# IAMG Newsletter

**No. 61 December 2000**

*Official Newsletter of the International Association for Mathematical Geology*


## Contents



**CALL FOR PROPOSAL TO ORGANIZE IAMG2003 CONFERENCE (2nd Notice)**

The Association is now accepting proposals for organizing the eighth IAMG conference during the summer or fall of 2003.

The deadline to submit proposals is **February 15, 2001**. Individuals interested in organizing IAMG2003 should follow the instructions "Guidelines to Prepare IAMG Conferences" available at the web site <www.iamg.org>. Bids should be sent to the IAMG President.

*The Association does not have a conference in years divisible by four. Instead the Association organizes a symposium on mathematical geology in conjunction with the International Geological Congress. Hence there will not be an IAMG conference in 2004. After IAMG2003, the earliest opportunity to organize an IAMG conference will be in 2005.*

The **Geological Modeling Society of Houston** announces the launch of the GMSH web site http://geoweb.tamu.edu/gmsh/

You will see that it hosts lots of interesting pages. The "Abstracts" page, for example, where all presentations and discussions from previous meetings are posted and can be downloaded. The presentation file from the September meeting will be available shortly. Other pages include announcements on GMSH activities as well as links to other modeling related sites.

### From the Editor

New beginnings — Your editor has just moved to a new location: the Kansas Geological Survey — the cradle of US mathematical geology. This is certainly an enjoyable experience, working with people who have been involved in this field for a long time and hearing stories about the history of this organization. At the same time, settling again in the US has turned out to be an unsettling experience after an absence of 13 years. A lot has changed and there are so many new things to get used to. On the other hand, there are some things that haven't changed. I was amzed to recognize in a newspaper photo actual, old fashioned punch cards — just like on our IAMG logo! — being used in some counties in Florida for voting in the US presidential election. I haven't seen anybody using this medium in at least 10 years. Incidentally, did you know that the state of Kansas where the IAMG logo was designed has the shape of a punch card?

Speaking of elections, you the membership voted, and at the IGC in Rio de Janeiro your chosen IAMG Officers and Council persons were installed into their new offices to help guide the Association during the next four years. Fortunately, the election wasn't as close or controversial as the political ones in various countries (including the US). You can find the names and addresses of the new officers and council on page 2 — I am sure they would welcome any comments, suggestions or feedback. Our new president, Graeme Bonham-Carter, in his first "President's Forum" column (p. 3 ) points out the activities and plans of the new council, in part started by the old council under Ricardo Olea. There are several committees that require ideas and members — perhaps YOU can contribute. The Association can certainly use new, active members to involve themselves in the various activities necessary to advance the goals of IAMG.

As we greet and welcome the new crew, I don't want to miss the opportunity to thank the "old" Council for a job well done. In particular, Ricardo Olea as president has been a dynamic and effective leader who managed the Association efficiently and used the support and cooperation of the Council to implement many good and necessary changes and innovations. I also very much appreciated his unflagging moral and hands-on support for the Newsletter.

*Harald S. Poelchau*

## *International Association for Mathematical Geology*

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# PRESIDENT'S FORUM

This is the first of my contributions to the newsletter as your new President. First, I would like to thank the previous Council for a job well done. For those members not at the General Assembly in Rio, the minutes are now available on our Web page <www.iamg.org>, and will be published in due course in Mathematical Geology. These minutes document some of the excellent work of the 1996-2000 Council. Besides the officers' reports, there are reports from the committee chairs, plus the revised Statutes and By-Laws and our very healthy balance sheet. It should be obvious to all members that the previous Council has left the Association in a very good state. Past-President Ricardo Olea, in particular, was in my opinion one of the most active and industrious IAMG Presidents ever, at least since the early days of the Association. His record of streamlining our procedures, amending out-of-date Statutes and By-Laws, encouraging the development of our Web page (including the online membership database), determining the opinion of members on a variety of issues through a questionnaire, launching initiatives for Student Grant and Distinguished Lecturer programs, amongst many other activities, are testament to his energy. His example will be hard to match.

....the previous Council has left the Association in a very good state. Past-President Ricardo Olea, in particular, was in my opinion one of the most active and industrious IAMG Presidents ever....

Often, the idea of a new regime (in any type of organization) is to start their mandate by bringing out the proverbial broom to sweep clean. Thanks to Ricardo and his Council, IAMG has no obvious cobwebs. That is not to say that there is nothing to do. One of the first tasks is of course to implement the recommendations for the Student Grant and Distinguished Lecturer programs. In both cases, we will need imaginative and hardworking committees to make these initiatives work. We need also to review and renew the committees that are important to various aspects of the Association: notably the Awards, Publications, Education and Membership committees. The activities of Council are nearly all directly or indirectly for the benefit of members. A concern of the previous committee (and maybe it was always that way) was how to bring in new members, particularly students. What can we do that will make the Association the professional organization for all those geoscientists involved with applications of mathematics and computer science to join?

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Successive Councils have in the past wrestled with this question—it's not a new issue, but I think that it's one that we need to address yet again. Besides some of the existing methods that we use to attract new members (booths at meetings, brochures, publications, etc.) perhaps we should make more use of the Internet. Already we have an excellent Web page, thanks in large part to our industrious Webmaster, Eric Grunsky. Many members are already discovering the value of our membership database. I would like to float two more ideas for using the Internet: a Current Literature Survey and an e-mail discussion group. Both of these ideas started out as Computers & Geosciences initiatives, but for various reasons I think that they should be extended to benefit IAMG members at large.

The idea of the Current Literature Survey was first proposed by Peter Henn, the previous Science Editor at Elsevier for Computers & Geosciences. It was run on a trial basis for something less than one year by John Cubitt. It worked like this: each month a search was carried out using Geobase for papers in other journals that satisfied a set of search criteria. This very long list was then pruned, and published in the back of the journal. The list provided a handy source for readers to browse on a regular basis, looking for papers in journals that they might not otherwise see. After some initial bugs, the trial was getting under way, when Elsevier decided to pull the plug on it. My suggestion is that we keep the idea, but publish the list digitally on the Web. And if the site were to be restricted to IAMG members (like the membership database), it could provide an additional incentive for joining the Association.

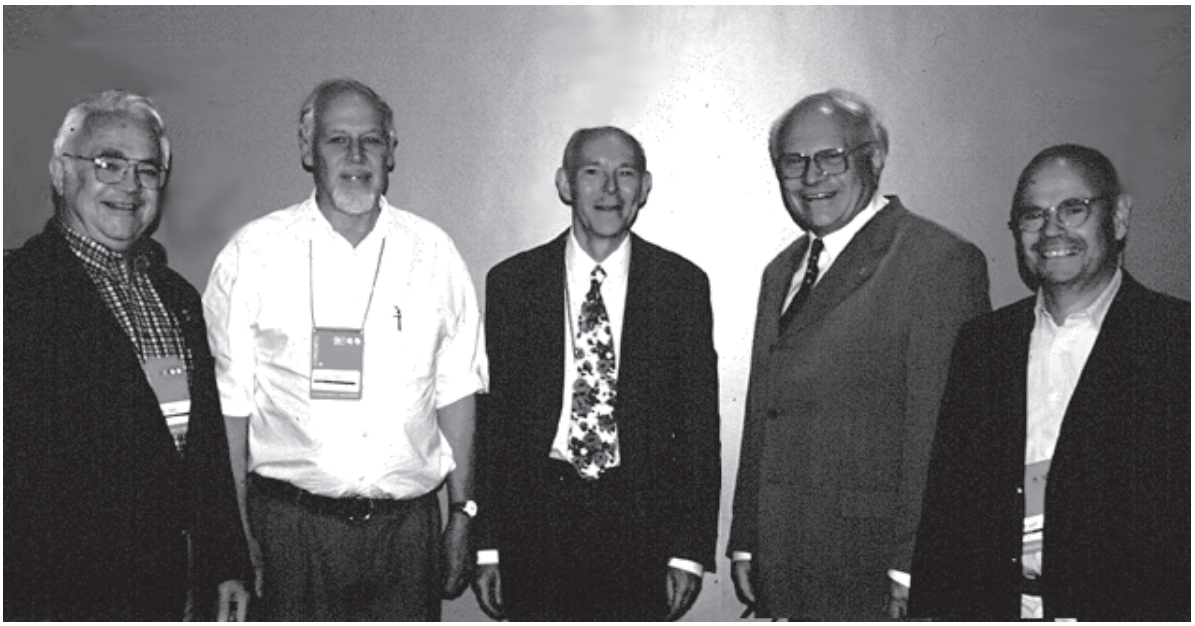
A second idea is to start an IAMG e-mail discussion group. In this case, it might be neither desirable nor practical to restrict access to members only. This proposal has been under active planning for some time at the Editorial Board of Computers & Geosciences, but has not actually been launched to date. E-mail discussion groups have a mixed success—at least the ones I know about. Some seem to work well, others get very little traffic. An IAMG discussion group, if successful, could provide a medium for technical discussions, for seeking answers to questions, for discussing papers published in our journals (a greatly accelerated way of doing the equivalent of writing a Letter to the Editor), for getting advice about software, and for many other topics.

The merits and disadvantages of these ideas will of course be considered thoroughly by Council before taking any action. If you have suggestions or comments about these (or other) ideas that could strengthen the benefits of membership in IAMG, please write to me or to any Council member and let us know.

*Graeme Bonham-Carter*

# IAMG at the International Geological Congress in Rio de Janeiro

*Members of the old and new Executive and Council: left to right - Margaret Armstrong, Frits Agterberg, Maria-Theresia Schafmeister, Dan Tetzlaff, Mike Hohn, Ricardo Olea, Hernani Chaves, Cedric Griffiths*



*New Krumbein Medalist Richard Howarth (center) and previous medalists (l. to r.) John Davis, Frits Agterberg, Vaclav Nemec, and Jan Harff*

*Photos courtesy of Cedric Griffiths*

# *Association Business*

## Election Results

The President received 176 valid ballots which are tallied below. Altogether 473 ballots were sent out to IAMG members. That means a 37.2% return. Total expenses for the election were $455.87, not counting the volunteer labor of the nomination committee and the tallying of JoAnne DeGraffenreid and President Olea.

Both amendments passed by more than 90% of the vote. All the winning candidates of the Executive Committee were ahead by a clear margin. Among the candidates for Councilor, Margaret Armstrong far outdistanced her competitors while the rest of the field stayed fairly close together.

A. AMENDMENTS

| | for | against |
|---|---|---|
| Amendment to By-Law 5 | 159 | 10 |
| Amendment to By-Law 17 | 155 | 14 |

B. ELECTIONS TO COUNCIL

| | votes |
|---|---|
| PRESIDENT | |
| **Graeme Bonham-Carter** (Canada) | 109 |
| Vera Pawlowsky-Glahn (Spain) | 64 |
| Abstain | 3 |
| VICE PRESIDENT | |
| **Frits Agterberg** (Canada) | 79 |
| Jaime Gomez-Hernandez (Spain) | 47 |
| Olivier Dubrule (France) | 45 |
| Abstain | 5 |
| SECRETARY GENERAL | |
| **Carol Gotway Crawford** (USA) | 83 |
| John Tipper (Germany) | 48 |
| Cedric Griffiths (Australia) | 40 |
| Abstain | 5 |
| TREASURER | |
| **Geoffrey C. Bohling** (USA) | 90 |
| Timothy C. Coburn (USA) | 66 |
| Marc Serre (write-in, USA) | 1 |
| Abstain | 19 |
| ORDINARY COUNCILORS | |
| **Margaret Armstrong** (France) | 125 |
| **Antonella Buccianti** (Italy)* | 98 |
| **Gert Weltje** (The Netherlands) | 96 |
| **Thomas A. Jones** (USA) | 92 |
| **Maria-Theresia Schafmeister** (Germany) | 88 |
| **John H. Doveton** (USA) | 87 |
| **Ryoichi Kouda** (Japan)* | 82 |
| Stephen Henley (UK) | 80 |
| George Christakos (USA) | 78 |
| Jan Harff (Germany) | 70 |
| Robert Garrett (Canada) | 53 |
| John Broome (Canada) | 51 |
| Andrea Fabbri (write-in, The Netherlands) | 2 |
| Abstain | 1 |
| Invalid (voted for seven) | 1 |

The ten candidates with their names in **bold face** are the ones elected to serve. Their term has started August 11, 2000, after appointment by the General Assembly which met in Rio de Janeiro during the 31st International Geological Congress.

*Antonella Buccianti accepted the appointment as Special IGC Councilor for the International Geological Congress in Florence, Italy in 2004, and vacated her position as Ordinary Councilor. Consequently, Ryoichi Kouda moved up into that position.

## IAMG-ISI joint meeting in Seoul

### *Extreme Occurrences in Seoul, Korea*

The IAMG has accepted an invitation from the International Statistical Institute to hold a joint Invited Paper Meeting during the 53rd ISI Session (Congress) to be held in Seoul, Republic of Korea, August 22-29, 2001. Vice President **Frits Agterberg** is organizing this meeting on "Extreme Value Distributions in Geology". This topic has many applications including modeling the evolution and extinction of fossil taxa as observed in the stratigraphic record, occurrences of large oil pools and mineral deposits, and outliers in geochemistry.

Invited papers will be presented by **Vera Pawlowsky-Glahn** (Spain) on "Scaling stratigraphic events using extreme occurrences" (paper co-authored by **Juan Jose Egozcue**), **Zhao Pengda** (China) on "The geological anomaly concept in mineral resources assessment", and **Qiuming Cheng** (Canada) on "Decomposition of geochemical map patterns using their scaling properties to separate anomalies from background". **Jeff Teugels** (Belgium) will be the Discussant. Papers and discussion will be published in the ISI Bulletin.

The IAMG has had a long-standing collaboration with the ISI. During the 52nd biennial ISI Session in Helsinki, August 1999, past Vice President Carol Crawford-Gotway, organized an excellent meeting on "Statistical Aspects of Physical and Environmental Science". The 54th ISI Session will be held in Berlin, Germany, during August 2003.

## CALL FOR AWARD NOMINATIONS (2nd Notice)

The Association invites all members to submit nominations for the **Felix Chayes Prize 2001** and the **Andrei B. Vistelius Award 2001** according to the following rules and subsequent guidelines:

**Deadline: January 15, 2001.**

Documents that should accompany the proposal:

• a short statement summarizing the relevant qualifications of the nominee;

• a curriculum vitae of the nominee.

The Awards Committee is working through electronic mail. Therefore, please use the following support of documents:

• e-mail or diskette;

• in .rtf format or as simple text files (ASCII code).

Please remember that not everybody has the latest versions of Word or other text processors like LaTeX!

Award descriptions and guidelines, as approved by the Council, November 11, 1997, can be found in the IAMG web page www.iamg.org. There you can find also a list of recipients and their citations. Please, have a look at it before submitting your proposal!

Send to:

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# IAMG2001 in CANCUN

## Annual Conference 2001 of the International Association for Mathematical Geology

Plans for the IAMG2001 conference in Cancun, Mexico, are firmly in place. I encourage each of you to review the continuously updated information at our conference web site: **http://www.kgs.ukans.edu/Conferences/IAMG/**

Under the Technical Program you will find a listing of all technical sessions and workshops. The Call for Papers provides details on submission deadlines. An Abstract Form is also available at the conference web site for electronic submission of abstracts. Remember, the critical deadlines are **January 31, 2001, for submission of abstracts**, with **final copy due by May 30, 2001**. Please plan to share your research findings at our conference.

Submit the electronic Pre-registration Form to receive further notices about IAMG2001. Reduced registration fees are available through June 4, 2001. Details on all fees can be found at the web site.

Hotel reservations should be made directly by FAX with the Hotel Camino Real Cancun. The hotel registration form is available as an Adobe Acrobat document.

Cancun and the surrounding areas of the Yucatan Peninsula have much to offer for scientist and tourist alike. The organizing committee hopes attendees will investigate opportunities for tours, available through the EPIC Group ("Everything's Possible In Cancun").

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The IAMG2001 meeting will start Thursday, September 6, at 6 p.m. with initial registration, followed by two days of workshops and one day of an interesting geological and archeological excursion. An official reception will take place on Sept. 9 at 6 p.m. The final three days will consist of plenary and parallel technical sessions. Plenary sessions will include lectures by invited speakers. Selected topics of the conference are:

**Technical Sessions**

a. Ground Water Applications

b. Computer-Aided Modeling in Marine Geosciences

d. Geostatistics and Data Integration

e. Geophysics and Geoengineering

f. GIS Applications and Digital Field Data Capture: integration of geologic database development, analysis, and map production

g. Mineral Resources, Mining, and the Environment

h. Geologic Modeling and Simulation of Sedimentary Systems

i. Building National and Regional Geologic Map Databases

j. Petroleum Geology

k. Prediction Models in Spatial Data Analysis

l. Statistics in the Earth Sciences

m. Numerical Methods and Applications

n. Fractal/Multifractal and Scaling Modeling and Geographical Information Systems

**Workshops**

1. Petroleum Log Analysis
2. Introduction to Groundwater-Systems Hydrology and Water Resources Sustainability for Non-Specialists
3. Stratigraphic Forward Modeling
4. Texture Analysis
5. Introduction to Statistics for Earth Scientists
6. The Statistical Analysis of Compositional Data

# Abstracts wanted - 21st IAS

The 21st IAS (International Association of Sedimentologists) meeting will take place in **Davos, Switzerland, from September 3-5, 2001**. It is organized by ETH Zürich and includes technical sessions, workshops and field trips. There is a web site http://www.ias-2001.ethz.ch with detailed information.

I was assigned the organization of a symposium called '**Mathematical and geophysical simulation and modelling of sequences and basins**' and am now looking for contributions to this symposium. The deadline for abstracts is **28 Feb.2001**. Please let me know if you are interested in presenting a paper in this symposium, if possible with a preliminary title of the paper.

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# Letter to the Editor

### Corrections to Krumbein Medalist Howarth's write-up (in the last Newsletter)

Richard Howarth writes:

I have just got back from a few days away to find the IAMG Newsletter 60 awaiting me and that it contains my old friend John Cubitt's kind, but embarrassingly long, write-up of my biography on pp 8-9 and 16. John very kindly took me out to lunch before he began writing it in order to get some additional 'background' beyond what he found in my c.v.. However, for some unaccountable reason, despite my request to do so, he did not send me a copy of what he had written before it went to press (I guess he thought it would be a nice surprise). The result is, I am afraid, that it contains a number of factual errors which need to be corrected in any future biographical material. For the record, details are as follows:

p8, para 2. The pressure to go to art school came from two of my art teachers at school (both of whom, Kyffin Williams and Anthony Green, subsequently became Royal Academicians), not from my family, who were happy for me to choose art or science as I preferred.

p. 9 para 2. I actually joined BIPM (as correctly stated) which later became known as Shell International not Shell Coal, working under Peter Dieboldt (not Peter Dearborn) - I was based in the Shell head office not the Rijswijk research centre. (Some years later, when Dieboldt was appointed to start up Shell Coal, they tried to tempt me back, but I decided not to join when it was decided that it would be based in The Hague as there had been a possibility that it would be set up in London). After a couple of years living in The Hague, it was made evident to me that because of my computing interests I was going to be permanently based there. Had we decided to stay on, I think we would have moved to Amsterdam and I would have commuted to The Hague office, but neither my wife nor I wanted to stay in Holland permanently: the weather was too like that at home and, for family reasons, we spent most of our vacations visiting back to England, so we tended to suffer the inconveniences of being based abroad without many compensating advantages. So, as correctly stated, I joined AGRG at Imperial College, working initially under John Webb and later, after Webb's retirement in 1979, under Iain (not Ian) Thornton.

p. 9 para 4. Athersuch's company is StrataData not Stratadata.

p. 9 para 5. I actually left BP in December 1992.

Having been doing some research on other Krumbein medallists in the course of writing my 'other' manuscript for the IGC - my paper on the "history of math. geol. in the 20th C" for the history of geology session - I am still rather baffled as to why I was chosen as the 23rd recipient, when I think my predecessors were all far more eminent mathematicians than I have ever been, but nevertheless remain extremely gratified that the IAMG awards committee decided in my favour!

*The newsletter editor apologizes for not having checked these facts before publication.*

## Congratulations, John!

**John Harbaugh** who is professor emeritus at Stanford, married Audrey Wegst on October 21 in Fairway, Kansas. Audrey is the president of Diagnostic Technology Consultants, in Overland Park, Kansas. She was formerly a professor of radiology at the University of Kansas Medical Center in Kansas City, Kansas.

Also, on June 3, 2001 he will receive the AAPG's Distinguished Educator Award at the Annual Convention in Denver, Colorado.

# *Member News*

### News from Spain

Dr. **Vera Pawlowsky-Glahn** has moved from Universitat Politècnica de Catalunya (UPC) in Barcelona (Spain) to the University of Girona (Spain), north of Barcelona. She has applied there for a permanent position. The intention is to strengthen and consolidate the group on statistical analysis of compositional data she has been working with for many years. Now the group has four members: Dr. Carles Barceló-Vidal, Josep Antoni Martín-Fernández, Gloria Mateu-Figueras and Dr. Vera Pawlowsky-Glahn, but soon it will grow with two additional ones: Dr. Santiago Thió-Henestrosa and Josep Daunis-i-Estadella.

The position in the Departament de Matematica Aplicada III at the UPC in Barcelona has been taken by Dr. **Eulogio Pardo-Igúzquiza** coming from the University of Leeds. Together with Dr. **Juan José Egozcue** and Dr. **Eusebi Jarauta-Bragulat**, they are starting to organize a new group in geostatistics with special emphasis in compositional data analysis, Bayesian procedures and hazard-risk analysis. We are convinced that both geostatistics and compositional data analysis will gain with these arrangements.

The new addresses are:

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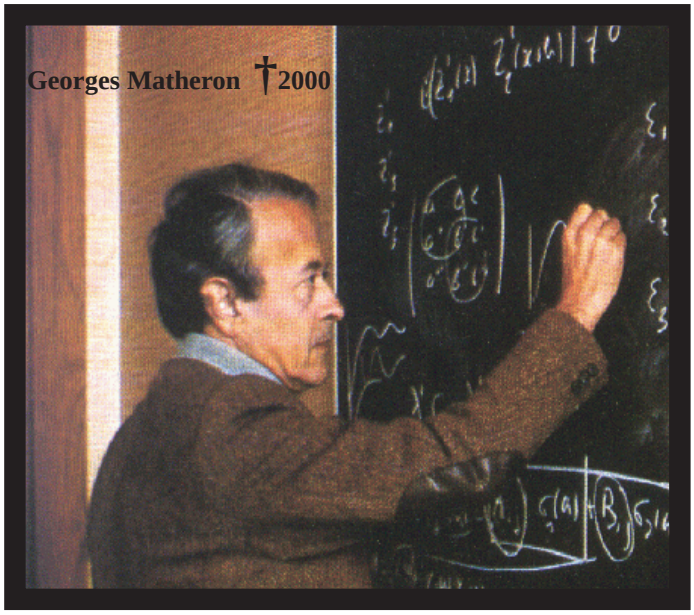


## John Cubitt has changed jobs

Please note that I am no longer with Energy Resource Management Limited. There has been an amicable split in our activities and I have decided to revert to my role as a consultant under the company name ES Information and Consultancy. This will not affect the business activities I have been recently involved in. However, should you need any clarification, please do not hesitate to contact me at the following address.

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# IAMG Journal Report

## 1999 MG Best Paper Award

Each year, the editorial board of ***Mathematical Geology*** selects an outstanding paper published in that journal to receive the Best Paper Award. In selecting a best paper, the editorial board used the following criteria: a best paper represents a significant advance by presenting a new concept or method with important applications, or a breakthrough on a long-standing problem; is well-written, clearly-illustrated, and referenced comprehensively; and is likely to be cited often in the literature for many years.

The best paper for 1999 is: **Patrick Bogaert,** "On the optimal estimation of the cumulative distribution function in presence of spatial dependence": **vol. 31, no. 2, p. 213-239.** At the time of the work Dr Bogaert was at the Agricultural Research Organization, The Volcani Center, Ben Dagan, Israel.

To recognize the achievement, the author was given a certificate and will receive a year's membership in the IAMG with a subscription to **Mathematical Geology**.

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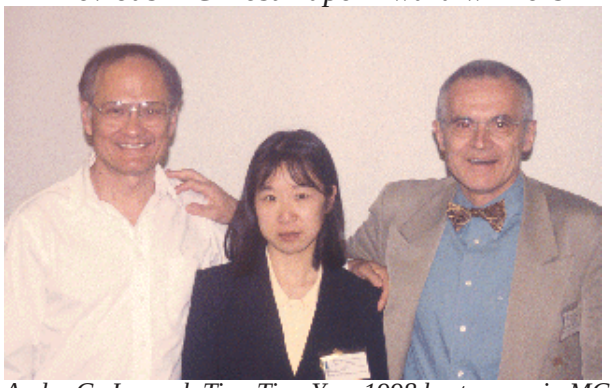
*Previous MG Best Paper Award winners*



*Andre G. Journel, Ting Ting Yao, 1998 best paper in MG*
*Jean-Laurent Mallet, best paper for 1997 in MG*

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## Status of Mathematical Geology

Mathematical Geology operates with a 6 to 7-months lead time with respect to Plenum Publishing; this means preparations are well advanced into the 2001 volume. Plenum has received edited manuscripts for the first three issues, and there are papers enough for several more issues. Editor-in-Chief **Michael Ed. Hohn** plans to complete this, his 4th volume of the journal, representing the standard tenure of an editor-in-chief with the exception of **Dan Merriam**'s emergency editorship in 1995-1997.

**W. Edwin Sharp** will be Mike's successor, taking up duties gradually starting early in 2001. He'll become the new editor-in-chief of Mathematical Geology operationally in mid-2001, when the first issue of 2002 is sent to Plenum. This issue will list him as editor-in-chief, as well as his editorial board. Mike will then step down to the deputy editor position until Ed comes up with a successor, further smoothing the transition.

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## Computers & Geosciences - Special Issues

Over the years C&G has produced a number of interesting Special Issues usually with guest editor responsible for a certain topic. This year promises to be a banner year with four Special Issues planned (two should be out by the time you read this). The following is a list of new and older Special Issues back to 1995:

Volume 26, Number 6 (2000): The Year 2000 Challenges Edited by J.C. Butler, University of Houston, USA

Volume 26, Number 4, 2000 Geostatistics and Geospatial Techniques in Remote Sensing Edited by Peter Atkinson and Dale A. Quattrochi

Volume 26, Number 3A (2000): Geoscience after IT Edited by T.V. Loudon

Volume 26, Number 1 (2000): Geoscientific Visualization Edited by S. Fuhrmann, W. Kuhn, U. Streit

Volume 25, Number 9, 1999 Fractals and Multifractals Edited by Frits Agterberg and Qiuming Cheng

Volume 25, Number 4 (1999): Freeware and Shareware in the Geosciences Edited by J.C. Butler

Volume 25, Number 1 (1999): Systems, Integration within the Geosciences Edited by M. Gahegan

Volume 24, Number 7 (1998): Distributed Education-Learning with Multimedia Edited by J.C. Butler

Volume 24, Number 4, 1998 Computers, Geoscience and Geocomputation Edited by D. Unwin

Volume 23, Number 5 (1997): Distance Education and the Internet Edited by J.C. Butler, Department of Geosciences, University of Houston, Houston, TX 77204

Volume 23, Number 4 (1997): Exploratory Cartographic Visualization Edited by A.M. Maceachren, Department of Geography, Penn State University, M.-J. Kraak, Department of Geoinformatics, The Netherlands

Volume 22, Number 9 (1996): Neural Network Applications in the Geosciences Edited by B.G. Lees, Department of Geography, Australian National University, Canberra, ACT 0200, Australia

Volume 22, Number 3 (1996): Geophysics Edited by N.L. Anderson

Volume 21, Number 8 (1995): Environmental Geology Edited by K.M. Morgan, A.B. Busbey, III

Volume 21, Number 6 (1995): The INTERNET Edited by J.C. Butler

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### IAMG "Oxford" Monographs

George Christakos' monograph #6 "Modern Spatiotemporal Geostatistics" is out. It is listed at a discounted price of US $42.00 for IAMG members.

Also, the final manuscript of another monograph is almost ready. It has been extensively examined by IAMG reviewers. It is authored by Drs. Vera Pawlowsky-Glahn and Ricardo A. Olea. The title and subject of the proposed volume is "Regionalized Compositional Data in the Geosciences."

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## Computers & Geosciences

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Book review: Geographical information systems: Principles, techniques, applications and management, 2nd edition, volumes 1 and 2 — TC Coburn

**C&G V. 26, no. 4 (2000)**

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Timothy C. Coburn — GIS and Multicriteria Decision Analysis - by Jacek Malczewski. Wiley, New York, 1999.

Vera Pawlowsky-Glahn — Multivariate Geostatistics, An Introduction With Applications, Second, Completely Revised Edition - by Hans Wackernagel, Springer, Berlin, 1998

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**v. 9, no. 3 (2000)**

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Diagenesis: A Quantitative Perspective — Implications for Basin Modeling and Rock Property Prediction by M. R. Giles — Reviewed by C. Kendall

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# *Recent Books of Interest*

**George Christakos**, Professor of Environmental Sciences and Engineering, University of North Carolina, Chapel Hill.

*MODERN SPATIOTEMPORAL GEOSTATISTICS*

International Association for Mathematical Geology: Studies in Mathematical Geology v. 6

2000, 304 pp.; 131 line illus., 0-19-513895-3 $60.00, Oxford University Press

This is the first book on the subject of spatiotemporal geostatistics. It is widely recognized that the techniques of classical geostatistics, which have been used for several decades, have reached their limit, and the time has come for some alternative approaches to be given a chance. This book, therefore, is an introduction to the fundamentals of modern geostatistics, which is a group of spatiotemporal concepts and methods that are the products of the advancement of the epistemic status of stochastic data analysis. The latter is considered from a novel perspective, promoting the view that a deeper understanding of a theory of knowledge is an important prerequisite for the development of improved mathematical models of scientific mapping. The main focus of the book is the Bayesian Maximum Entropy (BME) approach for studying spatiotemporal distributions of natural variables. As part of the modern geostatistics paradigm, the BME approach provides a fundamental insight into the mapping problem in which the knowledge of a natural variable, not the variable itself, is the direct object of study. The thread running throughout the book is that the modern geostatistical approach to environmental problems is that of natural scientists who are more interested in a stochastic analysis concerned with both the ontological level (building models for physical systems) and the epistemic level (using what we know about the physical systems and integrating and modeling knowledge from a variety of scientific disciplines), rather than in the pure naive inductive account of science based merely on a linear relationship between data and hypotheses and theory-free techniques that may be useful in other areas.

**Bartelme, N.**, Technische Universität Graz

*Geoinformatik — Modelle, Strukturen, Funktionen*

3., erw. u. aktualisierte Aufl. 2000. X, 419 S. 143 Abb. Brosch. 3-540-65988-9, DM 89, Springer-Verlag

'Geoinformatik' erläutert die Grundlagen der Modellierung von Geoinformation in Datenbanken und informationsverarbeitenden Systemen. Damit spricht es einen breiten Personenkreis aus der Geographie, dem Vermessungswesen, den angewandten Geowissenschaften und auch aus den Informationswissenschaften an, der sich ein Bild vom aktuellen Wissensstand und den Anwendungsmöglichkeiten der Geoinformatik machen will. Das Spektrum reicht dabei von der Modellierung von Geoobjekten im Raum bis zu ihrer Schematisierung in Datenbanken vor dem Hintergrund typischer GIS-Applikationen.

**John W. Harbaugh, W. Lynn Watney, Eugene C. Rankey, Rudy Slingerland, Robert H. Goldstein,** and **Evan K. Franseen** (editors)

*Numerical Experiments in Stratigraphy: Recent Advances in Stratigraphic and Sedimentologic Computer Simulations*

SEPM Special Publication #62, 1999, 362 pages plus CD-ROM, clothbound, ISBN 1-56576-061-1, US$ 170

This volume presents results derived from a three-day workshop held at the University of Kansas, Lawrence, Kansas, from May 15 through May 17, 1996. Seventy-four participants from nine countries represented affiliations that include industry, government, and academia.

The objectives of the workshop were to document, characterize, demonstrate, and compare different computing procedures that have been utilized in simulating stratigraphic sequences. Both inverse and forward simulation modeling procedures are represented. With these objectives in mind, the workshop was organized into four main themes entitled "Explicit Comparisons", "Model Outcomes", "Inverse Methods", and "New Philosophies".

Modeling at this stage is a fully operational research tool supported by industry, academia, and government. The workshop and this volume assess where we are at present in simulation modeling and attempt to project where we will be in the future. Although there are large uncertainties, the future appears to have great promise for simulation modeling. Thus, this volume is a snapshot of simulation modeling as it continues to evolve. The next symposium will return to issues of parameter definition and will focus on methods for making improved comparisons between simulations and the actual stratigraphic record.

**Prof. V.A. Glebovitsky** and **Dr. V.N. Dech (editors)** Russian Academy of Natural Sciences, Institute of Mathematical geology (IMAG)

*Capricious earth: models and modeling of geologic processes and objects*

198 p., US$65, discounts available, ISBN 5-88143-116-2, Theophrastus Pbl - St.Petersburg – Athens, http://www.spbu.ru:82/Science/Nii/NiiZK/imagraen.htm

This book is compiled of contributions of geoscientists from all over the world who took a lofty challenge of bringing this idea to geology. The first part, Shaping the Unknown, presents models of individual objects: Baltic Shield granitoids and tectonic structures, layered intrusions, tephra of Alaskan volcanoes, mantle xenoliths, etc., based on verbal description, thermodynamic calculations, visualization and application of some mathematical tools. Such "object-oriented" way of thinking leads to new approaches to modeling of entire processes and reveals hidden parallelism of many of them. This is what the second part, Symbolic Languages of the Unknown. Is about. Here the reader will find the papers summarizing the progress in and suggesting new ideologies for modeling of various magmatic and metamorphic processes, from explosive volcanism to layering in intrusive bodies, and research techniques, e.g., radiometric dating and chromatography.

The book may be of interest to petrologists, volcanologists, field geologists looking for new approaches to their objects, suggested by experience or by theory – and also for those mathematical geologists, mathematicians and physicists who are curious about how their mind games are played in real nature.

**Timothy C. Coburn and Jeffrey M. Yarus**

*Geographic Information Systems in Petroleum Exploration and Development*

AAPG Computer Applications in Geology 4, 2000. 316 pages, color illustrations, hardback, indexed. ISBN#: 0891817034, $109.00, AAPG Member Price $63.00, GSL Member Price $86.00

This publication takes an informative look at the use of computer-based Geographic Information Systems (GIS) in the energy industry. It is particularly timely in light of the rapidly growing numbers and types of applications of GIS technology. The book addresses the full range of GIS topics, approaches, and philosophies, with special emphasis on the petroleum industry; there is a good mix of theory, applications, resources, and practical advice. Case studies include a regional study, conceptual geological modeling, a field study, reservoir characterization, and more. Properly used and integrated, GIS technology can help geoscientists achieve greater success in all aspects of petroleum exploration and development.

**Chen, Z.**, Southern Methodist University, Dallas, TX, USA
**Ewing, R.E.**, Texas A&M University, College Station, TX, USA
**Shi, Z.-C.**, Chinese Academy of Sciences, Beijing, China (Eds.)

*Numerical Treatment of Multiphase Flows in Porous Media*

Proceedings of the International Workshop Held at Beijing, China,

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2-6 August, 1999. 2000. XXI, 445 pp. Hardcover, 3-540-67566-3, DM 164/$86, Springer-Verlag

This book describes in detail the current, state-of-the-art numerical treatment and simulation of multiphase flows in porous media. The porous media considered range from ordinary to fractured and deformable media, the models treated from single-phase compressible flow to multiphase multicomponent flow with mass interchange, while the computational algorithms encompass everything from classical iterative solvers to modern multigrid and domain decomposition approaches. Addressing many problems originating from the applied geosciences, the book focuses on their common mathematical and computational aspects. It will serve as an excellent research reference for all geoscientists, mathematicians, physicists, and engineers who work in the mathematical modeling and numerical simulation of multiphase flows in porous media.

**Bordogna, G.**, Istituto per le Tecnologie Informatiche Multimediali, Milan, Italy, and **Pasi, G.**, Istituto per le Tecnologie Informatiche Multimediali, Milan, Italy, (Eds.)

*Recent Issues on Fuzzy Databases*

2000. XII, 236 pp. 58 figs., 15 tabs. Hardcover 3-7908-1319-2, DM 118/$ 72, Springer-Verlag

This book focuses on the recent research issues regarding the application of fuzzy set theory to extend the functionalities of database management systems.

During the past 5 years, the research in this field has moved from a merely theoretical framework mainly addressing the definition of fuzzy extensions of the relational database model to the consideration of other, object-oriented database paradigms, fuzzy data mining, and fuzzy functional dependencies definition.

**Muller, R.A.**, University of California, CA, USA, **MacDonald, G.J.**, Int'l Inst. for Applied Systems Analysis, Laxenberg, Austria

*Ice Ages and Astronomical Causes – Data, spectral analysis and mechanisms*

2000. XIX, 318 pp. Hardcover, 1-85233-634-X, DM 269/$139, Springer-Verlag

It is not possible to understand the present or future climate unless scientists can account for the enormous and rapid cycles of glaciation that have taken place over the last million years, and which are expected to continue into the future. A great deal has happened in the theory of the ice ages over the last decade, and it is now widely accepted that ice ages are driven by changes in the earth's orbit. The study of ice ages is very interdisciplinary, covering geology, physics, glaciology, oceanography, atmospheric science, planetary orbit calculations astrophysics and statistics.

**Freska, C.**, University of Hamburg, Germany
**Brauer, W.**, Technische Universität München, Germany
**Habel, C.**, University of Hamburg, Germany
**Wender, K.F.**, University of Trier, Germany (Eds.)

*Spatial Cognition II*
*Integrating Abstract Theories, Empirical Studies, Formal Methods, and Practical Applications*

2000. XI, 420 pp. Softcover, 3-540-67584-1, DM 98/$ 69, Springer-Verlag

This book constitutes the second volume documenting the results achieved within a priority program on spatial cognition by the German Science Foundation (DFG). The 28 revised full papers presented were carefully reviewed and reflect the increased interdisciplinary cooperation in the area. The book is divided into sections on maps and diagrams, motion and spatial reference, spatial relations and spatial inference, navigation in real and virtual spaces, and spatial memory.

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"Geostatistical Space-Time Models: A Review" by P. Kyriakidis and A. G. Journel, Vol. 31, no. 6, p. 651-684.

**MG Vol. 32, No. 8 (2000)**

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## INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY
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# Upcoming Meetings

International Conference Celebrating Prof. C.R. RAO'S 80TH BIRTHDAY, organised by The Indian Statistical Institute, Calcutta, India, **29–31 December 2000**. Information: Email: cr80@isical.ac.in

Spatial Methods for Solution of Environmental and Hydrologic Problems: Science, Policy and Standardization, Reno, Nevada, USA, **25–26 January 2001**. Dr. Vernon H. Singroy, Canada Center for Remote Sensing, 588 Booth St., Ottawa, ONT K1A 0Y7, Canada. Phone: +1-613 947 1215; E-mail: Vern.Singhroy@GeoCan.NRCan.gc.ca

2001 SPE RESERVOIR SIMULATION Symposium, Houston, Texas U.S.A, **11 - 14 February 2001**. http://www.spe.org/cda/event_item/1,1710,357,00.html

GEOSYNTHETICS 2001, Portland, Ore., USA, **12-14 Feb 2001**. Janet Schneider, Phone: 800-225-4324, E-mail: GEO2001@ifai.com, Web: http://www.ifai.com

Symposium for the Application of GEOPHYSICS TO ENGINEERING AND ENVIRONMENTAL PROBLEMS, Denver, Colo., **4-7 Mar 2001**. The Environmental and Engineering Geophysical Society. Pieter Hoekstr, 631 Range View Trail; Golden, CO 80401, E-mail: pieterhoek@aol.com, Web: www.sageep.com

SPE COILED TUBING ROUNDTABLE, (with ICoTA), Adam's Mark Hotel, Houston, TX, **7-8 Mar. 2001**. Society of Petroleum Engineers, http://www.spe.org/cda/event_item/1,1710,116,00.html

Int'l Symp. on DEFORMATION MEASUREMENTS, Anaheim, CA, USA, **19-22 Mar 2001**. Web: http://www.pasadena.wr.usgs.gov/scign/fig/

4th International Conference on Recent Advances in GEOTECHNICAL EARTHQUAKE ENGINEERING AND SOIL DYNAMICS, San Diego, CA, USA, **26-31 Mar 2001**. E-mail: prakash@novell.civil.umr.edu, Web: http://www.umr.edu/~conted/conf8767.html

NEOGENE CLIMATE of the Indian Ocean and the Indian Subcontinent, Kharagpur, India, **29-30 Mar 2001**. Dr. Anil K. Gupta, Dept. of Geology and Geophysics, Indian Institute of Technology, Kharagpur, 721 301, INDIA, Phone: +91-3222-83368, E-mail: anilg@gg.iitkgp.ernet.in, Web: http://homepages.go.com/~neogeneclimate2001

The 12th GLOBAL WARMING International Conference & Expo, Cambridge, UK, **8-11 Apr 2001**. Fax: 630/910-1561, email: gw12@globalwarming.net, Web: http://www.GlobalWarming.net

SSA Annual Meeting, San Francisco, CA, USA, **18-20 Apr 2001**. Web: http://www.seismosoc.org/meetings/

IASTED International Symposium: MODELLING AND SIMULATION (MS'2001), Pittsburgh, Pennsylvania. USA, **16-18 May 2001.** IASTED Secretariat - MS'2001, #80, 4500 - 16 Avenue N.W., Calgary, AB, Canada T3B 0M6, Tel: 403-288-1195, Fax: 403-247-6851, Email: calgary@iasted.com, Website: www.iasted.com

Spring Meeting of the American Geophysical Union, Boston, Mass., **29 May-2 Jun 2001**. AGU Meetings Department, 2000 Florida Ave. NW, Washington, DC 20009, Phone: (202)462-6900; 1-800-966-2481, E-mail: meetinginfo@agu.org Web: www.agu.org/meetings/meetings.html

SEPM Diamond Jubilee Symposium, Denver, CO, USA, **2-3 Jun 2001**. SEPM (Society for Sedimentary Geology), 1741 East 71st Street, Tulsa, OK 74136-5108, Phone (N. America): 800-865-9765, Phone (International): 918-493-3361, FAX: 918-493-2093, http://www.sepm.org/meetings/75thanniversary.html

AAPG Annual Convention and Exhibition, Denver, Colo., **3-6 Jun 2001**. American Association of Petroleum Geologists, Convention Department, 1444 S. Boulder Ave., P.O. Box 979, Tulsa, OK 74101, Phone: 800-364-2274 or 918-560-2679, E-mail: convene@aapg.org, Web: http://www.aapg.org/meetings/annual2001

WATER-ROCK INTERACTION, Sardinia, Italy, **10–15 June 2001**. Rosa Cidu, Dipartimento di Scienze della Terra, via Trentino 51, I-09127 Cagliari, Italy; E-mail: cidur@unica.it

Sixth SIAM Conf. on Math and Comp Issues in the Geosciences (SIAG/GS), (GS01), Boulder, CO, **11-14 June 2001**. SIAM Conf. Dept., 3600 University City Science Center, Philadelphia, PA 19104-2688, Phone: (215) 382-9800, Fax: (215) 386-7999, E-mail: meetings@siam.org, http://www.siam.org/meetings/gs01/

EAGE European Assoc. of Geoscientists and Engineers 63rd Conference & Technical Exhibition, Amsterdam, The Netherlands, **11-15 June 2001**. Website: www.eage.nl

SPWLA Society of Professional Well Log Analysts, Annual Symposium, Houston, TX, **16-20 June 2001**. http://www.spwla.org/

EARTH SYSTEM PROCESSES (Int'l Meeting sponsored by the Geol. Soc. of America and the Geol. Soc. of London), Edinburgh, Scotland, **24–28 June 2001**. Ian Dalziel, University of Texas at Austin; E-mail: ian@utig.ig.utexas.edu

DC ROCKS 2001, Washington, DC, USA, **7-10 July 2001**. American Rock Mechanics Association, Mark Cramer, ExpoMasters, Inc., 7632 East Costilla Ave, Englewood, CO 80112, Phone: 303-771-2000, E-mail: mcramer@expomasters.com, Web: http://www.armarocks.org

St. Petersburg 2001 AAPG Regional Int'l Conference, St. Petersburg, Russia, **15-18 July 2001**. American Association of Petroleum Geologists, Convention Dept., 1444 S. Boulder Ave., Tulsa, OK 74119 USA, Phone: 800-364-2274 or 918-560-2679, E-mail: convene@aapg.org, Web: http://www.aapg.org/meetings/stpetersburg2001

Int'l Conf. on the BIOGEOCHEMISTRY OF TRACE ELEMENTS, Guelph, Ontario, Canada, **29 July - 2 Aug 2001**. Dr. Kim Bolton, Dept of Land Resource Science, Univ. of Guelph, Guelph, Ontario, Canada, N1G 2W1, Phone: (519) 824-4120 ext. 2531, E-mail: icobte@lrs.uoguelph.ca, Web: http://icobte.crle.uoguelph.ca

2001 JOINT STATISTICAL MEETINGS, Atlanta, GA, **5-9 August 2001**. Sponsored by ASA, ENAR, WNAR, IMS, SSC. Program Committee Chair, Richard D. DeVeaux, Williams Coll. E-mail: meetings@amstat.org or phone (703) 684-1221, http://www.amstat.org/meetings/jsm/2001/

INTERNATIONAL STATISTICAL INSTITUTE, 53rd Biennial Session , Seoul, Korea, **22–29 August 2001**. Includes an Invited Paper IAMG Session on "Extreme Value Distributions in Geology" chaired by Frits Agterberg. ISI Permanent Office, Prinses Beatrixlaan 428, P.O. Box 950, 2270 AZ Voorburg, The Netherlands. Tel.: +31–70–337–5737; Fax: +31–70–386–0025; E-mail: isi@cbs.nl, Website http://www.nso.go.kr/isi2001

Int'l Conf. on GEOMORPHOLOGY (5th), Tokyo, Japan, **23–28 August 2001**. Prof. Kenji Kashiwaya, Dept. of Earth Sciences, Kanazawa University, Kakuma, Kanazawa 920-1192, Japan; Phone & Fax +81-76 264 5735; E-mail: kashi@kenroku.kanazawa-u.ac.jp; wwwsoc.nacsis.ac.jp/jgu/

21st IAS meeting of SEDIMENTOLOGY, Davos, Switzerland, **3-5 Sep 2001**. IAS-2001 Secretariat., Geological Institute ETH-Zentrum, 8092 Zürich, Switzerland, E-mail: info@ias-2001.ethz.ch Web: http://www.ias-2001.ethz.ch

International Association for MATHEMATICAL GEOLOGY 6th Int'l Conference, Cancún, Mexico, **6–12 September 2001**. Gina Ross, Kansas Geological Survey; E-mail: aspiazu@kgs.ukans.edu; Website: www.kgs.ukans.edu/Conferences/IAMG

Assoc. of European Geological Societies: "CARPATHIANS PALEGEOGRAPHY and GEODYNAMICS – a Multidisciplinary Approach" (12th Biennial Mtg), Cracow, Poland, **8–15 September 2001**. Polish Geological Society, Oleandry 12, PL-30-063 Cracow, Poland; E-mail: ptg@ing.uj.edu.pl

Society of Exploration Geophysicists, San Antonio, Texas, USA, **9–14 September 2001**. SEG Business Office, Phone: +1-918 497 5500; Fax: +1-918 497 5557; Website: seg.org

20th Int'l Meeting on ORGANIC GEOCHEMISTRY IMOG 2001, Nancy, France, **10-14 Sep 2001**. Patrick Landais, UMR7566 G2R Université Henri Poincaré, BP239 54506 Vandoeuvre, EMail: imog2001@g2r.uhp-nancy.fr, Web: http://www.imog.uhp-nancy.fr

PALEOCEANOGRAPHY (7th Int'l Conf.), Sapporo, Japan, **17–21 September 2001**. Prof. Helmut Weissert, Geological Institute, ETH-Zurich, CH-8092 Zurich, Switzerland; Phone: +41 (0)1 632 37 15; Fax: +41 (0)1 632 10 30; E-mail: helmi@erdw.ethz.ch; Website: www.iijnet.or.jp/jtb-cs/icp7/

Fifth Int'l Conf. on Computer Modelling of SEAS AND COASTAL REGIONS, Rhodes, Greece, **19 - 21 September 2001**. Coastal Engineering 2001, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton, SO40 7AA, phone: 44 (0) 23 80 293223, Fax: 44 (0) 23 80 292853, E-mail: gcossutta@wessex.ac.uk, http://www.wessex.ac.uk/conferences/2001/coastal01)

The 40th MINING PRIBRAM symposium - the international section on GEOETHICS, Pribram, Czech Republic, **15 - 17 October 2001**. Vaclav Nemec and Lidmila Nemcova, K rybnickum 17, 100 00 Praha 10 - Strasnice, Czech Republic, phone +4202 7811801, e-mail nemcoval@nb.vse.cz

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# Conference Reports

## *School of Fluids Geochemistry, Arezzo (Italy), August 29 – September 1, 2000*

The School of Fluids Geochemistry was held in Arezzo at the end of summer, a beautiful city located in Tuscany, central Italy, easy to reach by train from Florence, in the Santa Caterina College, a building property of I.N.P.D.A.P. The school, sponsored by IAMG, So.Ge.I (Italian Geochemical Society), FIST (Italian Federation of Earth Sciences), the Department of Earth Sciences of Florence University and the National Research Council Centre of Florence, has been a big success considering the large number of young participants (more than 70!) and the excellent level of teachers from different countries of the world. The main topic of the school has been the investigation of Fluids Geochemistry from theory, analytical practice and modalities of data analysis and presentation. Particular attention has been, however, devoted to mathematical and statistical tools used to probe the nature of the data collected in this field of Geosciences and to model changes in geochemical systems.

The lectures were assembled in a volume given to all the participants at the beginning of the school so that everybody had the opportunity to discover in advance the nature of presentations, thus preparing questions and considerations. Consequently, the level of discussion was high at the end of lectures, during coffee break (typically Tuscan, no light coffee-break, with wild boar sausages and wine!) and lunch or dinner. The lecture on compositional data analysis by Vera Pawlowsky caused troubled sleep for a group of interested people, after discussions until early morning!

The lecture volume came in a black bag in which material useful to promote IAMG and its publications was included. We hope that this initiative will be useful to diffuse knowledge about IAMG activities, especially among young scientists, and wish to thank past IAMG President Ricardo Olea and Council to have helped us with the success of this initiative.

*Antonella Buccianti and Orlando Vaselli*
*Department of Earth Sciences, University of Florence*

## IAMG Targeting Scientific Youth

A program of activities launched in 1999 by the International Association for Mathematical Geology (IAMG) is trying to encourage more active participation of students and young scientists. One of the activities planned was to use the Annual Conferences as a forum where young participants can discuss questions particular interest to them and express their wishes and recommendations to further scientific and logistic development of the Association. The first "Meeting of Young Scientists" of the IAMG was held during the 31st International Geological Congress at Rio de Janeiro, Brazil, on Wednesday, August 16, 2000. Posters and a special article of the daily congress newletter invited graduate and postgraduate students, postdocs and other young scientists interested in the quantification of geosciences to discuss questions of education, to initiate a professional career, participate in international scientific conferences, acquire special awards for exceptional presentations of scientific results, and receiving fellowships and other means of support. More than 20 participants – students and professors - from South and North America, Europe and Asia did attend the meeting. The participants discussed the process of quantification of geosciences. They agreed that this process will be connected more and more with the development of computer technologies that will facilitate optimal data mining and data integration particularly through GIS methodologies and numerical process simulation. The discussion showed that there is special demand for educational programs mirroring this process. Particularly participants from South America expressed their wish for more special training courses for students in geosciences to be offered by the IAMG in advanced computer technologies and geoinformatics. Special demand does exist in developing countries for publications – textbooks and journals – in mathematical geology. One way recommended in order to provide geological departments in the "Third world" with scientific literature was to develop partnerships between North American and European geologists and colleagues in developing countries. Young geologists also recommended announcements of research projects and positions to be filled in the IAMG newsletter and the IAMG website.

A special topic of the discussion was to build up an international network aiming to connect young scientists being engaged in the quantification of geological sciences. Participants of the meeting registered for such a network to be built up via internet by Maria-Theresia Schafmeister. Every scientist interested in joining this network is cordially invited to contact schaf@uni-greifswald.de.

*Jan Harff*
*Maria-Theresia Schafmeister*
*Germany*

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Third South American Symp. on ISOTOPE GEOLOGY, Pucón, Chile, **21-24 Oct 2001**. Servicio Nac'l de Geología y Minería de Chile (SERNAGEOMIN); Dept. de Geología, Univ. de Chile; and Sociedad Geológica de Chile. Eugenia Fonseca, Laboratorio Sernageomin, Til-Til 1993 Ñuñoa, Santiago, Chile, Phone: 56-2-2385292 E-mail: ssagi@sernageomin.cl Web: http://www.sernageomin.cl/ssagi/

GSA Annual Meeting, Boston, Mass., USA, **5–8 November 2001**. Geol. Soc. of America Meetings Dept., P.O. Box 9140, Boulder, CO 80301-9140, USA; tel: +1 303 447 2020; fax: +1 303 447 1133; meetings@geosociety.org; www.geosociety.org/meetings/index.htm

8th Int'l Symp. on application of mathematical methods and computers in MINING, GEOLOGY AND METALLURGY, Cracow, Poland, **3 - 6 December 2001**. Prof. Jerzy Klich, AGH, Al. Mickiewicza 30, 30-059 Cracow, Poland, fax: +4812 4233760

AAPG Annual Convention and Exhibition, Houston, Texas, **10-13 Mar 2002**. Am. Assoc. of Petroleum Geologists Convention Dept., 1444 S. Boulder Ave., Tulsa, OK 74119, USA, Phone: 800-364-2274 or 918-560-2679, E-mail: convene@aapg.org Web: http://www.aapg.org

EAGE European Assoc. of Geoscientists and Engineers (63rd Conf. & Technical Exhibition), Florence, Italy, **27–30 May 2002**. www.eage.nl

JOINT STATISTICAL MEETINGS, New York, NY, **11-15 August 2002**. Sponsored by ASA, ENAR, WNAR, IMS, and SCC. ASA, 1429 Duke St., Alexandria, VA 22314-3415; (703) 684-1221, E-mail meetings@amstat.org, http://www.amstat.org/meetings/jsm/

5th Int'l Symp. on applying mathematical methods and computers for solving PROBLEMS of GEOCHEMISTRY and ENVIRONMENTAL PROTECTION in Kiev, Ukraine, **early September 2002**.

Cairo 2002 AAPG EPEX SEG EGS EAGE, Cairo, Egypt, **27-30 Oct 2002**. AAPG Convention Dept., 1444 S. Boulder Ave., Tulsa, OK 74119 USA, Phone: 800-364-2274 or 918-560-2679, E-mail: convene@aapg.org, Web: http://www.aapg.org

Geological Society of America (Annual Meeting), Denver, Colo., USA, **28–31 October 2002**. GSA Meetings Dept., P.O. Box 9140, Boulder, CO 80301-9140, USA; tel: +1 303 447 2020; fax: +1 303 447 1133; e-mail: meetings@geosociety.org; Website: http://www.geosociety.org/meetings/index.htm

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**Modul 2: 3D-Modellierung und Visualisierung**
(R. Prissang, E. Spyridonos, 12.3.-16.3)
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- Einführung in Surpac2000 und Lynx
- Fallbeispiele: Modellierung in Geologie und Geomorphologie
- Durchführung eines Kurzprojektes mit Surpac2000

**Modul 3: Prozeßmodellierung**
(Prof. Dr. U. Bayer, Dr. J. Lang, A. Schumann, 19.3.-23.3)
- Prozeßmodelle in den Geowissenschaften
- Grundlagen der Analysis und Verfahren zur Lösung von linearen Gleichungssystemen
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Freie Universität Berlin, FR Geoinformatik
Kennwort: Weiterbildendes Studium
Malteserstr. 74-100, Haus D, 12249 Berlin

## GEOMATHEMATICS POSITION

A research position, or research and teaching position (half-time equivalent) is available at the Geomathematics Division, Universität Trier, Trier, Germany. Candidates are required to hold a Diploma, Masters, or equivalent degree in a geoscience, mathematics, or engineering, and will be expected to work towards a doctoral degree.

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Please send applications and inquiries to

Prof. Dr. Ute C. Herzfeld
Geomathematik, FB VI, Universität Trier
54286 Trier, Germany
uch@denali.uni-trier.de, fax *49-651-201-4609

Applications will be considered until the position is filled.

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**Request**: Looking for Computers & Geosciences (1989), vol.15, no.7 (whole issue)

Contact info:
Mike Morassutti, mike@climetsystems.com, 905-954-1193
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