

IAMG

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Newsletter

Official Newsletter of the International Association for Mathematical Geology

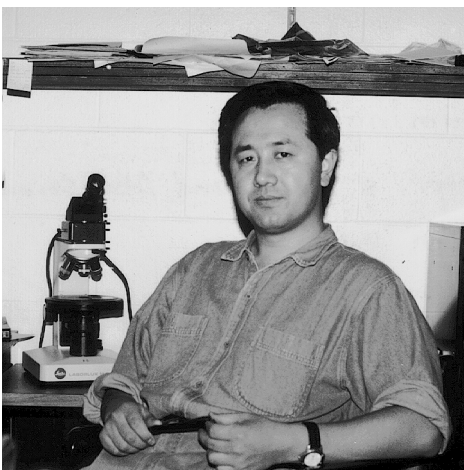
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1995 President's Prize awarded

Dr. **Qiuming Cheng** is the recipient of the 1995 President's Prize. He was selected by a committee comprised of four members from four different countries. Dr. Cheng has made new and significant contributions in the development of fractal-multifractal modeling and applications in the geosciences. Other research interests include applications and software development of Geographic Information Systems (GIS), spatial analysis, data integration, and mineral exploration and mineral potential mapping.

Dr. Cheng obtained a B.Sc. in Mathematics (1982) and an M.Sc. in Mathematical Geology (1985) at the Changchun University of Earth Sciences, China. For six years he worked on quantitative assessment and prediction of gold deposits in northern China. In 1994 he received a Ph.D. from the Department of Earth



Sciences at the University of Ottawa, Canada. He was awarded the 1995 Graduate Studies and Research Prize by the University of Ottawa. He has also recently been nominated by the School of Graduate Studies and Research of the University of Ottawa for the 1996 CAGI/UMI Distinguished Dissertation Award.

Dr. Cheng is currently an Assistant Professor in the Department of Earth and Atmospheric Science and Department of Geography, York University, Toronto, Canada.

1996 has been a year of change. After four years of running the association the old crew turned over their duties to the newly elected board (see the list of officers and council members on p. 2). Now is a good time to thank **Mike Hohn** and his crew for a job well

From the Editor From the Editor

done. This happened to be the first team of officers from the second generation of mathematical geologists - taking over from the founding fathers of the association (the past presidents were Dick McCammon, John Davis, Timothy Whitten, Dan Merriam, Andrew Vistelius) who have been running the ship for a long time. And, this new crew brought in some fresh air and new ideas. We think that the next team now embarking on a four year stint will continue this trend - if you look at what our new president **Ricardo Olea** has outlined on page 3.

Another kudo is due **Václav Nešmec** who has served as eastern treasurer since the foundation of the IAMG with a gap of only four years (1980-84). He has had the large responsibility to represent our association in that part of the world which until recently was less accessible to us westerners and almost impermeable for those living there. With great engagement Václav Nešmec has tried to further the causes of mathematical geology in the east, has helped to organize several meetings and started the Mining Příbram series and the conferences on geoethics. Now that the iron curtain has fallen and many countries have free convertible currencies he has laid down the office of eastern treasurer. We owe him a lot of gratitude and hope that he will be able to continue promoting the various causes of interest to him and to the association.

Harald S. Poelchau

CALL FOR PROPOSAL FOR IAMG'98 VENUE

The Association is accepting proposals to host and organize the 1998 IAMG annual conference. The deadline to receive proposals is February 7, 1997. The Council will make a decision shortly thereafter. Guidelines for preparing proposals are available from the President (see address on p. 2), to whom the bids should be submitted.

International Association for Mathematical Geology
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A BRIEF HISTORY OF COMPUTING

(excerpt from Dave Barry in Cyberspace)

Part V: The Evil Genius of MS-DOS

In the early days, different brands of computers used different operating systems, which meant that people switching from one computer to another would have to learn a completely new set of instructions. This was obviously inefficient, so in the early 1980s most major computer manufacturers agreed to stop forcing people to learn a bunch of different operating systems, and instead adopt a single, uniform, standardized operating system so absurdly non-intuitive that nobody could learn it. This system was called MS-DOS.

The MS, of course, stood for Microsoft, the company that was started by the brilliant software genius Bill Gates. Gates is a very rich man today -- Forbes magazine estimates that he's worth more than the entire O.J. Simpson defense team combined -- and do you want to know why? The answer is one word: versions.

To understand what I mean by versions, let's consider an analogy involving cars. Suppose you've purchased a new car, and you notice that, although it does move, it goes very slowly, is extremely hard to steer, and makes a loud scraping sound. You study this problem for a while, and you conclude that the most likely cause is that the car does not have any front wheels. So you mention this to the salesperson, and he tells you that you have Version 1.0 of the car, but

that Version 1.1 will be out shortly, and it will feature wheels in front as well as back. So when Version 1.1 comes out, you upgrade, which means you pay money. But you're happy, because now you have a car with a complete set of wheels, and you're totally satisfied with it from the moment that you pull out of the dealer's lot to the moment, about 90 seconds later, when you drive into a public fountain. This is when find out that brakes are not scheduled to appear until Version 1.3.

This is very much the way MS-DOS worked. The original version, 1.0, did virtually nothing except cause the computer screen to say:

A:>

That was it. Really. Ask anybody who used MS-DOS computers back then. You'd turn them on, and there'd be this A: staring back at you. What did it mean? Why A:? Why not some other letter, or even an actual word? And what was the little pointy > thing for? We will never know the answer. It's one of the many mysteries of MS-DOS.

So, anyway, people would turn on their computers, and stare at the

A:>

continued on p. 11

PRESIDENT'S FORUM

The Association had its quadrennial General Assembly last August 8 during the 30th International Geological Congress in Beijing. Part of the agenda of our General Assemblies is to appoint the voting members of the Council following the preferences indicated by the membership through mail balloting.

One of the privileges of being IAMG President is the opportunity to contribute to this column to comment on current matters affecting the health and welfare of the Association. I would like to take advantage of my first article to share my vision and agenda for IAMG.

I am grateful for the honor of being elected to preside over an Association that is in good shape financially and organizationally owing to the work and foresight of the members of previous Councils. I believe that we do not need a serious reorganization, only gentle touches to the stern trying to charter an even better Association or to adjust to external changes beyond our control.

The purpose of the IAMG is to promote the development and application of mathematical geology and geoinformatics in science and technology. To accomplish such objectives, the IAMG primarily publishes three journals, has organized a symposium on mathematical geology at every International Geological Congress since its chartering in 1968; in 1994 started its own system of annual conferences; and continues to sponsor joint meetings and programs with other professional associations. Yet, despite our best efforts, individual membership in the Association remains a critical issue.

For the last ten years, individual membership has fluctuated between 500 and 650 members, which is a perilously small number even for a special interest group like ours. Some members treasure the cozy atmosphere proper of an organization the size of IAMG. My counterargument is that we will have to increase our membership several fold before noticeably changing the character of our Association. I am not for growth for growth's sake. I believe that by doubling our membership we can make our future more secure, we can consolidate past accomplishment, and still be the same friendly organization that we are now.

I served one term as Chairman of the Membership Committee, so I know how difficult it is to achieve even zero growth, let alone to recruit enough new members to have growth. With computers taking over the world, one may presume that the universities are graduating students with stronger and stronger backgrounds in geoinformatics and mathematical geology. Consequently, an organization such as ours should be receiving applications from graduating geologists in increasing numbers at the same time that experienced geologists are joining IAMG to gain familiarity with emerging techniques that were not around when they received their diplomas. I would say that to a certain extent such a scenario is happening. Unfortunately for the Association and for the expectations of many geologists, these theoretical opportunities have been offset by more than ten years of a never ending process of restructuring, downsizing and consolidations in industry that has resulted in a severe reduction in the employment opportunities for mathematical geologists among others.

Considering that we cannot change world affairs and we cannot force anybody to join, if the Association is going to grow and flourish, we have to adapt to the external

circumstances by making the Association a more attractive alternative. In the free market of professional organizations, individuals do not join by the strength of pleas. They join by the value of the opportunities offered.

If the Association is going to grow and flourish, we have to increase the circulation of our journals and monographs. Papers should address relevant issues, new techniques should be presented in clear and convincing ways demonstrating the advantages of novel approaches over existing mathematical or traditional methods, and we need to have an active flow of contributions to our Oxford Monograph Series: Studies on Mathematical Geology.

If the Association is going to grow and flourish, we need to consolidate our newly established series of annual conferences. Recently, the conferences have been instrumental in recruiting new members and in the promotion of mathematical geology in the geographical area hosting the event. Short courses and workshops have been well received by those interested in learning about novel but established techniques, while the technical sessions concentrate in frontier approaches.

If the Association is going to grow and flourish, we have to expand the scope of the IAMG to include more disciplines and to work with other associations sharing some common goals. The last General Assembly already moved in that direction by creating a new Working Group on Quantitative Methods in Environmental Geology to operate jointly with the International Union of Geological Sciences (IUGS). The coming conference in Barcelona will feature sessions in disciplines never considered before, such as engineering geology, well log analysis, and marine geology.

If the Association is going to grow and flourish, we should improve our marketing abilities to let others know about our programs and opportunities through a strong and active Membership Committee. The Education Committee is working on an ongoing project intending to publish review papers on mathematical geology. To maximize the impact, the papers will be published in journals other than our own.

If the Association is going to grow and flourish, we need to expand our services both to members and non-members. At least two initiatives come to my mind, initiatives still in need of a closer scrutiny by the Council: a Distinguished Lecturer Series and research grants. Considering that many geologists cannot always afford to attend international conferences to learn about the latest techniques, the IAMG could bring those novel techniques to them. Other professional organizations offer such service, service that Past President Hohn tried to get started a few years ago. The second initiative also tends to primarily favor colleagues working for institutions or in countries going through hard economic times. I believe that IAMG could appropriate funds to support promising research in geoinformatics and mathematical geology, support that should work in the best interest of both science and the Association.

If the Association is going to grow and flourish, we need to have the involvement of all members. In an organization run on volunteer power, the sum and substance of IAMG is not solely determined by the commitment of its Council. IAMG is its members and will succeed to the extent that the membership participates in the Association and takes seriously their role of promoting through industry and academia that mathematical geology and geoinformatics are the way to go.

Ricardo Olea



IAMG Journal Report

Editors Report: Computers & Geosciences

The switch over of editorship from Dan Merriam to myself has been smooth. The final manuscripts processed by Dan appeared in the first two or three issues of 1996 (volume 22). The main changes so far introduced during my editorship have been (1) the structure and composition of the editorial board, (2) a new cover, (3) the use of a publicly accessible FTP site for access to programs, and (4) the initiation of discussions with Elsevier about the start of an electronic version of the journal. The mechanics of processing articles submitted to the journal follows a well beaten path, instituted by Dan. Kathryn Mackinnon is a proving to be an excellent Editorial Assistant. Paid by the hour by Elsevier, she works out of her home in an Ottawa suburb, and is 2 minutes walk from my own home. She uses an Alpha Four database to keep track of manuscripts, authors and reviewers, and uses e-mail extensively which cuts down on FAX and mail costs. We get about 3 papers submitted per week (150 per year), of which 25-30% are rejected.

The Associate Editors are now Agterberg, Butler, Cubitt, Grunsky, Herzfeld, Kouda, Peters and Unwin. Of these Agterberg, Cubitt and Peters remain from before, and I will briefly mention the role of the new members. John Butler was Guest Editor of a special issue on the Internet, and has started a column about all aspects of the Web called Another Node On interNet (ANON), which has turned into a regular, and popular, feature. John has also started a Virtual Poster Session (not directly related to C&G) and is busy preparing another special issue on Distance Learning that will appear in volume 23. Eric Grunsky has relinquished his post as book and software review editor, and is now Webmaster for IAMG and Computers & Geosciences in addition to his position as Associate Editor covering geochemical data analysis. Eric has designed and implemented the IAMG Home Page, and looks after the FTP site (a time consuming and valuable task), about which more is mentioned later. Ute Herzfeld brings her broad interests in mathematical geology and gives us an associate editor based in Germany and representing continental Europe. Roy Kouda has just started as an associate with a special role of increasing our contributions from Japan and the Far East. David Unwin brings his experience and knowledge in GIS to strengthen and expand this aspect of the journal. The new book review editor is Geoff Bohling from the Kansas Survey, providing a welcome continuity in the link between C&G and KGS. James Tweedie, assisted by Steve Henley and Ron Dougill, has just started as Software Review Editor. So many geologists use commercial software nowadays, that timely software reviews may help to increase the readership outside the traditional group of computer specialists.

The Assistant Editors and Editorial Correspondents that are continuing have been rolled into a new single Editorial Advisory Board. Many of the former names are continuing on the board, but some new members have been added to fill geographic and subject matter gaps. The new board members are Tony Fowler (fractals and nonlinear dynamics, Univ. Ottawa), Steve Franklin (remote sensing, Univ. Calgary), Steve Henley (databases, Consultant, UK), Max Meju (applied geophysics, Univ. Leicester), Berndt Milkreit (seismic, Univ. Kiel), Ross Renner (statistics, Univ. Wellington, NZ), Vasil Vuchev (general mathematical geology, Bulgarian Academy of Sciences), and Dave Watson (spatial interpolation, computational geometry, CSIRO, Perth).

One of the new features of the journal is the cover, which shows output from a 3-D structural modelling program, and associated geophysical responses. This software was developed by Mark Jessell at the Australian Geodynamics Cooperative Research Centre at Monash University in Melbourne. There is more information about this software on our web site, and this has been a popular item of interest. The plan is to change the cover every 2-3 years.

The FTP site IAMG.ORG started after the Prague 25th Anniversary meeting by Eric Grunsky is turning out to be very successful. The idea was to stop printing computer code in the journal (or greatly reducing it) and instead to put the programs and data sets on to the IAMG server for public access by anonymous FTP. The server is a machine belonging to the BC Geological Survey, to which a 3-Gbyte hard drive purchased with money from IAMG has been added. FTP access of programs is steadily increasing, and has reached a level of over 1000 downloads per month. In addition, access can be made via the IAMG Home Page on the Web (www.iamg.org), and individuals may use a searchable database generated from GEOREF (with payment by IAMG annually of a small royalty to AGI) which has linkages to program files and test data sets, compressed either for Dos, Unix or Mac operating systems. WWW access has reached a level of over 300 visits per month. An initial concern that this facility would prevent some access to code from developing countries has been dealt with by offering diskette availability, although in practice this has seldom been used. Also available on the IAMG Home Page or by FTP is access to various information files, such as Guidelines to Authors, Guidelines for Colour Separations, Journal Abbreviations used by C&G, and others. These are useful for editors and authors, and there are now about 30 hits per month for Guidelines for Authors.

An editors meeting was held with Peter Henn (Senior Science Editor from Elsevier Science Ltd in Oxford, responsible for C&G) and Sue Cloke (also from Elsevier and responsible for publicity for C&G) at AGU in December 1995 in San Francisco. Some of the topics discussed were as follows. (1) Attrition of institutional subscriptions was high for Nov 93-Nov 94 (11.1%), but

New C&G Title Page?

If anyone has good-looking colour computer output that they think might be suitable for the next cover of Computers & Geosciences, the Editor-in-Chief would be delighted to receive it.

moderate for Nov 94-Nov 95 (3.4%). (2) There are about 8 special issues in the works, and these will help to make up for the reduction in size of the journal now that programs are not printed. (3) There has been an increase in requests for sample copies (20 per month since Jan 94), probably attributable to the appearance of C&G on the Elsevier Internet Catalogue. (4) Our ISI citation factor over the last 5 years, starting in 1990, were 0.464, 0.623, 0.354, 0.434, 0.514. One of the key points for discussion with Elsevier at present is C&G Online, an electronic version of the journal that it is hoped will be launched during 1997. Elsevier have successfully started EPSL Online, an electronic version of Earth and Planetary Science Letters, and C&G Online will be modelled after it. The journal will still of course be printed, but the electronic version will have a number of valuable extra features: colour figures in abundance, hotlinks to abstracts of cited papers, hotlinks to computer programs and data bases, and others. The difficult question of payment is still under study. This is an exciting new venture, and it is hoped that C&G's early lead into the electronic publishing world will prepare it for the changes and challenges that inevitably lie ahead for all scientific journals.

The journal appears to be healthy, with plenty of material being submitted, and evidence of reader interest judging from the FTP and WWW activity. However, there is no room for complacency in the present economic climate, and the journal needs to maintain and improve its standards to remain a relevant and popular journal for geoscientists.

Graeme Bonham-Carter, Editor-in-Chief

Mathematical Geology

Editor Dan Merriam has received 65 manuscripts during 1996, a slight decrease compared to 1995. So far 11 have been rejected, 14 accepted, one referred to another journal and 39 are in review. Preparation of volume 28 is finished and will comprise the 1,000 pages in eight issues agreed in the contract with Plenum Press. The volume contains 54 technical papers, one short note, two discussion papers and several book reviews, letters-to-the-editor, and association announcements. Production of volume 29 for 1997 is well underway as it takes a 6-8 months lead time with the press.

Several problems now are beginning to show up in the manuscript processing, in addition to the normal irregularities. Slow response by reviewers causes delays and unnecessary problems to the authors and editor, an inconvenience with no immediate apparent remedy.

Many papers submitted now exceed the 5,000 word limit, cutting down on the number of papers that can be processed. Most authors apparently have difficulty in comprehending the "Instructions for Authors", and thus countless hours are required for the editor to complete and put the papers in the proper format and style. Some authors 'shingle' papers by submitting identical or almost identical manuscripts to several journals simultaneously, a difficult practice to detect and deter.

As recommended by the McCammon Commission in June of 1995, the Council decided to appoint Michael Ed. Hohn as the next Editor-in-Chief, who will take over editorial duties gradually with volume 30. Founding editor Merriam expects to use his experience to replicate a transition as smooth as the one he had transferring Computers & Geosciences to editor Graeme Bonham-Carter.

For *Current and Future Contents*

JOURNAL MATHEMATICAL GEOLOGY

see p. 10

Nonrenewable Resources

was moved in 1996 from Oxford University Press to Plenum Publishing Corp., the same publisher as for Mathematical Geology. The four years of our association with Oxford can best be characterized as unfulfilled expectations. Editor-in-Chief Richard B. McCammon published 103 of the 123 manuscripts received which translates to a 14% rate of rejection. The annual IAMG member subscriptions remained flat at an average 137 subscriptions while the non-member subscriptions (mainly libraries) showed a steady increase, starting at 39 and reaching 70 subscriptions during the fourth year. To provide some perspective, the journal needed 300 more member subscriptions to start being profitable in 1997. Since such was not to be, the parties agreed to an early termination of the five-year contract.

Plenum has just released volume 5, number 1 of the journal. It represents a new beginning with the approval of the council. Under the terms with Plenum an IAMG subsidy is not required. Plenum is committed to an aggressive publicity campaign this year in an effort to attract new non-member subscriptions. They have mailed 9000 brochures advertising the journal to professional societies, government and academia. McCammon envisages a bright future for the journal, addressing quantitative approaches to problems and issues in nonrenewable resources.



Upcoming Meetings

3rd GEOTECHNICAL ENGINEERING Conference in Egypt. Soil Mechanics & Foundations Research Laboratory. Cairo University, Egypt, **5-8 January 1997**. Mohamed Hosam. Phone: 202 5729124. Fax: 202 5729124

AAAS Annual Meeting and Science Innovation Exposition. Seattle, WA, USA. **13-18 February 1997**. <http://www.aaas.org>.

FUNDAMENTAL GEOLOGICAL PROCESSES - Geol. Vereinigung Annual Meeting, Jülich, Germany, **27 February - 1 March 1997**. U. Mann, ICG-4, Research Center Jülich, D-52425 Jülich, Germany, e-mail: u.mann@kfa-juelich.de (cosponsored by IAMG)

GEOFLUIDS II - Second International Conference on fluid evolution and interaction in sedimentary basins and orogenic belts, Waterfront Hall, Belfast, **March 10-14 1997**. Dept. of Geology, Queen's University, Belfast BT7 1NN, e-mail: J.Parnell@qub.ac.uk

4th Intern'l Conf. on REMOTE SENSING FOR MARINE AND COASTAL ENVIRONMENTS, Orlando, Florida, **17-19 March 1997**. ERIM/Marine Conf., P.O.Box 134001, Ann Arbor, MI 48113-4001, USA, Ph. 313-994-1200, Fax: 313-994-5123, e-mail: wallman@erim.org, <http://www.erim.org/CONF/conf.html>

15th Ann. Mtg. of the EGYPTIAN GEOPHYSICAL SOCIETY, Cairo, Egypt, **18-19 March 1997**. Baha El Din A. Elhakim, Phone: 202-2828040. Fax: 202-4820128

EUG 9 (European Union of Geosciences), Strasbourg, France, **23-27 March 1997**. EUG 9 Office, EOPG, 5 rue René Descartes, F-67084 Strasbourg Cedex, France, tel. +33 88 416393 or 450191, fax: +33 88 603887, e-mail: egug@eopg.u-strasbg.fr

AAPG, Ann. Mtg., Dallas. **6-9 April 1996**. AAPG Convention Dept., Phone: 918/584-2555

SIMULATION MULTICONFERENCE 1997. Society for Computer Simulation. (Computer Simulation, Military, Government and Aerospace Simulation.) Atlanta, GA, USA. **6-10 April 1997**. Steven Branch. Phone: 619-277-3888. Fax: 619-277-3930.

FRACTALS IN THE NATURAL AND APPLIED SCIENCES. 4th Int'l Multidisciplinary Working Conf., Denver, CO, USA, **8-11 April 1997**. Dr. Miroslav Novak, Kingston Univ., England, +44-181-547-2000, fax +44-181-547-7562, e-mail: novak@kingston.ac.uk, http://www.kingston.ac.uk/~ap_s412.

GEOTECHNICA '97. Cologne, Germany, **13-16 May 1997**. (GIS, GPS, remote sensing) 970/282-0402, fax: 970/282-0423, email: denny@psigis.com

IASTED Intern'l Conf. MODELLING and SIMULATION, Pittsburgh, PA, USA, **14-17 May 1997**. IASTED Secretariat-MS'97, 1811 W. Katella Ave., Suite 101, Anaheim, CA 92804, Ph. 714-778-3230, fax: 714-778-5463, e-mail: iasted@orion.oac.uci.edu

18th International GEOCHEMICAL SYMPOSIUM. Renaissance Hotel in Jerusalem, Israel, **25-29 May 1997**. P.O.Box 50006, Tel Aviv 61500, Israel, Phone: 972-3-5140000, Fax: 972-3-5175674 / 5140077; <http://192.114.77.89/IGES.htm>

8th GLOBAL WARMING International Conference & Expo (GW8). Columbia University, New York, NY, USA, **26-29 May 1997**. Prof. Sinyan Shen, Chair, +1 630-910-1551, Fax: +1 630-950-1561

EAGE Annual Meeting, Geneva, Switzerland, **26-30 May 1997**

The PIPELINE PIGGING Conference, Amsterdam, The Netherlands, **2 - 5 June 1997**. Pipes & Pipelines International, Tel: +44 (0)1494 675139, Fax: +44 (0)1494 670155, E-mail: 10070.1741@compuserve.com

4th SIAM Conference on GEOSCIENCES, Albuquerque, NM, **16-18 June 1997**. Org.: Clint Dawson (Rice and U. Texas, Austin). SIAM, 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/conf.html>

1997 INT'L GEOSCIENCE AND REMOTE SENSING SYMPOSIUM. Singapore. **4-8 August 1997**. Abstract submission deadline is January 13, 1997. 713/291-9222, fax: 713/291-9224, email: tstein@phoenix.net.

HEAT FLOW, SEISMIC STRUCTURE AND SEISMICITY IN ACTIVE TECTONIC REGIMES, Symposium, 29th General Assembly of IASPEI. Thessaloniki, Greece, **18-29 August 1997** Convenors L.Rybach, S.Smithson and M.Fytikas, Contact Person: L. Rybach, Zuerich, Switzerland, e-mail: rybach@geo.phys.ethz.ch

THERMAL REGIMES OF CONTINENTAL AND THERMAL LITHOSPHERES, Workshop, 29th General Assembly of IASPEI, Thessaloniki, Greece, **18-29 August 1997**, C. Clauser, Hannover, Germany, e-mail: c.clauser@bgr.de

MINERAL EQUILIBRIA AND DATABASES, Int'l Mtg., Helsinki, Finland. (International Mineralogical Association). **19-20 August 1997**. Pentti Holatta, Geological Survey of Finland, SF-02150 Espoo, Finland. Fax: 358-0-462205, E-mail: pentti.holatta@gsf.fi

AQUIFER SEDIMENTOLOGY, Symposium, Heidelberg, Germany. **2-4 September 1997**. T. Aigner, Institute of Geology, University of Tübingen, Sigwartstr, 10, 72076, Tübingen, Germany. Phone: 49(0)7071-295923. Fax: 49(0)7071-296990. E-mail: t.aigner@uni-tuebingen

NUMOG VI. Computers & Geotechnics, Montreal, Canada, **4-6 September 1997**. (Civil Engineering, Geotechnical Engineering, Computer modelling). Gyan Pande, Phone: +44 1792 29 55 17, Fax: +44 1792 29 56 76, e-mail: g.n.pande@swansea.ac.uk.

AAPG, Int'l. Conf. and Exhibition, Vienna, Austria. **7-10 September 1997**. AAPG Conventions Dept. Phone: 918/584-2555

XXVII Congress - GROUNDWATER IN THE URBAN ENVIRONMENT. Nottingham, United Kingdom. **21-27 September 1997**. Sponsor: International Association of Hydrogeologists. Prof. Stephen Foster Phone: +44-115-985-6545, Fax: +44-115-985-6612, <http://www.shef.ac.uk/uni/academic/D-H/es/iah.html>

IAMG Annual Conference - STATISTICAL ANALYSIS OF COMPOSITIONAL DATA, Barcelona, **22-27 September 1997**. Vera Pawlowsky, IAMG '97- Conference Secretariat, CIMNE- Campus Nord (Edifici C1) UPC, S.Eulàlia d'Anzizu, s/n, E- 08034 Barcelona (Spain), Tel: 34 - 3 - 401 60 37, Fax.: 34 - 3 - 401 65 17, e-mail: iamg97@ma3.upc.es; <http://www.iamg.org/iamg97.html>

The Mining Præsymposium "MATHEMATICAL METHODS IN GEOLOGY", Prague, Czech Republic, **6 - 10 October, 1997**. Dr. Václav Nemec, K rybníku 17, 100 00 Praha 10 - Strahov, Czech Republic, ph. 0042 (2) 7811801, fax 0042 (306) 23169, e-mail: nemcoval@vse.cz

WORLD PETROLEUM CONGRESS 1997, Beijing, **12-16 October 1997**. CNPC, Tel: +86 10 2095455, Fax: +86 10 2095447

AAAS Annual Meeting and Science Innovation Exposition. Philadelphia, PA, USA. **12-17 February 1998**. <http://www.aaas.org>.

4th Int'l Conf. on CASE HISTORIES IN GEOTECHNICAL ENGINEERING. University of Missouri-Rolla. St. Louis, MO, USA. **8-14 March 1998**. (Case histories, Foundations, Earth Dams, Deep Excavations, Engineering Vibrations, Earthquake Engineering)
Contact: Continuing Education. Phone: 573-341-6061. Fax: 573-341-4992 or Shamsher Prakash. Phone: (573) 341-4489. Fax: (573) 341-4729.

WATER ROCK INTERACTION-9, Taupo, New Zealand. **30 March-4 April 1998**. B.W. Robinson, Secretary General. Phone: +64 737 48211. Fax: +64 73748199. E-mail: wri-9@gns.cri.nz. <http://ruamoko.gns.cri.nz/wri-9>

AAPG Annual Meeting (held with Rocky Mountain Section), Salt Lake City, UT, **20-23 May 1998**.

EAGE, Leipzig, Germany, **8-12 June 1998**

AAAS Annual Meeting and Science Innovation Exposition. Anaheim, CA, USA. **21-26 January 1999**. <http://www.aaas.org>.

EUG 10 Meeting, Strasbourg, France, **28 March-1 April, 1999**.

AAPG Annual Meeting, San Antonio, TX, **11-14 April 1999**. e-mail: convene@aapg.org



MOZART WRITING THE DIGITAL VERSION OF HIS SYMPHONY NO. 38 IN D MAJOR

IAMG'97 Barcelona - LATEST NEWS

The organizing committee of the next IAMG conference (22-27 September 1997) has been busy preparing for the occasion. At the time of the release of this Newsletter, events scheduled include 15 short courses and workshops, 3 keynote lectures, and 12 special sessions.

The keynote speakers will be Dr. **John Aitchison** who will talk about Compositional Data Analysis; Dr. **Georgy Bardossy** on Statistical Methods in the Earth Sciences; and Dr. **Qiuming Cheng**, the 1995 President's Prize winner, on a subject yet to be announced.

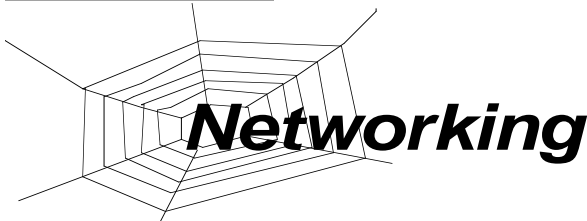
Sessions on the following topics are planned:

- 1) *Alternative Analyses of the Darss Sill Compositional Data Set.*
- 2) *Compositional Data in Petrophysics.*
- 3) *Statistical Analysis of Compositional Data in the Earth Sciences.*
- 4) *Advances in Environmental Geology.*
- 5) *Developments in Computer Software for the Geosciences.*
- 6) *Engineering Geology.*
- 7) *Geostatistics.*
- 8) *Neural Networks, Fractals, and Other Concepts in Fashion.*
- 9) *Numerical Methods in the Earth Sciences (26th Geochautauqua).*
- 10) *Marine Geology.*
- 11) *Modelling of Fluid Flow in Porous Media.*
- 12) *Seismology, Volcanism and Geodynamical Settings.*

The organizing committee may reshape the program depending on the interest of the participants. Do not worry if your favorite subject is not included as a main topic. Any contribution related to mathematical geology passing the review of the Scientific Committee will have the right to be in the final program.

Members are encouraged to participate. The first step is submission of an **abstract by January 30, 1997**. For additional information, please see Newsletter 51, p. 7-8, or contact the conference secretariat at the following address:

IAMG'97 - Conference Secretariat
CIMNE - Univ. Politecnica de Catalunya
Campus Nord UPC (Edifici C1)
E-08034 Barcelona (SPAIN)
tel.: +34 - 3 - 401 60 37
fax.: +34 - 3 - 401 65 17



The web site of the Association can be found under: www.iamg.org/iamg.html. It is maintained by **Eric Grunsky**. He can be contacted by e-mail at: (ericg@mp.gsb.empr.gov.bc.ca) and welcomes new ideas to put on the web site. One new useful feature is the listing of fully referenced (from GeoRef) C&G articles with links to FTP sites with program listings (see also list below).



Interesting web sites:

Geoscience Information group of the Geological Society of London: <http://www.bris.ac.uk/Depts/Geol/gig/gig.html>

GeoPOP (Geosciences Project into OverPressure) <http://www.dur.ac.uk/~dgl0zz7>



IAMG FTP SITE UPDATE

Source code files of programs published in Computers & Geosciences are available to download from the Association's ftp site "iamg.org" in directory /pub/CG. The following is a listing of new uploads since the complete listing was published in the last Newsletter. The programs are listed by volume, issue number, and article number (of each issue). All of the new files are available in DOS .zip and Unix .tar format.

- 22 4-1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13; 5-1, 2, 3, 5, 6, 9, 11; 6-1,3, 5, 9, 10, 11; 7-2, 4, 5, 6, 11, 12, 13

Association News

Proposed changes in statutes and by-laws

All of the 18 proposed amendments were approved by the voters and ratified by the board. A total of 177 voters responded by mail. The main changes are as follows: The association will have only one treasurer; the office of the eastern treasurer will be merged with the western treasurer. At the quadrennial International Geological Congress there may be more than just the Symposium on Mathematical Geology. The President's Prize will be known as the Vistelius Prize, and there will be awards of two new medals: the Griffiths Medal and the Chayes Medal.

Results of voting for the election of officers and council members (177 ballots)

President:	R. Olea	108	C. J. Mann	66
Vice President:	C. Gotway Crawford	94	J. Schuenemeyer	62
Secretary General:	T. A. Jones	86	V. Pawlowski	81
Treasurer:	D. Tetzlaff	147		

Council member:	D. G. Krige	119	U. C. Herzfeld	102
	C. M. Griffiths	97	S. Henley	88
	O. Dubrule	86	T. Shoji	86
	A. Förster	80	M. Maignan	65
	E.Y. Baafi	59	G. Bourgault	58



Geographic Information Systems for Geoscientists: Modelling with GIS by

G.F. Bonham-Carter, Pergamon, Oxford (1994), Computer Methods in the Geosciences 13, edited by Dan Merriam. 2nd printing. US\$43/NLG 69.00 softcover. Orders or more information: <http://www.elsevier.nl:80/catalogue/SAL/560/18410/18410/30523/30523.html>

Stochastic Modeling and Geostatistics--Principles, Methods, and Case Studies, AAPG Computer Applications 3. Edited by Jeffrey M. Yarus and Richard L. Chambers, 25 chapters. Hardbound, 380 p., color, index. ISBN 0-89181-702-6, Cat. #322-06, AAPG Member price: \$99, List price: \$149

Inverse Methods - Interdisciplinary Elements of Methodology, Computation, and Applications by B.H. Jacobsen, University of Aarhus, Aarhus, Denmark; K. Mosegaard, University of Copenhagen, Denmark; P. Sibani, University of Odense, Denmark, (Eds.), Springer-Verlag Heidelberg, 1996. XVI, 341 pp. 150 figs., 6 tabs. Softcover, DM 128,-; £ 60,-; FF 483,-; Lit. 141.360; öS 934,40; sFr 113, ISBN 3-540-61693-4

Statistical Evaluations in Exploration for Mineral Deposits by F.-W. Wellmer, Hannover, Germany (Original German edition published by Ellen Pilger Verlag 1989. Translated by D. Large), Springer-Verlag Heidelberg, 1996. Approx. 370 pp. 120 figs., 74 tabs. Hardcover, DM 98,-; £ 46,-; FF 370,-; Lit. 108.230; öS 715,40; sFr 86,50, ISBN 3-540-61242-4

Diagenetic Models and their Implementation - Modelling Transport and Reactions in Aquatic Sediments by B.P. Boudreau, Dalhousie University, Halifax, NS, Canada, Springer-Verlag Heidelberg, 1996. XVI, 414 pp. 75 figs., 19 tabs. Hardcover, DM 98,-; £ 46,-; FF 370,-; Lit. 108.230; öS 715,40; sFr 86,50, ISBN 3-540-61125-8

Stable Isotope Geochemistry by J. Hoefs, University of Göttingen, Germany, 4th completely rev., updated and enlarged edition, Springer-Verlag Heidelberg, 1996. XI, 200 pp. 73 figs., 22 tabs. Hardcover, DM 78,-; £ 36,50; FF 294,-; Lit. 86.140; öS 569,40; sFr 69,-, ISBN 3-540-61126-6

Petroleum and Basin Evolution - Insights from Petroleum Geochemistry, Geology and Basin Modeling edited by D.H. Welte, B. Horsfield, Forschungszentrum Jülich, Germany; D.R. Baker, Rice University, Houston, TX, USA, Springer-Verlag Heidelberg, 1997. 535 pp. 227 figs., 3 in color, 38 tabs. Hardcover, DM 168; £ 78,50; FF 633; ISBN 3-540-61128-2

Scientific Unit Conversion - Practical Guide to Metrication by F. Cardarelli, Université Paul-Sabatier, Toulouse, France, Springer-Verlag Heidelberg, 1996. XV, 456 pp. 187 figs., Softcover, DM 49,50; £ 19,50; FF 187,-; Lit. 54.670; öS 361,40; sFr 44,50, ISBN 3-540-76022-9

Modellierung dynamischer Prozesse in der Hydrologie - Grundwasser und ungesättigte Zone Eine Einführung von E. Holzbecher, Berlin, Springer-Verlag Heidelberg, 1996. XVI, 337 S. 88 Abb. 21 Tab., CD-ROM, DM 88; £ 41; FF 332; Lit. 97.180; öS 642,40; sFr 77,50, ISBN 3-540-60516-9
U.S. Springer-Verlag Customers: For Price Information please contact SV New York (201) 348-4033 (Toll Free: 1 (800) SPRINGER)

Handbook of Statistics, 13: Design and Analysis of Experiments edited by S. Ghosh, University of California, Riverside, CA, USA and C.R. Rao, Pennsylvania State University, University Park, PA, USA, Hardbound, NLG 375.00, US\$ 190.00, 1252 pages, 1996, NORTH-HOLLAND, ISBN: 0-444-82061-2

Advances in Porous Media (Volume 3) edited by M.Y. Corapcioglu, Texas A&M University, Department of Civil Engineering, College Station, TX, USA (1996) Hardbound, NLG 355.00, US\$ 222.00, 454 pages, ELSEVIER, ISBN: 0-444-82500-2

Physical Properties of Rocks: Fundamentals and Principles of Petrophysics by J.H. Schön, Joanneum Research, Institute of Applied Geophysics, Leoben, Austria (1995), 592 pages, PERGAMON, Hardbound NLG 267.00, US\$ 170.00, ISBN: 0-08-041008-1

Coupled Thermo-Hydro-Mechanical Processes of Fractured Media - Mathematical and Experimental Studies - Recent developments of DECOVALEX Project for radioactive waste repositories, edited by O. Stephansson, Royal Institute of Technology, Stockholm, Sweden, L. Jing, Royal Institute of Technology, Stockholm, Sweden and C.-F. Tsang, Ernest Orlando Lawrence Berkeley National Laboratory, Berkeley, CA, USA, 592 pages, ELSEVIER, Hardbound NLG 350.00, US\$ 218.75, ISBN: 0-444-82545-2

Simulating Oil Migration and Stratigraphic Traps edited by Johannes Wendebourg, PERGAMON (1997 in preparation) Hardbound, ISBN: 0-08-042431-7

Report: METHODS AND COMPUTER TECHNOLOGIES AND THEIR APPLICATION FOR GEOCHEMISTRY AND GEOENVIRONMENTAL RESEARCH, Lviv (Ukraine), October 29-31, 1996

Altogether 62 papers were prepared for the symposium and 56 abstracts published, but only about 50% presented, mostly by Ukrainian authors. Only a few visitors from the Czech Republic, Lithuania, Poland and Russia took part in the meeting, while Kazakhstan and Romania were represented only by the authors of published papers. Altogether about 50 persons were present, at least during some parts of the symposium.

Four specific topics were emphasized by the symposium: a) Geoecological data bases, b) Hydroecological problems, c) Principles and methods of automated geoecological mapping, d) Coal industry and ecology, protection of the local region.

The IAMG cosponsored the Symposium together with the Ukrainian Academy of Sciences and with the local Institute of Geology and Geochemistry of Combustible Minerals. The recent death of Academician Zabigaylo who was the organizer and chairman of these meetings since 1992 had some impact on the Symposium. This impact was small, however, compared with all the troubles and difficulties occurring in the daily life of the Ukraine. A shortage of money is evident everywhere, many Institutes are unable to pay even the relatively low wages to their employees, and practically all income is used only for paying wages owed. No money for heating, lights limited to the indispensable minimum, lack of electric current during the day... The same occurs in the hotels, lifts very often out of service, heating possible by additional electric heaters if you pay an equivalent of about three US\$ representing two days' income of retired people.

The organizers are to be congratulated for their efforts to bring together people trying to continue scientific research which, by the way, is especially needed in this country. Without the IAMG support the organization of the Third Symposium would have been impossible. Therefore, the IAMG is also to be congratulated for understanding and solidarity.

Václav Nešmec

† V. Yu. ZABIGAYLO (1934 - 1996)

Volodymyr Yukhimovich Zabigaylo was born in Dnepropetrovsk where he also studied at the Mining Institute and where he later worked with various organizations until 1986. He moved to Lviv and since March 1987 served as Director of the Institute of Geology and Geochemistry of Combustible Minerals of the Ukrainian Academy of Sciences. His work was remarkable for the large variety of both theoretical and practical problems he solved. The list of papers authored or co-authored by him has more than 200 items. The success of his work is shown by the top scientific and pedagogical degrees he received as well as by various prestigious awards.

In the Ukraine as well as in the former USSR he belonged to the pioneers who helped to introduce mathematical methods to earth sciences. His personal work and interest was focussed mostly on problems of predicting and prognosticating geological phenomena connected with practical exploration and exploitation problems, especially occurring in coal deposits and in oil and gas fields. He took an active part in numerous symposia in the former USSR. In 1977 he travelled abroad for the first time to the Mining Præibram Symposium and since 1991 he visited Præibram and Prague regularly and attended other international meetings as well.

In 1992 he organized in Lviv the First International Symposium on "Mathematical Methods and Computer Technologies and Their Application for Geochemistry and Geoenvironmental Research" cosponsored also by the IAMG. Despite incredible difficulties he continued in organizing the 2nd symposium of this series in 1994 and prepared also the 3rd symposium which took part in Lviv two months after his sudden, unexpected death. It was perhaps one of the last good news in his life when he learned that the IAMG Council approved financial support for the symposium. Fortunately he had found and prepared several younger colleagues able to continue in his scientific, pedagogic and organizational activities. Nevertheless his knowledge, experience, management ability, good humour as well as his personal charm will be missed by his colleagues and followers for a very very long time.

Václav Nešmec

Best Paper Awards

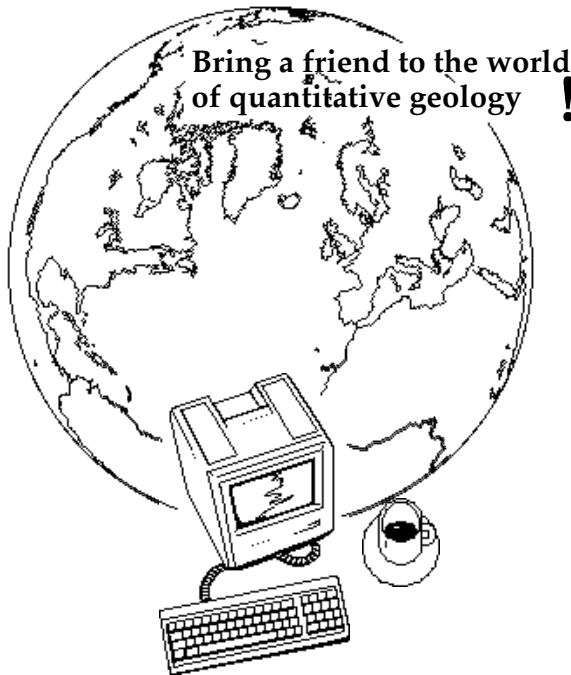
The Computers & Geosciences Best Paper Award for 1994 (v. 20) will go to:

E. Pardo-Iguzquize, M. Chica-Olmo, and F.J. Rodriguez-Tovar for the paper "CYSTRATI: a computer program for spectral analysis of stratigraphic successions" in C&G, v. 20, no. 4, p. 511-584.

The Best Paper Award for 1995 (v. 21) was won by:

Chris Brunson, University of Newcastle, for his paper "Estimating probability surfaces for geographical point data: an adaptive kernel algorithm" which appeared in C&G, v. 21, no. 7.

Best paper in Mathematical Geology 1994 was "Joint simulation of multiple variables with a Markov-type coregionalization model" by **Alberto S. Almeida** and **André G. Journel** in MG v. 26, no. 5, p. 565-588



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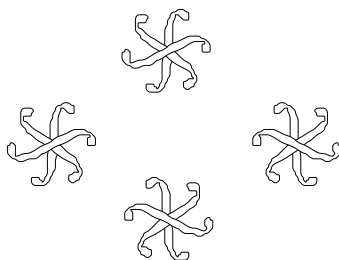
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SHORT NOTE

The border effect of simulated annealing, by P. Grouleau and D. Marcotte



Dave Barry ...from page 2

for awhile, scratching their heads, and then finally they'd try typing something after the A:>, perhaps something like:

A:> HELLO

But here was the crucial thing about MS-DOS Version 1.0: No matter what you typed in, it would respond as follows:

BAD COMMAND OR FILE NAME

Then, with no further explanation, it would go back to:

A:>

There were rumors -- never verified -- that if you typed in certain secret code words, you could get some response other than A:> or BAD COMMAND OR FILE NAME, but if there were such code words, only Bill Gates ever knew what they were. So mainly what this version of the MS-DOS was used for -- millions of person-hours were spent on this -- was trying to get it to do something, anything. If you were to travel back in time and look at the average person's computer screen during that era, you'd see what looked like a conversation between the computer user and an unusually hostile employee of the Department of Motor Vehicles:

```
A:> HELLO
BAD COMMAND OR FILE NAME
A:> HELP
BAD COMMAND OR FILE NAME
A:> DO SOMETHING!
BAD COMMAND OR FILE NAME
A:>RUN A PROGRAM, DAMMIT!
BAD COMMAND OR FILE NAME
A:>**** YOU
BAD COMMAND OR FILE NAME, ***HOLE
```

This was pretty much all people did with MS-DOS Version 1.0. So you can imagine how excited everybody was when Microsoft came out with Version 1.1, which had a whole new capability. In addition to doing this:

A:>

It would sometimes also do this:

C:>

A new letter! This was very, very exciting news for those of us in the computer geek world. We all immediately upgraded to Version 1.1. Of course, no matter what we typed, it still answered BAD COMMAND OR FILE NAME. But we felt renewed hope.

Over the next few years, Microsoft continued to come out with new improved, versions of MS-DOS, featuring a constantly expanding repertoire of incomprehensible and/or scary screen messages, including:

```
B:>
NON-SYSTEM DISK OR DISK ERROR
INVALID SWITCH
PATH NOT FOUND
WARNING! ALL DATA WILL BE LOST!
```

And just about everybody's all-time favorite:

```
ABORT, RETRY, FAIL?
```

We loyal Microgeeks faithfully upgraded every time a new version came out, until finally, somewhere around Version 3.7, we had reached the point where we could use MS-DOS to actually run programs on our computers, and Bill Gates had reached the point where he had approximately 217 personal jet airplanes.

20 Years Ago in IAMG News Letter

FORMER EIGEN MEMORIAL IN PARIS

A new report by the R. G. V. Eigen Memorial Committee

It is not generally known that for a long period Rudolf Eigen had a memorial to his genius in the form of a small station on the Paris Métro system. The first line of the Métro was built between Porte de Vincennes and Porte Maillot and came into operation in 1900. In a surprise decision, the Directoire du Métro designated a station to be named in honor of Eigen in recognition both of his scientific contributions and almost

legendary standing with Parisians of his day. However, the choice of an Austrian mathematician had pointed political overtones and was used as part of an abortive diplomatic initiative to drive a wedge between the Austrian and German emperors. Théophile Delcassé, the French minister for foreign affairs, presented the station keys to the Emperor Franz Joseph in a formal court ceremony at the Schönbrunn Palace in Vienna.

.....

The station met its end at the hands of German army demolition squads in the

International Association for Mathematical Geology

c/o Dr. Harald S. Poelchau

Forschungszentrum Jülich ICG-4

D-52425 Jülich

Germany