4001 electronic

The mathematical journal founded by Richard von Mises in 1921. ZAMM is one of the oldest journals in the field of applied mathematics and mechanics and is read by scientists all over the world. The aim and scope of ZAMM is the publication of new results and review articles, book reviews and information on applied mathematics (mainly numerical mathematics and various applications of analysis, in particular numerical aspects of differential and integral equations), on the entire field of theoretical and applied mechanics (solid mechanics, fluid mechanics, thermodynamics) and on mathematical physics. ZAMM is also open to essential contributions on mathematics in industrial applications.



PAMM

Proceedings in Applied Mathematics and Mechanics

2003, Volume 2
(electronic only)
ISSN 1617-7061 electronic

PAMM, Proceedings in Applied Mathematics and Mechanics, publishes the proceedings of the annual GAMM conferences.

Part of the institutional subscription of ZAMM, included in membership: Proceedings of the annual GAMM conferences.



GAMM - Mitteilungen

2003, Volume 26
2 issues per year
ISSN 0936-7195 print

The GAMM-Mitteilungen (GAMM-Reports) are the official organ of the Gesellschaft für Angewandte Mathematik und Mechanik e.V. (GAMM). In particular, the reports are devoted to review articles covering the important fields of applied mathematics and mechanics. The journal also publishes original papers of topical interest. Preference is given to articles stressing the interaction of mathematics and mechanics.

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ECCOMAS
European Community on Computational Methods in Applied Sciences

July 24 - 28, 2004

ECCOMAS 2004 Congress

Jyväskylä, Finland

Scientific Programme

The scientific programme of the Congress consists of invited keynote lectures by respected experts, invited symposia, contributed papers, special technological sessions and poster presentations.

Call for Papers Two-page abstracts on topics related to the themes of the congress are invited by 15 November 2003. Authors are kindly requested to submit their abstracts via the Congress Website. The service will be opened at the time of the publication of the Third Announcement. Notification of acceptance will be given by 15 January 2004 at which stage recommendations concerning the format of the papers to be published in CD-ROM proceedings will be sent to the authors. In order to produce the proceedings in time for distribution to delegates upon registration, completed papers must be submitted by 31 March 2004.

Congress Topics

Computational Solid and Structural Mechanics, Computational Fluid Mechanics, Computational Acoustics, Computational Electromagnetics, Computational Chemistry, Computational Mathematics and Numerical Methods, Inverse Problems, Optimization and Control, Computational Methods in Life Sciences, Industrial Applications.

Deadline

Deadline for abstracts 15 November 2003,
Acceptance of presentations by 15 January 2004,
Deadline for complete papers 31 March 2004,
Deadline for early registrations 15 April 2004,
Deadline for post-conference tours 15 May 2004,
Deadline for registrations and hotel bookings 15 June 2004.

Organisers ECCOMAS 2004 will be organised in co-operation with ECCOMAS (The European Community on Computational Methods in Applied Sciences), the University of Jyväskylä, Department of Mathematical Information Technology, the City of Jyväskylä, and Jyväskylä Congresses. The conference is co-sponsored by WG 7.2 TC 7 IFIP (Working Group 7.2 on Numerical Methods in DPS, Technical Committee 7 in Modeling and Optimization within the International Federation for Information Processing).

ECCOMAS 2004 Congress Secretariat

Jyväskylä Congresses

P.O. Box 212

FIN-40101 Jyväskylä, Finland

Fax: +358 14 339 8159

E-Mail: eccomas2004-info@mit.jyu.fi

Web: <http://www.mit.jyu.fi/eccomas2004> or
<http://193.209.12.112/mediakettu/eccomas/>

EUROMECH
European Mechanics Society

EUROMECH Conferences 2004

June 29 - July 2, 2004

10th European EUROMECH Turbulence Conference

Trondheim, Norway

Topics

Instability and transition, intermittency and scaling, vortex dynamics and structure formation, transport and mixing, turbulence in multiphase and non-Newtonian flows, reacting and compressible turbulence, acoustics of turbulent flows, control of turbulent flows, geophysical and astrophysical turbulence, large eddy simulation and related techniques.

Deadline

Notification to authors: January 19th 2004

Submission of full paper: March 15th 2004

E-Mail: admin@etc10.ntnu.no

Web: <http://www.etc10.ntnu.no>

EUROMECH Conferences 2005

August 7 - 12, 2005

ENOC-2005: Fifth EUROMECH Nonlinear Oscillations (Nonlinear Dynamics) Conference

Eindhoven, The Netherlands

Contact: Prof. Dick H. van Campen

Dept. Mechanical Engineering,

Eindhoven University of Technology,

P.O. Box 513, 5600 MB Eindhoven, The Netherlands.

Email: D.H.v.Campen@tue.nl, Fax: +31 40 243 7175

EUROMECH - Colloquia 2004

448.

September 6 - 10, 2004 (postponed from 2003)

Vortices and field interactions

Paris, France

Chairman: Dr. Maurice Rossi

Laboratoire de Modélisation en Mécanique,

Université Pierre et Marie Curie (Paris 6),

CNRS (UMR n07607),

8 rue du Capitaine Scott,
75015 Paris, France.
E-Mail: maur@ccr.jussieu.fr
Co-chairpersons: Dr. Andrew Gilbert
School of Mathematical Sciences,
University of Exeter, Exeter, EX4 4QE, UK.
E-Mail: a.d.gilbert@ex.ac.uk
Dr. A. Maurel, CNRS, Lab. Ondes et Acoustique,
ESPCI, 10 rue Vauquelin,
75005 Paris, France.
E-Mail: anges.maurel@espci.fr
Euromech contact person: Prof. Patrick Huerre

450.

September 2004 (postponed from 2003)**Studies on Splashes, a Century after A.M. Worthington**

Carry le Rouet, France

Chairman: Professor Christophe Clanet
IRPHE, Technopole de Château Gombert,
49 rue Frédéric Joliot-Curie,
13 384 Marseille, France.
E-Mail: clanet@irphe.univ-mrs.fr
Co-chairmen: Prof. David Quéré
Physique de la Matière Condensée, Collège de France,
11 place Marcelin Berthelot,
75231 Paris, France.
Prof. Jean-Marc Chomaz, LADHYX, Ecole Polytechnique,
Laboratoire d'hydrodynamique,
91128 Palaiseau, France.
Euromech contact person: Prof. Patrick Huerre

451.

October 26 - 29, 2003**Sea Wave Bottom Boundary Layer**

Taormina, Sicily, Italy

Chairman: Associate Professor Enrico Foti
Department of Civil and Environmental Engineering,
University of Catania,
V. le A. Doria 6, 95125 Catania, Italy.
E-Mail: efoti@dica.unict.it
Web: www.dica.unict.it/users/efoti/euromech451
Co-chairman: Professor Jorgen Fredsoe
Department of Hydrodynamics and Water Resources,
Technical University of Denmark,
Building 115, DK-2800 Lyngby, Denmark.
E-Mail: fredsoe@isva.dtu.dk
Euromech contact person: Professor Paolo Blondeaux

452.

March 1 - 4, 2004**Advances in Simulation Techniques for Applied Dynamics**

Halle, Germany

Chairman: Prof. M. Arnold

Martin-Luther-University Halle-Wittenberg,

Department of Mathematics and Computer Science,

Institute of Numerical Mathematics,

Theodor-Lieser-Str. 5, D-06120 Halle (Saale), Germany.

E-Mail: arnold@mathematik.uni-halle.de

Co-chairman: Prof. Dr.-Ing. Dr. h.c. W. Schiehlen, Institute B of Mechanics,

University of Stuttgart, Germany

Euromech contact person: Prof. W. Schiehlen

453.

December 1 - 3, 2003**Internal Stresses in Polymer Composite Processing and Service Life**

Ecole des Mines de Saint-Etienne, France

Chairman: Professor Alain Vautrin

Mecanique et Materiaux, Ecole Nationale Supérieure des Mines de Saint-Etienne

158, cours Fauriel, 42023 Saint-Etienne Cedex 2, France.

E-Mail: vautrin@emse.fr

Colloquium website: <http://www.emse.fr/euromech453>

Co-chairman: Professor Luigi Nicolais, Materials and Production Engineering,

University of Naples Federico II, Naples, Italy.

Euromech contact person: Professor Ahmed Benallal

454.

April 12 - 16, 2004**Large Eddy Simulation (LES), Coherent Vortex Simulation (CVS) and Vortex methods for incompressible turbulent flows**

CIRM, Marseille, France

Chairman: Professor Kai Schneider

L3M & CMI, Université de Provence,

(Aix-Marseille I) 39, rue Joliot-Curie,

13453 Marseille Cedex 13, France.

Fax: +33 4 91 11 35 02

Phone: + 33 4 91 11 85 29

E-Mail: kschneid@cmi.univ-mrs.fr

Co-chairpersons: Prof. Marie Farge, LMD-CNRS,

Ecole Normale Supérieure,

75231 Paris Cedex 5, France.

E-Mail: farge@lmd.ens.fr

Prof. Joel Ferziger, Department of Mechanical Engineering,

Stanford University, Stanford, USA.

E-Mail: ferziger@ecoule.stanford.edu

Euromech contact person: Prof. Patrick Huerre

455.

July 2 - 4, 2004**Semi-active Vibration Suppression**

Prague, Czech Republic

Chairman: Professor Michael Valasek

Department of Mechanics, Faculty of Mechanical Engineering,
Czech Technical University, Karlovo nám. 13,
12135 Prague 2, Czech Republic.

E-Mail: valasek@fsik.cvut.cz

Co-chairman: Prof. Andre Preumont

Active Structures Laboratory

Department of Mechanical Engineering and Robotics,
Faculty of Applied Sciences Universite Libre de Bruxelles,
Bruxelles, Belgium.

Euromech contact person: Assoc. Prof. Miloslav Okrouhlík

456.

May 2004**Experimental and Computational Biofluid Mechanics**

RWTH, Aachen, Germany

Chairman: Prof. W. Schröder

Fluid Mechanics and Institute of Aerodynamics,
RWTH Aachen,

Wuellnerstr. zw. 5 u. 7,

D-52062 Aachen, Germany.

Phone: +49-(0)241 80 95410

Fax: +49-(0)241 80 92257

E-Mail: office@aia.rwth-aachen.de

Co-chairmen: Prof. H. Reul

Helmholz Institute for Biomedical Engineering, RWTH Aachen,
Universitätsklinikum of the RWTH Aachen,
Pauwelsstr. 20,

D-52074 Aachen, Germany.

E-Mail: reul@hia.rwth-aachen.de

Euromech contact person: Prof. Patrick Huerre

457.

June 7 - 9, 2004**Non-linear modes of vibrating systems**

Frejus, France

Chairman: Prof. Claude-Henri Lamarque

ENTPE, DGCB-LGM,

3 rue Maurice Audin,

69518 Vaulx-en-Velin, Cedex, France.

Phone: +33-(0)4 72 04 70 75

E-Mail: claude.lamarque@entpe.fr

Co-chairman: Prof. Bruno Cochelin

LMA-CNRS, Marseille, France.
Euromech contact person: Prof. Franz Rammerstorfer

458.

May 2004

Validation and Identification of Non-linear Constitutive Equations in Solid Mechanics

Moscow, Russia

Chairman: Prof. R.A. Vasin
Institute of Mechanics, Lomonosov Moscow State University,
Michurinski Prosp. 1,
117192, Moscow, Russia.
Phone: +7-095 939 5285
Fax: +7-095 939 5285
E-Mail: vasin@imec.msu.ru
Co-chairman: Prof. Georges Cailletaud
Centre de Materiaux, Ecole National Superieure des Mines de Paris,
UMR CNRS 7633, BP87,
91003 Evry Cedex, France.
Co-chairman: Prof. B.E. Melnikov
St. Petersburg State Tech. University,
Polytechnicheskaya Street 29,
195 251 St. Petersburg, Russia.
Phone: +7-812 552 63 03
E-Mail: strength@mtr.hop.stu.neva.ru
Euromech contact person: Prof. Irina Goryacheva

459.

June 7 - 10, 2004

Modelling and Evaluation of Woven and Knitted Materials

Nancy, France

Chairman: Prof. J.F. Ganghoffer
LEMTA-ENSEM,
2 Avenue de la Foret de Haye,
BP 160, 54504 Vandoeuvre les Nancy, Cedex, France.
Phone: +33-(0)3 83 59 57 24
Fax: +33-(0)3 83 59 55 51
E-Mail: jfgangho@ensem.inpl-nancy.fr
Co-chairman: Dr. Bernard Haussy, ESEO, Angers, France
Euromech contact person: Prof. Eric van der Giessen

464.

September 20 - 24, 2004

Fibre-reinforced solids: constitutive laws and instabilities

University of Cantabria, Santander, Spain

Chairman: Prof. R.W. Ogden
Department of Mathematics, University of Glasgow,

G12 8QW, U.K.
Phone: +44 (0)141 330 4550
Fax: + 44-(0)141 330 4111
E-Mail: rwo@maths.gla.ac.uk
Co-chairman: Dr. J. Merodio, University of Cantabria, Santander, Spain

EUROMECH Colloquia 2005

460.

February 21 - 23, 2005

Numerical Modelling of Concrete Cracking

Innsbruck, Austria

Chairman: Professor G. Hofstetter
Institute for Structural Analysis and Strength of Materials,
University of Innsbruck, Technikerstrasse 13,
A-6020 Innsbruck, Austria.
Phone: +43-(0) 512 507 6720
Fax: + 43-(0) 512 507 2908
E-Mail: guenter.hofstetter@uibk.ac.at
Co-chairman: Prof. Günther Meschke
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Universitätsstrasse 150, D-44801 Bochum, Germany.
Telephone: ++49 (0) 234 32 29051 Fax: ++49 (0) 234 32 14149
E-Mail: Guenther.Meschke@ruhr-uni-bochum.de
Euromech contact person: Prof. F. Rammerstorfer

461.

April 2005

Vortex and Magnetohydrodynamics. Structure, Symmetry and Singularity

Italy

Chairman: Prof. R.L. Ricca
Dip. Matematica, Università di Milano, Bicocca,
Via Bicocca degli Arcimboldi 8, 20126 Milano, Italy.
Phone: +39-02 6448 7762
Fax: +39-02 6448 7705
E-Mail: ricca@matapp.unimib.it
Co-chairman: to be nominated
Euromech contact person: Prof. P. Huerre

462.

April 2005

Fluid Mechanical Stirring and Mixing

Chairman: Dr. P.A. Davidson
Dept. of Engineering, University of Cambridge,
Cambridge, UK.

Phone: +44-(0)1223 33xxxx
Fax: +44-(0)1223 332662
E-Mail: pad3@eng.cam.ac.uk
Co-chairman: Dr. A. Pumir, INLN, Nice, France
Co-chairman: Dr. J.C. Vassilikos, Aeronautics, Imperial College, London, UK.
Euromech contact person: Prof. P. Huerre

463.

May 2005

Size-dependent Mechanics of Materials

Groningen, The Netherlands

Chairman: Prof. P.R. Onck
University of Groningen,
Micromechanics of Materials,
Nijenborgh 4, 9747 AG Groningen,
Netherlands.
Phone: +31-(0)50 363 8039
Fax: +31-(0)50 363 4886
E-Mail: p.r.onck@phys.rug.nl
Co-chairman: Prof. Dr. T. Pardoen
Université Catholique de Louvain,
Materials Science and Processes Department,
PCIM, Bâtiment Réaumur,
Place Sainte Barbe 2,
1348 Louvain-la-Neuve,
Belgium.
Euromech contact person: Prof. E. van der Giessen

EMS
European Mathematical Society

June 27 - July 02, 2004

4th European Congress of Mathematics

Stockholm, Sweden

Instructions for Organisers

The Executive Committee of the 4th ECM offers the following advantages to organisers of satellite activities:

- A summary of information about each satellite activity will be freely distributed through the printed and electronic systems of the 4th ECM.
- The reduced registration fee offered to participants of the 4th ECM registered before April 2004 will be extended until the beginning of the 4th ECM for participants of satellite activities.
- Addresses of satellite activity participants may be included in the mailing list of the 4th ECM for distribution of information.

The Executive Committee requires the following information in order to decide if an activity can be considered as a satellite of the 4th ECM:

- Title and a short presentation of the activity (periodicity, objectives, etc.),
- Location and dates,
- Organising Committee and Scientific Committee, if applicable,
- Preliminary list of speakers, if applicable.

The experience from previous EMS conferences and other international events shows that it is also convenient to request the following:

- The dates of satellite activities should be close to the dates of the 4th ECM (from 27th June to 2nd July, 2004).
- People responsible for each satellite activity should provide their participants with information about the 4th ECM. In addition, they should assist them in organising their trip to or from Stockholm. The organisers of the 4th ECM will also assist 4th ECM participants who are registered in some satellite activity in arranging their travel plans.

Deadline

for proposals of satellite activities is February 1, 2004. We regret that activities communicated after this date cannot be acknowledged by the Organising Committee.

Contact Addresses for Organisers

Mikael Passare, passare@matematik.se

Chair of the Organising Committee: Ari Laptev (Stockholm) (laptev@math.kth.se)

Chair of the Scientific Committee: Lennart Carleson (Stockholm)

Web: <http://www.math.kth.se/4ecm>

MFO
Mathematisches Forschungsinstitut Oberwolfach
Meetings at 2004

January 04 - 10, 2004

Combinatorics

Organizers: Laszlo Lovasz, New Haven, Hans Jürgen Prömel, Berlin

January 11 - 17, 2004

Statistics in Finance

Organizers: Claudia Klüppelberg, München, Richard Davis, Fort Collins

January 18 - 24, 2004

Mini-Workshop: Numerik für instationäre nichtlineare Kontrollprobleme

Organizers: Karl Kunisch, Graz; Angela Kunoth, Bonn; Rolf Rannacher, Heidelberg

January 25 - 31, 2004

Oberwolfach-Seminar: The Novikov Conjecture: Geometry and Algebra

Organizers: Matthias Kreck, Heidelberg; Wolfgang Lück, Münster

January 25 - 31, 2004

Wave Motion

Organizers: Adrian Constantin, Lund; Joachim Escher, Hannover

February 01 - 07, 2004

Finite and Infinite Dimensional Complex Geometry and Representation Theory

Organizers: Alan T. Huckleberry, Bochum; Karl-Hermann Neeb, Darmstadt; Joseph A. Wolf, Berkeley

February 08 - 14, 2004

Funktionentheorie

Organizers: Walter Bergweiler, Kiel; Stephan Ruscheweyh, Würzburg; Edward B. Saff, Vanderbilt

February 15 - 21, 2004

Mini-Workshop: Nonlinear Spectral and Eigenvalue Theory with Applications to the p-Laplace Operator

Organizers: Jürgen Appell, Würzburg; Pavel Drabek, Plzen; Raffaele Chiapinelli, Siena

February 15 - 21, 2004

Mini-Workshop: Classification of Surfaces of General Type with Small Invariants

Organizers: Fabrizio Catanese, Bayreuth; Ciro Ciliberto, Roma

February 22 - 28, 2004

Computational Electromagnetism

Organizers: Ralf Hiptmair, Zürich; Ronald H.W. Hoppe, Augsburg; Ulrich Langer, Linz

February 29 - March 06, 2004

Algebraische Gruppen

Organizers: Michel Brion, Grenoble; Jens Carsten Jantzen, Aarhus

March 07 - 13, 2004**Discrepancy Theory and its Applications**

Organizers: Bernard Chazelle, Princeton; William Chen, Sydney; Anand Srivastav, Kiel

March 07 - 13, 2004**Analysis and Design of electoral Systems**

Organizers: Michel L. Balinski, Paris; Steven J. Brams, New York; Friedrich Pukelsheim, Augsburg

March 14 - 20, 2004**Motives and Homotopy Theory of Schemes**

Organizers: Thomas Geisser, Los Angeles; Bruno Kahn, Paris; Fabien Morel, Paris

March 21 - 27, 2004**Self-Adaptive Methods for PDE**

Organizers: Rolf Rannacher, Heidelberg; Endre Süli, Oxford; Rüdiger Verfürth, Bochum

March 28 - April 03, 2004**Arbeitsgemeinschaft mit aktuellem Thema (to be announced in issue 3/2003 of „Mitteilungen der DMV“)**

Organizers: N.N.

April 04 - 10, 2004**Hyperbolic Conservation Laws**

Organizers: Constantine M. Dafermos, Princeton; Dietmar Kröner, Freiburg; Randall J. LeVeque, Seattle

April 11 - 17, 2004**Mathematics in the Supply Chain**

Organizers: Bob Bixby, Rice; David Simchi-Levi, Cambridge; Alexander Martin, Darmstadt; Uwe Zimmermann, Braunschweig

April 18 - 24, 2004**Cohomological Aspects of Hamiltonian Group Actions and Toric Varieties**

Organizers: Victor Guillemin, Cambridge; Volker Puppe, Konstanz; Michele Vergne, Palaiseau

April 25 - May 01, 2004**Multiplier Ideal Sheaves in Algebraic and Complex Geometry**

Organizers: Joseph J. Kohn, Princeton; Georg Schumacher, Marburg; Yum-Tong Siu, Harvard

May 02 - 08, 2004**Mathematics and Physics of Disordered Systems**

Organizers: Michael Baake, Greifswald; Werner Kirsch, Bochum; Hajo Leschke, Erlangen; Leonid Pastur, Paris

May 09 - 15, 2004**Buildings and Curvature**

Organizers: Ernst Heintze, Augsburg; Linus Kramer, Würzburg; Bernhard Mühlherr, Bruxelles; Bertrand Remy, Grenoble

May 16 - 22, 2004

Mini-Workshop: Geometry and Duality in String Theory

Organizers: Xenia de la Ossa, Oxford; Sylvie Jane Ann Paycha, Aubiere; Sheung Tsun Tsou, Oxford

May 23 - 29, 2004

Geomathematik

Organizers: Willi Freeden, Kaiserslautern; Eric W. Grafarend, Stuttgart; Ian H. Sloan, Sydney; Leif Svensson, Gävle

May 30 - June 05, 2004

Oberwolfach Seminars

Organizers: N.N.

June 06 - 12, 2004

Approximation Algorithms for NP-Hard Problems

Organizers: Ravi Kannan, Yale; Marek Karpinski, Bonn; Hans Jürgen Prömel, Berlin

June 13 - 19, 2004

Calculus of Variations

Organizers: Gianni Dal Maso, Trieste; Gero Friesecke, Warwick; Tristan Riviere, Zürich

June 20 - 26, 2004

Phasenübergänge

Organizers: Hans Wilhelm Alt, Bonn; Stephan Luckhaus, Leipzig; Errico Presutti, Roma; Ekhard K.H. Salje, Cambridge

June 27 - July 03, 2004

Classical Algebraic Geometry

Organizers: David Eisenbud, Berkeley; Joe Harris, Cambridge; Frank-Olaf Schreyer, Bayreuth

July 04 - 10, 2004

Combinatorial Commutative Algebra

Organizers: Irena Peeva, Cornell; Volkmar Welker, Marburg

July 04 - 10, 2004

Fast Numerical Methods for Non-local Operators

Organizers: Wolfgang Hackbusch, Leipzig; Stefan Sauter, Zürich; Christoph Schwab, Zürich

July 11 - 17, 2004

Wavelet and Multiscale Methods

Organizers: Albert Cohen, Paris; Wolfgang Dahmen, Aachen; Ronald A. DeVore, Univ. South Carolina; Angela Kunoth, Bonn

July 18 - 24, 2004

Model Theory and Complex Analytic Geometry

Organizers: Andreas Baudisch, Berlin; David Marker, Chicago; Katrin Tent, Würzburg; Frank Wagner, Lyon

July 25 - 31, 2004**Spectral Theory in Banach Spaces and Harmonic Analysis**

Organizers: Alan G.R. McIntosh, Canberra; Nigel Kalton, Columbia; Lutz Weis, Karlsruhe

August 01 - 07, 2004**Arithmetic Algebraic Geometry**

Organizers: Gerd Faltings, Bonn; Günter Harder, Bonn; Nicholas M. Katz, Princeton

August 08 - 14, 2004**String-Theorie und Geometrie**

Organizers: Nigel Hitchin, Oxford; Anton Kapustin, Pasadena; Werner Nahm, Bonn

August 15 - 21, 2004**Mini-Workshops**

Organizers: N.N.

August 22 - 28, 2004**Komplexe Analysis**

Organizers: Jean-Pierre Demailly, Grenoble; Klaus Hulek, Hannover; Thomas Peternell, Bayreuth

August 29 - September 04, 2004**Large Scale Stochastic Dynamics**

Organizers: Claudio Landim, Rio de Janeiro; Stefano Olla, Paris; Herbert Spohn, München

September 05 - 11, 2004**Topologie**

Organizers: Cameron Gordon, Austin; Wolfgang Lück, Münster; Bob Oliver, Paris

September 12 - 18, 2004**Nichtkommutative Geometrie**

Organizers: Alain Connes, College de France, Paris ; Joachim Cuntz, Münster; Marc A. Rieffel, Berkeley

September 19 - 25, 2004**Theory of the Riemann Zeta and Allied Functions**

Organizers: Martin N. Huxley, Cardiff; Matti Jutila, Turku; Yoichi Motohashi, Tokyo; Samuel James Patterson, Göttingen

September 26 - October 02, 2004**Geometrie**

Organizers: Victor Bangert, Freiburg; Yuri Burago, St. Petersburg; Ulrich Pinkall, Berlin

October 03 - 09, 2004**Arbeitsgemeinschaft mit aktuellem Thema (to be announced in issue 1/2004 of "Mitteilungen der DMV")**

Organizers: N.N.

October 10 - 16, 2004**Oberwolfach Seminars**

Organizers: N.N.

October 17 - 23, 2004

Design and Analysis of Infectious Disease Studies

Organizers: Niels Becker, Canberra; Klaus Dietz, Tübingen; Niels Keiding, Kobenhavn

October 24 - 30, 2004

Nonlinear Waves and Dispersive Equations

Organizers: Carlos E. Kenig, Chicago; Herbert Koch, Dortmund; Daniel Tataru, Berkeley

October 31 - November 06, 2004

The History of Differential Equations, 1670 - 1950

Organizers: Thomas Archibald, Wolfville; Craig Fraser, Toronto; Ivor Grattan-Guinness, Middlesex

November 07 - 13, 2004

Oberwolfach Seminars

Organizers: N.N.

November 14 - 20, 2004

New Inference Concepts for Analysing Complex Data

Organizers: Jianqing Fan, Chapel Hill; Klaus-Robert Müller, Berlin; Vladimir Spokoiny, Berlin

November 21 - 27, 2004

Lehrerfortbildung

Organizers: N.N.

November 28 - December 04, 2004

Spectral Analysis of Partial Differential Equations

Organizers: Alexander V. Sobolev, Brighton; Timo Weidl, Stuttgart

December 05 - 11, 2004

Finite Fields: Theory and Applications

Organizers: Joachim von zur Gathen, Paderborn; Igor E. Shparlinski, Sydney; Henning Stichtenoth, Essen

December 12 - 18, 2004

Thermodynamische Materialtheorien

Organizers: Kolumban Hutter, Darmstadt; Ingo Müller, Berlin; Lev Truskinovsky, Minneapolis

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Introduction to Shape Optimization: Theory, Approximation, and Computation

J. Haslinger and R. A. E. Mäkinen
Advances in Design and Control 7

The efficiency and reliability of manufactured products depend on, among other things, geometrical aspects; it is therefore not surprising that optimal shape design problems have attracted the interest of applied mathematicians and engineers. This self-contained, elementary introduction to the mathematical and computational aspects of sizing and shape optimization enables readers to gain a firm understanding of the theoretical and practical aspects so they may confidently enter this field.

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siam Society for Industrial and Applied Mathematics

Weitere Wissenschaftliche Veranstaltungen

Tagungsjahr 2003

September 29 - October 03, 2003

54th International Astronautical Congress

Bremen, Germany

Chairman Local Organising Committee:

Prof. Dr.-Ing. Hans J. Rath,

Institutsleiter des ZARM, Universität Bremen.

54th IAC Secretariat, Exhibition Office:

c/o ZARM-University of Bremen,

Am Fallturm,

D-28359 Bremen.

Tel.: +49 (0)421 218-3462, Fax: +49 (0)421 218-2521

E-Mail: loc.cherman@iac2003.org

Web: <http://www.iac2003.org>

<http://www.iafastro.org>

October 15 -18, 2003

International Meeting on Applied Physics (APHYS-2003)

Badajoz, Spain

Topics

All branches of Applied Physics (applied thermodynamics, applied mechanics, applied magnetism, etc.) are covered in this First International Meeting. Moreover, the Conference will be specifically interested in receiving reports on Interdisciplinary researches relating Physics with other Sciences such as Biology, Chemistry, Information Science, Medicine, etc. In other words, we are specially interested in applying the techniques, the training, and the culture of physics to research areas usually associated with other scientific and engineering disciplines.

Surface and Interface Science, Physical and Biophysical chemistry, Nano-sciences and Technologies, Imaging Techniques, Engineering Physics, Biophysics, Biomedical Engineering, Medical Physics, Health Physics, Environmental Physics, Biomechanics, Computational Physics, Applied Solid State and Materials Science, Non-linear Physics, Instrumentation, Metrology, Certification...

Accoustics, Industrial Physics, Applied Optics, Opto-electronics, Industrial Physics, Physics and Information Sciences and technologies, Quantum Information Sciences, Nuclear Sciences, Radioactivity, Radiochemistry...

Semiconductors devices and Photonics, Applied Aero-Space Physics/Engineering, Biomagnetism.

Conference Secretariat:
José Antonio Mesa González,
INNOVATEX, S.L.,
C / Encarnación, 3 1ºE,
(Semillero de Empresas),
06001 Badajoz,
SPAIN.

Tel./Fax: +34 924 258 615
E-Mail: secretariat@formatex.org
Web: <http://www.formatex.org/aphys2003/aphys2003.htm>

November 05 - 07, 2003

Materials Characterisation 2003

International Conference on Material Characterisation
Santa Fe, New Mexico

Objectives

Most natural and artificial materials possess complex microstructures which, to a large extent, determine their physical properties and behaviour. Recent advances in simulation methods and High Performance Computing have made it possible to perform ab initio calculations to study complex microscale mechanisms. Even more significantly, it is becoming feasible to link microscale mechanisms to the macroscale behaviour of materials.

The objective of this conference is to bring together researchers who use computational methods in all areas of materials characterisation, to discuss their recent results and ideas, in order to foster the multidisciplinary approach that has become necessary for the study of complex phenomena.

Topics

Length scale bridging methods, Statistical characterisation of microstructures, Constitutive behaviour, Optimisation of materials, Interface phenomena, Damage mechanisms, Thermomechanical behaviour, Dynamic behaviour, Composites, Foams, Alloys, Suspensions and emulsions, Electro- and magneto-rheological fluids, Polymers, Ceramics, Concretes, Nanoscale materials, Molecular dynamics, Homogenization theory.

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Tel: +44 (0) 238 029 3223, Fax: + 44 (0) 238 029 2853
Web: <http://www.wessex.ac.uk/conferences/2003/materials03/index.html>

November 10 - 14, 2003

COBEM 2003 International Congress of Mechanical Engineering Adaptive Modeling and Simulation

Sao Paulo, Brazil

On behalf of the organizing committee of COBEM 2003, we kindly ask you to announce, among the members of your Society, the "COBEM 2003 International Congress of Mechanical Engineering", which will be held in Sao Paulo, Brazil, from 10th to 14th of November of 2003.

COBEM2003 is the 17th edition of the major scientific event in the mechanical engineering area, in Latin America. Covering all areas of knowledge related to the Mechanical Sciences, participation averages 850 published papers. It is held every two years since 1971, promoted by The Brazilian Society of Mechanical Engineering and Sciences (ABCM) which maintain a cooperation agreement with GAMM.

During the 2003 edition, participants and attendees will have the opportunity to have contact with to have contact with the state-of-the-art on a broad range of application areas and to be acquainted with on-going research projects carried out in Brazil and abroad. Engineering and Society constitutes the thematic motivation of this edition. A special symposium will be organised to serve as a forum for interdisciplinary discussion.

During the 70s and 80s the COBEM primarily had a national character. However, in the 90s, COBEM begun to attract international participants. Starting from the present edition, COBEM is assuming its international character. We would like, therefore, to announce the conference among a large number of international related societies.

Chairman: Paulo E. Miyagi

The state-of-the-art on a broad range of application areas and to be acquainted with on-going Technical Committee Coordination: Celso P. Pesce and Agenor T. Fleury.

E-Mail: cobem2003@poli.usp.br

Web: <http://www.cobem2003.abcm.org.br>

November 11 - 13, 2003

2nd International Symposium on Ultrafine Grained Structures

Geelong, Australia

The conference will deal with the latest developments in the production of ultrafine grained metals through thermomechanical processing. Of particular interest will be work related to the mechanical performance of these structures, the development of multiphase microstructures and characterisation of the evolution of these structures. While the 1st ISUGS conference had a particular emphasis on steel, this conference will consider a wide range of structural metals. Deakin University is the host for the Symposium and the Institute of Materials Engineering Australasia (IMEA) is the administrative body responsible for all practical arrangements.

Program

The formation and properties of ultrafine and nanostructured materials:

Review of national programs (Japan, Korea, China, Europe), Control of the second phase, Properties of fine grained materials, Severe plastic deformation, Phase transformations and recrystallisation, Nano structure control in steel, Novel processes to produce ultrafine grained structures, Alloy and process design.

E-Mail: isugs-2003@deakin.edu.au

Web: <http://www.mateng.asn.au/isugs/>

November 17 - 18, 2003**Die Integration der numerischen Simulation in den Entwicklungsprozess
Integration of Numerical Simulation into the Development Process**

Wiesbaden, Germany

Ziele

Das Seminar „Integration der numerischen Simulation in den Entwicklungsprozess“ möchte einen möglichst vollständigen Überblick über die Einbindung der virtuellen Produktentwicklung in den Entwicklungsprozess geben. Dazu sollen technologische, organisatorische und datentechnische Aspekte berücksichtigt werden. Schwerpunkte werden die CAD-CAE Integration, die Korrelation von Berechnung und Test, das Simulationsdatenmanagement, der Engineering Workflow und die Verbindungen zu PDM- und ERP-Systemen einnehmen. Beispiele aus der Praxis sollen verdeutlichen helfen, wie die Umsetzung im einzelnen Unternehmen realisiert wurde.

Organisation:

WERBOS GbR,
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Schillerstraße 6,
D-85567 Grafing b. München.

Tel.: +49 (0) 80 92 - 8 35 50, Fax: +49 (0) 80 92 - 8 35 51

E-Mail: nafems@werbos.de

Web: <http://www.NAFEMS.de>

November 30 - December 04, 2003**Chemistry at the Interface - 2003 NZIC Conference**

Nelson, New Zealand

Interface of Chemistry with Biology

Topics to be covered include: Synthesis, Biosynthesis and Natural Products, Biotechnology, Food and Health, Bioactives and Pharmaceuticals, Environmental Chemistry, Molecular Biology, Green Chemistry and Carbohydrates.

Techniques and Technologies of Chemistry at the Interface

Topics to be covered include: Spectroscopy, Separation Science, Proteomics, Biological Activity Screening, Chemical Genetics, Synthesis, Modeling, Electrochemistry, Mass Spectrometry, X-Ray Crystallography, Synthesis, Automation in Synthesis, and Human Interface Technologies.

Interface of Chemistry with the Commercial Sector

Topics to be covered include: Intellectual Property, Setting up a Chemical Company, New Zealand Industry, Role of Government, Venture Capital and Primary Produce Value added Industries.

Interface of Chemistry with Materials and Nanotechnology

Topics to be covered include: Supramolecular Chemistry, Polymer Chemistry, Smart Materials, Catalysis, Synthesis and Bioengineering.

Interface of Chemistry with Materials and Nanotechnology continues

MacDiarmid Industrial Forum: Smart Materials and Smart Materials Technologies.

Web: <http://www.chem.canterbury.ac.nz/nzicconf03.htm>

December 15 - 19, 2003

**SG-Technology Services Corporation - short course
Advanced Topics in Computational Engineering**
Irvine, California

This short course aims to provide researchers, practitioners, scientists, and engineers, from industry, academia, research labs, and government organizations, with a unified treatment of finite volume methods, finite element methods, boundary integral equation methods, the new class of truly meshless local-Petrov-Galerkin methods, and combinations thereof. Special attention is placed on damage tolerance, structural integrity & durability; truly meshless methods & the MLPG method.

Topics

1. Damage Tolerance, Structural Integrity & Durability,
2. Truly Meshless Methods & The MLPG Method,
3. Molecular Dynamics & Computational Nanotechnology,
4. Nonlinear Solid & Fluid Mechanics.

Instructors

Prof. Satya N. Atluri , University of California, Irvine, CA, USA,
Dr. Shan Nageswaran, MSC Software, Santa Ana, CA, USA,
Dr. Guna Krishna, MSC Software, Santa Ana, CA, USA.

E-Mail: sgtech@cox.net

Web: http://members.cox.net/sgtech/short_course.htm

Tagungsjahr 2004

January 05 - 09, 2004

PACAM VIII - Eighth Pan American Congress of Applied Mechanics
University of Havana, Cuba

To promote progress in the broad field of mechanics by (1) exposing mature engineers and scientists, including graduate students, to new research findings, techniques, and problems, and (2) providing opportunities for personal interactions between mechanics of North and South America, as well as other continents, through formal presentations and informal contacts. It is the only conference sponsored by the American Academy of Mechanics.

Latin American Co-Chairman
Prof. Reinaldo Rodriguez-Ramos
Facultad de Matemática y
Computación
Universidad de la Habana
San Lazaro y L, Vedado,
CP 10400La Habana, Cuba
reinaldo@matcom.uh.cu

North American Co-Chairman
Prof. Martin Ostoja-Starzewski
Department of Mechanical Engineering
McGill University
817 Sherbrooke Street West
Montréal, PQ, Canada
martin.ostoja@mcgill.ca

Web: <http://www.pacam8.mcgill.ca/>

January 19 - 30, 2004**International Summer School on Computational Mechanics
Modelling, Mathematical Analysis, Algorithms**

University of Cape Town, South Africa

Motivation

A great many engineering applications involve the use of numerical simulations for purposes of analysis and design, and to establish their quality, durability and safety. The basis of the most frequently employed software packages is the approximation by means of discretization in space and/or time of a system of partial differential equations. The method most frequently used for these purposes is the finite element method. In all cases there exists a discretization error which can be small or large, of minor or dominating significance.

It is the aim of the International Summer School on Computational Mechanics to provide a direct introduction to reliable and efficient computation and error control in numerical simulations. The topics range from elementary functional analysis and the finite element method, in week one, to advanced topics such as adaptive finite element techniques and computational plasticity in week two.

Lecturers

Carsten Carstensen, Vienna University of Technology, Austria,
Francois Ebobisse, University of Cape Town, South Africa,
Jean Lubuma, University of Pretoria, South Africa,
Daya Reddy, University of Cape Town, South Africa,
John Whiteman, Brunel University, United Kingdom.

Web: <http://www.mth.uct.ac.za/SummerSchool2004>

March 14 - 18, 2004**11th Annual International Symposium on Smart Structures and Materials**

San Diego, South California

In diesem Rahmen findet zum fünften Mal die Teilkonferenz „Active Materials: Behavior and Mechanics“ statt.

Arbeiten zu Funktionsmaterialien können auf dieser international führenden Fachtagung einem interessierten Publikum aus Forschung und Industrie vorgestellt werden. Des Weiteren kann man aus vielen Beiträgen anderer Gruppen den aktuellen Stand ihrer Arbeiten erfahren und die einmalige Gelegenheit zu internationalen Kontakten und Diskussionen mit den einschlägigen Wissenschaftlern nutzen.

Dr. Marc Kamlah
Forschungszentrum Karlsruhe GmbH,
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Postfach 3640,
76021 Karlsruhe.

Tel: +49 (0)7247 / 82-5860
E-Mail: marc.kamlah@imf.fzk.de
Web: <http://www.spie.org/info/ss-nde>

March 17 - 19, 2004**Inverse Problems, Design and Optimization**

Rio de Janeiro, Brazil

The conference will emphasize a broad range of deterministic, statistical, mathematical, computational and experimental approaches, which can be applied to the solution of inverse, design and multi-disciplinary optimization problems. The topics listed below give a general guideline for possible contributions.

Topics

Acoustics, Vibrations and structural dynamics, Electromagnetism, Nuclear transport, Geophysics, Multi-objective optimization, Imaging, Design of experiments, Heat and mass transfer, Physical property estimation, Fluid mechanics, Signal and noise processing, Solid mechanics, Benchmark results, Tomography, Novel methodologies, Chemistry and combustion, Inverse scattering, Materials processing, Uncertainty and decision making.

Contributions dealing with practical applications are encouraged, such as in petrochemistry, aeronautics, astronautics, bio-medicine, transport and sensing of pollutants, materials processing, remote sensing, non-destructive evaluation, material property determination, acceleration of optimization procedures, etc.

Important Dates

Abstracts due: August 29, 2003

Notification of abstract evaluation: September 26, 2003

Full papers due for review: November 21, 2003

Notification of paper evaluations: January 09, 2004

Final papers due: February 27, 2004

Chair: Prof. George S. Dulikravich
MAIDO Institute
University of Texas at Arlington
MAE Dept., Box 19018
Arlington, Texas 76019
USA
Tel.: (817) 272-7376
dulikra@mae.uta.edu

Co-Chair: Prof. Helcio R. B. Orlande
PEM/COPPE/UFRJ
Federal University of Rio de Janeiro
CP 68503
Rio de Janeiro, RJ 21945-970
BRAZIL
helcio@serv.com.ufrj.br

E-Mail: ipdo@lmt.coppe.ufrj.brWeb.: <http://www.lmt.coppe.ufrj.br/ipdo>**June 13 - 17, 2004****2004 NUMIFORM****8th International Conference on Numerical Methods and Industrial Forming Processes**

Columbus, Ohio, USA

The 2004 NUMIFORM will focus on recent advancements and future directions in the computational modeling and design of manufacturing processes. In addition, the conference will also emphasize methods of advanced materials modeling and their

design and fabrication. Technical sessions are envisioned to cover a wide range of topics on conventional and emerging methods; process and product design; and modeling methods. More details on these topics are provided in the brochure enclosed.

The organizers are planning two tracks of mini-symposia; (i) honoring individuals who have made substantial contributions to areas within the conference theme and (ii) on specific topics reflecting priorities in the conference theme. In addition, panel discussions addressing future thrusts in industrial and governmental research are planned.

Deadline

Proposals for mini-symposia are being accepted until June 30, 2003.

Abstracts: September 30, 2003.

Hild Peersen
NUMIFORM 2004 Conference Secretary,
Mechanical Engineering,
Ohio State University,
206 West 18th Ave.,
Columbus, OH 43210-1077.

Tel: (614) 247-6605

Web: <http://numiform.osu.edu>

June 14 - 17, 2004**ICRS-7****7th International Conference on Residual Stresses**

Xian, China

The International Conference on Residual Stresses will be the seventh (ICRS-7) in the series after the tremendous success in Germany in 1987, in France in 1989, in Japan in 1991, in USA in 1993, in Sweden in 1997 and in UK in 2000 and will take place in Xian, China on June 14-17, 2004. The purpose of this conference is to bring together professors, researchers, students and engineers worldwide to exchange ideas and information in the evaluation, control and applications of residual stresses.

Topics

Residual stresses and mechanical behaviour, Residual stress in advanced materials, Residual stress in engineering components, Residual stress in composites, Residual stress in nano- and film materials, Residual Stresses in non-metallic materials, Residual stresses in electronic materials, Residual stresses with processings, Measurement techniques of residual stresses and their recent developments, Micro-area and micro-sample residual stress measurement, Residual stress distribution and simulation, Online and onsite residual stress measurements, Removal and control of residual stresses.

Important Dates

Submission of abstracts: Sept. 30, 2003

Acceptance of abstracts and information for authors: Nov. 30, 2003

Submission of final manuscripts: Feb. 28, 2004

Mr. Junma Nan
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Web: <http://www.icrs7.xjtu.edu.cn>

June 21 - 25, 2004

European Conference on Mathematics for Industry

Eindhoven, The Netherlands

The 13th ECMI conference will take place from 21-25 June 2004 in Eindhoven, The Netherlands. The conference will be devoted to mathematical and statistical modelling, analysis and simulation of problems arising in a practical context. In particular the following application areas have been chosen: Aerospace, Electronic industry, Chemical technology, Life sciences, Materials, Geophysics, Financial mathematics, Water flow.

The conference is intended for mathematicians, statisticians, scientists and engineers, both from industry and academia. ECMI conferences have a long-standing tradition of bringing together researchers from various disciplines, who work on often only seemingly different disciplines. The transversality of mathematics makes it a versatile tool in a large variety of applications, in particular when using it in computational modeling.

On each of the main topics there will be invited lectures by distinguished researchers. Besides, the conference will have minisymposia on these topics, both invited and contributed ones. Moreover there will be an opportunity to give a contributed paper and a poster. A topic will typically be concentrated to a period of 1-2 days, to accommodate attendees with less available time. Herewith we invite you to submit proposals on a topic in line with the themes of the conference. Minisymposia: A minisymposium has a slot of 2 hours and will typically consist of 4 speakers. A proposal should consist of a two page abstract, with names and affiliations of potential speakers. The details are left to the organizer/proposer. Contributed papers: A contributed oral paper will have 20 minutes. A proposal should contain a one page abstract and include full address. Posters: There will be a number of poster sessions throughout the week.

There will be refereed conference proceedings, to be published by Springer Verlag.

Invited Plenary Speakers

Among the speakers who have already accepted an invitation are S. Bisgaard (Amherst, MA & Amsterdam), A. Friedman (Columbus, OH), R. Helmig (Stuttgart), J. Hinch (Cambridge), J. Hunt (London), C. Rossow (Braunschweig), F. Ruggeri (Milano), B. Schrefler (Padova), B. Trowbridge (Oxford), M. Waterman (Los Angeles, CA).

Deadlines

Submission of interest: now

Deadline for submission of proposals for minisymposia: January 30, 2004

Deadline for papers and posters: February 25, 2004

Notification of acceptance: March 25, 2004

ECMI 2004 Conference Secretariat
Technische Universiteit Eindhoven,
PO Box 513,
5600 MB Eindhoven,
The Netherlands.

Tel: +31 40 2472753
Fax: +31 40 2442489
E-Mail: ecmi2004@tue.nl
Web: <http://www.ecmi2004.tue.nl>

June 22 - 24, 2004

4th International Conference on Thin-Walled Structures ICTWS 2004 Loughborough, England

This conference is the fourth in the series, with the first three being held in Glasgow in 1996, Singapore in 1998 and Poland in 2001. The aim of the fourth conference is to provide the opportunity for one to follow the advances made in a broad spectrum of topical research areas associated with the unique phenomenological behaviour which can occur in thin-walled structural elements. It is the aim of the conference to bring together the world's experts in the broadest sense at this international gathering to review and discuss current developments and trends and to relate to research progress and the achievements made in our knowledge and understanding in the field of thin-walled structures.

Professor J. Loughlan
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Tel.: +44 (0)1509 227213
Fax: +44 (0)1509 227241
E-Mail: j.loughlan@lboro.ac.uk
Web: <http://www.lboro.ac.uk/departments/tt/ictws2004>

June 30 - July 7, 2004.

Fourth World Congress of Nonlinear Analysts (WCNA-2004) Orlando, Florida, USA

Short Description

The fourth World Congress (WCNA-2004) of Nonlinear Analysts will be held at the Hyatt Regency Orlando (Near Walt Disney World Resort) under the auspices of the International Federation of Nonlinear Analysts (IFNA). The vision of IFNA and WCNA is to promote, encourage, and influence more cooperation, understanding, and collaboration in the world community of nonlinear analysts from various diverse disciplines; to bring together various disciplines that attempt to understand nonlinear phenomena and solve nonlinear problems; and to help minimize the ever-widening gap between the developed and developing countries by providing scientific and technical

research assistance in various forms. It is with this spirit that the International Federation of Nonlinear Analysts was established in 1992 as a transdisciplinary world society. IFNA sponsors the World Congress of Nonlinear Analysts periodically once every four years.

Scientific Program

There will be several invited lectures, organized sessions, minisymposia and workshops (by academic, industrial, and government experts) covering recent trends in nonlinear problems arising in such diverse disciplines as: aerospace sciences, atmospheric sciences, biological sciences, chemical sciences, cosmological sciences, economics, engineering & technological sciences, environmental sciences, geophysical sciences, medical & health sciences, numerical & computational sciences, oceanographic sciences, physical sciences, social sciences, and mathematical sciences. There will be opportunities to present short communications (30 minutes), organize informal seminars, and propose special sessions. More details concerning travel facilities, social events, preregistration, accommodations, submission of abstracts, scientific program, and invited lectures will be provided in the second announcement, which will be posted shortly.

E-Mail: wena2004@yahoo.com

Web: http://www.ams.org/mathcal/info/2004_jun30-jul7_orlando.html
<http://kermani.math.fit.edu/>

July 04 - 11, 2004

ICME-10 International Congress on Mathematical Education

Copenhagen, Denmark

The International Programme Committee (IPC) for ICME-10 would like to extend its warmest greetings to all readers of the First Announcement. The IPC is doing its very best to put together a rich, varied and multi-faceted scientific programme for the Congress, with the aim of attracting and addressing the entire community of researchers and practitioners in mathematics education all over the world. It is our ambition to provide food for thought and inspiration for mathematics practice to the established mathematics educator of world renown and to the novice in the field attending an ICME for the very first time, and to everyone else who takes an interest in mathematics education.

In the programme structure of ICME-10, we have attempted to combine the best of the traditional components which have served to make the past ICMEs the great successes they were, with a number of new components and features which are intended to accommodate new needs and to address the changes that mathematics education as a field of research, development, and practice is currently undergoing.

The main components of the scientific programme are outlined below. A few others are likely to be added at later stages. In this Announcement, no names of speakers or group organisers will be given. As soon as decisions have been made and invitations accepted, names will appear on the ICME-10 web site. Readers are invited to consult this site for updates. Questions and proposals concerning matters pertaining to the programme should be addressed to the Chair of the IPC.

The observant reader will notice that certain themes are dealt with in several different programme formats. This is deliberate, and reflects the expectation that these themes

will appeal to different categories of delegates and therefore call for a variety of different approaches.

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 Martensens Alle 8
 DK-1828 Frederiksberg C
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 Tel.: +45 70 20 03 05
 Fax: +45 70 20 03 15
 icme@congress-consult.com

Chair International Programme Committee
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 P.O. Box 260
 DK-4000 Roskilde
 Denmark
 Tel.: +45 46 74 22 66
 ICME10-IPC@ruc.dk

Web: <http://www.icme-10.dk/>

July 25 - 29, 2004

8th International Symposium on Emerging Technologies for Fluids, Structures, and Fluid-Structure Interactions

2004 ASME / JSME Pressure Vessels and Piping Conference
 San Diego, California, USA

Topics

Fluid Flow and Computational Fluid Dynamics (CFD),
 Materials, Solid and Structural Mechanics,
 Interaction Phenomenon and Coupled Problems,
 Particle - Based Problems and Discrete Element Method (DEM).

Deadline

Abstract: September 30, 2003
 Authors of accepted papers will be notified: October 15, 2003
 Drafts of selected papers are due: November 30, 2003 for review
 Paper peer review comments will be returned: January 31, 2004
 Final papers for publication are due: March 1, 2004

Dr.-Ing. Dipl.-Wirt. Ing. Michael Fischer
 Developer, Chairman

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 80797 München
 Germany

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 E-Mail: dr.michael.fischer@web.de
 Web: <http://pvp.dc.kumamoto-u.ac.jp/pvp2004>

August 12 - 14, 2004

International Symposium on Developments in Plasticity and Fracture

Cracow, Poland - Centenary of M. T. HUBER Criterion

The program of the Symposium will include a number of invited lectures and contributed papers. The language of the conference will be English. One page camera

ready abstracts of papers in English with the title, authors' names and affiliation are due to January 15, 2004 and should be submitted to the Organizing Committee. Notification of acceptance will be sent by April 1, 2004. A book of all accepted abstracts will be distributed to the conference participants. The authors will be encouraged to submit their full-length papers for publication in special Proceedings.

Topics

The aim of the Symposium is to pay tribute to Prof M.T. Huber on the occasion of the 100th anniversary of his criterion. Taking the opportunity of the 21st ICTAM 2004, 15-21 August, in Warsaw the specialists from all the world working in the field of: theoretical and experimental studies on the strength hypotheses (e.g. yield criteria, criteria of brittle fracture, creep-rupture), material strength theories based on a initio analysis of atomic bonds and instability of crystalline lattice, problems of plasticity, viscoplasticity, creep, damage and fracture based or related to the Huber criterion, are invited to take part in the Symposium.

E-Mail: huber2004@agh.edu.pl
Web: <http://huber2004.imir.agh.edu.pl>

August 22 - 28, 2004

Symposium on Trends in Applications of Mathematics to Mechanics (STAMM'2004)

Seeheim near Frankfurt Airport, Germany

The conference is of interest to engineers, mechanics, mathematicians, material scientists and physicists. The venue is taking place in the week following the ICTAM 2004 conference in Warsaw so that participating in both events is particularly convenient.

Prof. K. Hutter, Dr. Y. Wang
STAMM'2004-Conference office,
Institute of Mechanics (AGIII),
Darmstadt University of Technology,
Hochschulstr. 1, D-64289 Darmstadt, Germany.

Fax: +49-6151-164120
E-Mail: stamm04@mechanik.tu-darmstadt.de
Web: <http://wegener.mechanik.tu-darmstadt.de/STAMM04>

September 07 - 09, 2004

The Seventh International Conference on Computational Structures Technology Lisbon, Portugal

Topics

The themes for this conference will include: Structural Analysis and Design, Non-Linear Analysis, Dynamic Analysis, Finite Element Analysis, Boundary Element Analysis, Computer Aided Design, Structural and Multidisciplinary Optimization, Structural Re-analysis & Sensitivity Analysis, Geomaterials, Plates and Shells, Structural Modelling, Micro-Mechanics Models, Damage Identification, Material Models, Reliability Problems, Software Standards and Quality Control, Adaptivity, Mesh and Grid Generation, Shape and Topology Optimization, Visualization and

Graphics, Impact and Contact Simulations, Post and Pre Processing, Smart Structures, Multi and Inter-Disciplinary Optimization, Composite Materials and Structures, Forming Problems, Poromechanics, Fracture and Fatigue, Brittle Materials, Eigensolvers, Education, Coupled Problems, Soil-Structure Interaction, Fluid-Structure Interaction, Simulation, Integration of CST and CFD, Inverse Problems, FEM in Design, Implementation of Computational Procedures, Computer Modelling.

Important Dates

Abstract submission deadline: 14 February 2004

Full paper deadline: 1 May 2004

Last day for author registrations: 8 July 2004

Programme is released: 15 August 2004

Conference Editor:

Prof. Barry H.V. Topping

School of Engineering,

Heriot-Watt University, Riccarton,

Edinburgh, EH14 4AS, UK.

Tel.: 44(0)1786 870 191, Fax: 44(0)1786 870 192

E-Mail: conf2004@civil-comp.com

Web: <http://www.civil-comp.com/conf/cst2004.htm>

Neue Bücher und Zeitschriften

Buchempfehlungen

Finite-Dimensional Variational Inequalities and Complementarity Problems

by **Facchinei, F.**, Università di Roma "La Sapienza", Rome, Italy;
Pang, J.-S., The Johns Hopkins University, Baltimore, MD, USA

Contents: Introduction, Solution Analysis I, Solution Analysis II, The Euclidean Projector and Piecewise Functions, Sensitivity and Stability, Theory of Error Bounds, Bibliography.

Publisher: Springer-Verlag; Volume I 2003 XXXII, 728 p. 18 illus. Hardcover
ISBN: 0-387-95580-1
Price: €109.95
Web: <http://www.springer.de>

Finite-Dimensional Variational Inequalities and Complementarity Problems

by **Facchinei, F.**, Università di Roma "La Sapienza", Rome, Italy;
Pang, J.-S., The Johns Hopkins University, Baltimore, MD, USA

Contents: Local Methods for Nonsmooth Equations, Global Methods for Nonsmooth Equations, Equation-Based Algorithms for CPs, Algorithms for VIs, Interior and Smoothing Methods, Methods for Monotone Problems, Bibliography, Index.

Publisher: Springer-Verlag; Volume II, 2003 XXXII, 704 p. 15 illus. Hardcover
ISBN: 0-387-95581-X
Price: €109.95
Web: <http://www.springer.de>

Essential Mathematical Biology

by **Britton, N. F.**, University of Bath, UK

Contents: Single Species Population Dynamics, Population Dynamics of Interacting Species, Infectious Diseases, Population Genetics and Evolution, Biological Motion, Molecular and Cellular Biology, Pattern Formation, Tumour Modelling, Further Reading, Some Techniques for Difference Equations, Some Techniques for Ordinary Differential Equations, Some Techniques for Partial Differential Equations, Non-negative Matrices, Hints for Exercises.

Publisher: Springer-Verlag; 2003 XV, 335 p. 92 illus. Softcover
ISBN: 1-85233-536-X
Price: €29.95
Web: <http://www.springer.de>

Advanced Mechanics of Solidsby **O.T.Bruhns**, Ruhr-Universität Bochum, Germany

In this textbook, the principles of linear continuum mechanics and linear elastic material behavior are presented. They build the foundation for the later treatment of structures such as beams, bars, plates and shells. Particular attention is paid to the respective thin-walled cases. The text also contains some chapters on the more and more important topic of dynamics of structures. Moreover, it provides the fundamental principles underlying modern Computer methods. The book is structured such that in each chapter the theoretical considerations are accompanied by several illustrative examples demonstrating the application of these results. At the end of each chapter, additional problems are included. The solutions to these given in the last chapter.

Publisher: Springer-Verlag; 2003. XII, 206 p. 81 illus. Hardcover
 ISBN: 3-540-43797-5
 Price: €39.95; sFr 68.so, £ 28
 Web: <http://www.springer.de>

Fields, Flows and Waves

An Introduction to Continuum Models

by **Parker, D. F.**, University of Edinburgh, UK

Contents: Preface, The Continuum Description, Unsteady Heat Flow, Fields and Potentials, Laplace's Equation and Poisson's Equation, Motion of an Elastic String, Fluid Flow, Elastic Deformations, Vibrations and Waves, Electromagnetic Waves and Light, Chemical and Biological Models, Solutions, Bibliography.

Publisher: Springer-Verlag; 2003 XII, 270 p. 90 illus. Softcover
 ISBN: 1-85233-708-7
 Price: €24.95
 Web: <http://www.springer.de>

Numerical Mathematics and Advanced Applicationsby **Brezzi, F.**, Università di Pavia, Italy; **Buffa, A.**, Università di Pavia, Italy;
Corsaro, S., Università di Napoli, Italy; **Murli, A.**, Università di Napoli, Italy (Eds.)

Proceedings of ENUMATH 2001, the 4th European Conference on Numerical Mathematics and Advanced Applications, Ischia, July 2001

Contents: Flow problems, Electromagnetic problems, Elasticity and structures, Numerical problems in finance, Numerical methods for kinetic equations, Singular free boundary problems, Other applications, A posteriori estimates and adaptivity, Discontinuous Galerkin finite element methods, Domain decomposition methods, ODE, IDE, and related problems.- Numerical linear algebra.

Publisher: Springer-Verlag; 2003 XXIV, 996 p. Hardcover
 ISBN: 88-470-0180-3
 Price: €98.95
 Web: <http://www.springer.de>

Nonholonomic Mechanics and Control

by **Bloch, A.M.**, University of Michigan, Ann Arbor, MI, USA

Contents: Preface, About the Authors, A Diagram for the Book, Introduction, Mathematical Preliminaries, Basic Concepts in Geometric Mechanics, Introduction to Aspects of Geometric Control Theory, Nonholonomic Mechanics, Control of Mechanical and Nonholonomic Systems, Optimal Control, Stability of Nonholonomic Systems, Energy-Based Methods for Stabilization, References.

Publisher: Springer-Verlag; 2003 XIX, 483 p. 49 illus. Hardcover
 ISBN: 0-387-95535-6
 Price: €69,95
 Web: <http://www.springer.de>

Dynamics of Mechanical Systems with Coulomb Friction

by **Le xuan Anh**, St. Petersburg, Russia

Contents: Development of the theory of motion for systems with Coulomb friction, Coulomb's law of friction, Main peculiarities of systems with Coulomb friction and the specific problems of the theory of motion, The principle peculiarity, Non-closed system of equations for the dynamics of systems with friction and the problem of deriving these equations, Non-correctness of the equations for systems with friction and the problem of solving Painleve's paradoxes, The problem of determining the forces of friction acting on particles, Retaining the state of rest and transition to motion, The problem of determining the property of self-braking, Appearance of self-excited oscillations, Various interpretations of Painleve's paradoxes, Principles of the general theory of systems with Coulomb friction, Laws of Coulomb friction and the theory of frictional self-excited oscillations.

Publisher: Springer-Verlag; 2003 IV, 269 p. 59 illus. Hardcover
 ISBN: 3-540-00654-0
 Price: €89.95
 Web: <http://www.springer.de>

The Finite Element Analysis of Shells - Fundamentals

by **Chapelle, D.**, INRIA-Rocquencourt, Le Chesnay, France;
Bathe, K. J., MIT, Cambridge, MA, USA

Contents: Introduction, Geometrical Preliminaries, Elements of Functional and Numerical Analysis, Shell Mathematical Models, Asymptotic Behaviors of Shell Models, Displacement-Based Shell Finite Elements, Influence of the Thickness in the Finite Element Approximation, Towards the Formulation of Effective General Shell Elements, On the Nonlinear Analysis of Shells.

Publisher: Springer-Verlag; 2003 XIV, 330 p. 88 illus. Hardcover
 ISBN: 3-540-41339-1
 Price: €69.95
 Web: <http://www.springer.de>

Boundary Element Methods for Engineers and Scientists

by **Gaul, L.**, University of Stuttgart, Germany; **Kögl, M.**, University of Stuttgart, Germany;
Wagner, M., University of Stuttgart, Germany

Contents: Introduction, Mathematical Preliminaries, Continuum Physics, Boundary Element Method for Potential Problems, Boundary Element Method for Elastic Continua, Numerical Integration, DRM for Potential Problems and Elastodynamics, Solution of the Equations of Motion, Dynamic Piezoelectricity, Coupled Thermoelasticity, Variational Principles of Continuum Mechanics, The Hybrid Displacement Method, The Hybrid Stress Method for Acoustics, The Hybrid Boundary Element Method in Time Domain, Properties of Elastic Materials, Fundamental Solutions, Particular Solutions, The Bott-Duffin Inverse.

Publisher: Springer-Verlag; 2003 XVI, 488 p. 145 illus. Hardcover
ISBN: 3-540-00463-7
Price: €79.95
Web: <http://www.springer.de>

Finite Elemente für Ingenieure 1

Grundlagen Matrixmethoden, Elastisches Kontinuum
by **Betten, J.**, RWTH Aachen

Inhalt: Einführung, Matrixmethoden, Matrixsteifigkeitsmethoden, Elastisches Kontinuum, Lösungen der Übungsaufgaben, Literatur und Sachverzeichnis.

Publisher: Springer-Verlag; 2., neu bearb. u. erw. Aufl. 2003 XII, 400 S., 83 Abb., mit CD-ROM. Geb.
ISBN: 3-540-00438-6
Price: €46.68
Web: <http://www.springer.de>

Dental Biomechanics

by **Arturo N. Natali**, University of Padova, Italy

This book represents a first general approach to dental biomechanics. Offers a multi-disciplinary description of dental problems concerning dental devices and materials, biological tissues and clinical activity, with specific reference to biomechanical aspects. Useful not only to bioengineers but also to clinicians.

Publisher: Taylor & Francis; April 2003: 256x174: 360pp: 153 diagrams, 38 photos and 16 tables
ISBN HB: 0-415-30666-3
Price: £ 65.00
Web: <http://www.tandf.co.uk>

Zeitschriftenempfehlung

Biomechanics and Modeling in Mechanobiology

New Journal in 2002

The goal of this journal is to provide a forum for basic and applied research that promotes and integrates the expanding knowledge-bases in the allied fields of biomechanics and mechanobiology. Approaches may be experimental, theoretical, or computational; they may address phenomena at the nano, micro, or macro levels.

Editors-in-Chief

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E-Mail: jhumphrey@tamu.edu

Web: <http://biomed.tamu.edu/Faculty/Humphrey/Default.htm>

Publisher: Springer-Verlag; Vol. 2 (4 issues)

ISSN (print) 1617-7959

ISSN (electronic) 1617-7940

Price: €298 suggested list price, plus postage and handling

Web: <http://www.springer.de>

Title no. 10237

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Call for Nominations of Candidates for ten EMS Prizes

Principal Guidelines

Any European mathematician who has not reached his or her 35th birthday on 30 June, 2004, and who has not previously received the prize, is eligible for an EMS Prize at 4ECM. A total of 10 prizes will be awarded. The maximum age may be increased by up to three years in the case of an individual with a corresponding broken career pattern. Mathematicians are defined to be European if they are of European nationality or their normal place of work is within Europe. Europe is defined to be the union of any country part of which is geographically within Europe or that has a corporate member of the EMS based in that country. Prizes are to be awarded for the best work published before the 31 December, 2003. The Prize Committee shall interpret the word best using its judgement: e.g., it may refer to innate quality or impressiveness, influence, etc.

Nomination for the Award

The Prize Committee, headed by Professor Nina Uraltseva (St. Petersburg), is responsible for solicitation and evaluation of nominations. Nominations may be made by anyone, including members of the Prize Committee or by the candidates themselves. It is the responsibility of the nominator to provide all relevant information to the Prize Committee, including a résumé and documentation. The nomination for the awards should be reported by the Prize Committee to the EMS President at least three months prior to the date of the awards. The nomination for each award must be accompanied by a written justification and a citation of about 100 words that can be read at the award ceremony. The prizes cannot be shared.

Description of the Award, Award Presentation

The award comprises a certificate including the citation and a cash prize of 5000 €

The prizes will be presented at the Fourth European Congress of Mathematics by the President of the European Mathematical Society. The recipients will be invited to present their work at the conference.

Prize Fund

The money for the Prize Fund will be raised by the organizers of the Fourth European Congress of Mathematics in Stockholm.

Deadline for Submission

Nominations for the prize must reach the office in Stockholm at the following address no later than the **1 February, 2004**:

4ECM Organizing Committee,
Prof. Ari Laptev,
Department of Mathematics,
Royal Institute of Technology,
SE-100 44 Stockholm,
Sweden.

Tel.: +46-8-790 84 86 Fax: +46-8-723 17 88
E-Mails: laptev@math.kth.se, uunur@nur.usr.pu.ru
Web: <http://www.math.kth.se/4ecm/>

Call for Nomination of Candidates for the Felix-Klein-Prize

Principal Guidelines

The prize, established in 1999 by the EMS and the endowing organisation, the Institute for Industrial Mathematics in Kaiserslautern, is awarded to a young scientist or a small group of young scientists (normally under the age of 38) for using sophisticated methods to give an outstanding solution, which meets with the complete satisfaction of industry, to a concrete and difficult industrial problem.

Nomination for the Award

There are no restrictions on eligibility other than those specified in the Principal Guidelines. The prize committee is responsible for solicitation and evaluation of nominations. Nominations may be made by anyone, including members of the prize committee or by candidates themselves. It is the responsibility of the nominator to provide all relevant information to the prize committee, including a resume and documentation of the benefit to industry and the mathematical method used.

The nomination for the award must be accompanied by a written justification and a citation of about 100 words that can be read at the award ceremony. The prize is awarded to a single person, or to a small group, and cannot be split.

Description of the Award

The award comprises a certificate containing the citation and a cash prize of 5000 €

Award Presentation

The prize is presented every four years at the European Congress of Mathematics.

A representative of the endowing Institute for Industrial Mathematics in Kaiserslautern or the president of EMS presents the award. The recipient is invited to present his or her work at the conference.

Prize History

The first Felix-Klein-Prize was awarded to David C. Dobson (U.S.A.) in the year 2000 during the 3rd European Congress of Mathematics in Barcelona.

Deadline for Submission

Nominations for the prize to be presented at the 4th European Congress of Mathematics, Stockholm, 27th June - 2nd July, 2004, must reach the following address no later than 1st February 2004:

EMS Secretariat
Ms. Tuulikki Makelainen
Department of Mathematics,
P.O.Box 4 (Yliopjstonka.tu 5),
FI-00014 University of Helsinki, Finland.

Fax: +358-9-19123213)
E-Mail: tuulikki.makelainen@helsinki.fi

Personalia

Ehrungen

Herrn Dr. Dr. h.c. Norbert Herrmann (Universität Hannover, Institut für Angewandte Mathematik) wurde am 17. Juli 2002 von der Brunel-University of West-London in Uxbridge, UK, der Titel Doctor of the University Honoris Causa verliehen.

Herr Prof. Dr.-Ing. Dr. h.c. Friedrich Pfeiffer (Technische Universität München, Lehrstuhl für Angewandte Mechanik) wurde zum Ausländischen Mitglied der Russischen Akademie der Wissenschaften ernannt.

Todesfälle

Wir gedenken:

Herrn Prof. Dr.-Ing. Dipl.-Phys. Johann Theodor Heynatz, zuletzt in Stuttgart

Herrn Prof. em. Dr. Owe Pettersson, zuletzt in Lund, Schweden

Herrn Dr. Uwe Timm Bödewadt, zuletzt in Ottobrunn

Herrn Prof. Dr. Helmut Epheser, zuletzt in Hannover

Herrn Prof. Dr.-Ing. Dr.h.c. mult. Friedrich Rimrott, zuletzt in Toronto, Kanada

Herrn Prof. Dr. Hans Joachim Leutheusser, zuletzt in Toronto, Kanada

Informationen zur GAMM-Mitgliedschaft

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The journal *Surveys on Mathematics for Industry*, Springer Verlag, Wien, at reduced price.
- Die Beiträge der GAMM-Tagungen werden in der elektronischen Zeitschrift PAMM veröffentlicht, frei zugänglich für GAMM-Mitglieder und Abonnenten der ZAMM.
The proceedings of the GAMM-Conferences will be published in the electronic journal PAMM "Proceedings in Applied Mathematics and Mechanics" which will be free of charge for GAMM members and subscribers of ZAMM-Journal for Applied Mathematics and Mechanics.
- Ermäßigter Mitgliedsbeitrag für Gesellschaften, mit denen die GAMM Reziprozitätsabkommen hat.
Reduced membership fees for societies having a mutual agreement with GAMM.

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²⁾ Mitglieder aus den neuen Bundesländern können, falls ihre finanzielle Situation dies erfordert, durch Antrag an den Schatzmeister eine Reduktion auf 20 €DM erhalten.

³⁾ American Institute of Aeronautics and Astronautics, American Mathematical Society, Associação Brasileira de Ciências Mecânicas, Association Française de Mécanique, Association de Mécanique du Vietnam, Australian Mathematical Society, Canadian Applied and Industrial Mathematical Society, Canadian Mathematical Society, Chinese Society of Theoretical and Applied Mechanics, Czech Society for Mechanics, Indian Mathematical Society, Netherland Mathematical Society, Polish Society of Theoretical and Applied Mechanics, Sociedad Española de Matemática Aplicada, Société de Mathématiques Appliqués et Industrielles, South African Association for Theoretical and Applied Mechanics, South African Mathematical Society.

Hinweise zu den Mitgliedsbeiträgen

Die Gesellschaft der GAMM-e.V. dient laut Bescheinigung des Finanzamtes Karlsruhe-Stadt vom 3. Juli 2000 ausschließlich und unmittelbar steuerbegünstigten Zwecken im Sinne von §§51 ff. AO. Die Mitgliedsbeiträge sind nach § 10b Abs. 1 EStG, § 9 Abs. 1 Nr. 2 KStG und § 9 Nr. 5 GewSTG wie Spenden als Zuwendung abziehbar.

Membership und Correspondence

Correspondences discussing financial issues are teaking care of our Treasurer:
Prof. Dr. A. Frommer

Messages concerned with membership issues should be addressed to our Vice-Secretary:
Prof. Dr.-Ing. R. Kienzler

All other correspondences, information, changes of addresses etc. are being processed by our GAMM-Secretary: Prof. Dr.-Ing. V. Ulbricht or the GAMM-Office respectively.

GAMM-Geschäftsstelle

c/o Prof. Dr.-Ing. V. Ulbricht
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Institut für Festkörpermechanik
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Beitragszahlung / Notes to the payment

For payments, use the following accounts:

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Sonderkonto GAMM

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Sonderkonto GAMM

According to § 6(3) each member is committed to the statute to pay unsolicited the annuity to the Treasurer.

The treasurer addresses the urgent request to the members of the GAMM in Germany to follow the direct debit. Please use the following form to make this possible:

Authorization for a direct debit of membership dues (or Payment by Credit Card):

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Prof. Dr. A. Frommer
Fachbereich Mathematik
Bergische Universität -Gesamthochschule
Wuppertal
D-42097 Wuppertal
Germany

ERMÄCHTIGUNG ZUM EINZUG DES MITGLIEDSBEITRAGS

Ich erkläre mich widerruflich damit einverstanden, dass die Gesellschaft für Angewandte Mathematik und Mechanik GAMM e. V. den jeweils gültigen Jahresmitgliedsbeitrag von meinem unten angegebenen Konto abbucht.

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Klaus Höllig

Frontiers in Applied Mathematics 26

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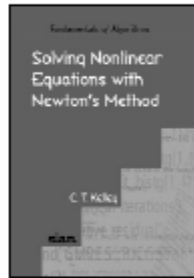
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C. T. Kelley

Fundamentals of Algorithms 1



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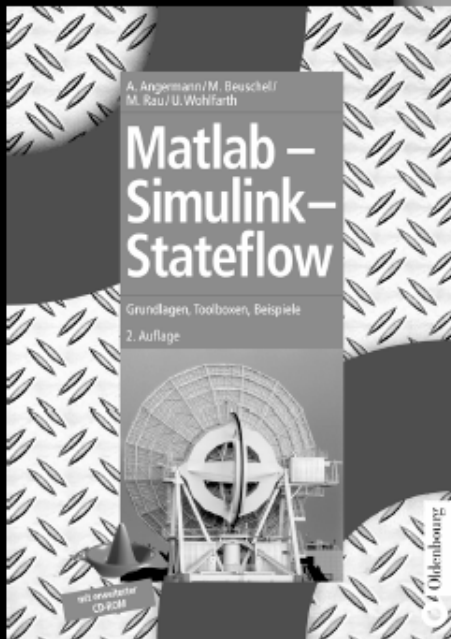
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