



IAMG

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Newsletter

Official Newsletter of the International Association for Mathematical Geology

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EIGEN LIVES!

The demise of Rudolf Gottlieb Viktor Eigen is shrouded in mystery. The Western school of thought believes that he fell to his death on the Pasterzen Glacier in 1876, and memorialized this event with a centennial bronze plaque at a bend in the Hochalpenstrasse that overlooks the Pasterzen. However, the circumstantial evidence of his death was hotly disputed by Russian mathematical geologists, who claimed that Eigen survived and spent the rest of his life as a missionary in Siberia, where he died in 1944. So far, no third school of thought has stepped forward to claim that he is still alive, a circumstance that is highly improbable because he would now be 164 years old.

However, his great-grandson Viktor Eigen is very much alive and well and, like his venerable forebear, is a gifted algebraist and essayist with all the intellectual passions and hot-blooded lifestyle that are the birthright of a true Eigen. It appears that Viktor was born in the central European town of Vyshrad and attended colleges in Prague and Budapest, before working on a doctorate at the Universität Berlin. He came to grief with the authorities when he took part in the student uprising of 1953 in the streets of East Berlin. Readers who are familiar with the Eigen temperament and erratic life history should not be surprised to learn that Viktor found himself on a Soviet military plane bound for Siberia, that it was shot down over Alaska, and that he was the only survivor. He laid low so as not to attract the attention of overzealous bureaucrats back in Moscow, and worked on the gold dredges outside Fairbanks. He shares a financial interest in the Bar X Casino on Lake Tahoe with two other rogue mathematicians, which supports some of his far-ranging projects.

Interested readers are invited to visit Viktor Eigen's page on the web at

<http://icecube.acf-lab.alaska.edu/~fsgrb/viktor/viktor.htm>

(or use the keywords: Viktor Eigen on one of the search engines). Among other things, you will learn something of Viktor's life history, his love of gambling (but not for gambling), and his sheared rotation of the opening passage of the book of Genesis as documented in the Dead Psi Scrolls.

JD

The International Association for Mathematical Geology is an international organization. This is not only evidenced by its name but also by the membership distribution. You may recall the brief presentation in one of the recent Newsletters by Jan Harff, our membership chairman, showing how our membership is spread clear around the

globe. With this in mind I would like to encourage you, the readers, to contribute more news about Mathematical

From the Editor
From the Editor
From the Editor

Geology in various countries around the world. Some things come to my attention, and I try to pass these on to you. In this issue there is a report on a meeting in Poland, one in Germany; some personnel changes in France, the reminder of the upcoming IAMG'97 in Barcelona, Spain, and the selection of Ischia, Italy, for the IAMG'98. More news, of course, comes from North America where the majority of our members reside. But where is the news from Asia and Australia? **You** have a lot more information that could be printed in this Newsletter. Please, e-mail me your news, or talk to me at the IAMG'97 in Barcelona - I'm planning to be there.

As your Newsletter editor and producer I also get to mail the copies and have to look at the number of members receiving the Newsletter. There are, of course, always fluctuations from issue to issue. For this issue I was rather shocked to find a drop from 686 previously to 448! That's a decrease of more than 25%. One of the causes for this is that our Japanese colleagues apparently had to join en masse for the Osaka meeting and are dropping out now. However, the decrease also points to the ever increasing pressure and the difficulties to keep up membership in our (just as in other) organizations. So, if you like this association and would like it to continue bringing information, articles and meetings, try to recruit your colleagues, neighbours, friends who might have some interest in the field of Mathematical Geology.

To make it easier to impress potential recruits (don't forget to mention the special discounts) we are now listing regularly in this Newsletter the entire contents of all three journals. This is done in order to whet your appetite and make you subscribe to more journals, and also inform those of you who have difficulty getting access to this kind of information.

Harald S. Poelchau

**Don't forget: IAMG'97 in
Barcelona - September 22-27 !**

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IAMG'98 - Late-breaking news!

The 1998 Annual Conference of the International Association for Mathematical Geology will be held on the island of **Ischia, Italy, from 5 to 9 October**. It will be chaired by **Giuseppe Nardi** of nearby Naples University and **Roberto Potenza** of CNR Milano. The main theme will be "time-space systems", however, **Antonella Buccianti** of the University of Florence, our contact at the National Research Council of Italy, plans on organizing a program as diverse as the one in Barcelona. The IAMG Council chose Ischia in a very close decision over the other contestant, the University of Trier, Germany (Prof. **Ute Herzfeld**), which had offered its campus on the beautiful Moselle River as a conference site.

Ischia is situated in the Gulf of Naples within view of the Vesuvius volcano and can be reached by ferry from Naples. It has attracted tourists for centuries and is also known for its baths and waters with curative powers. Visitors will find wonderful weather, superb scenery and any number of exquisite excursion goals of archeological and geological interest.

More information on the conference program, registration, lodging, etc., will be published in the next Newsletter. Also, watch the IAMG web site "www.iamg.com" for timely announcements.

CALL FOR PROPOSAL FOR IAMG'99 CONFERENCE

The Association is now accepting proposals to organize the fifth IAMG conference in 1999.

Since its beginning in Mont Tremblant in 1994, the IAMG conferences have been on the rise in terms of participants and prestige. The organizers of the coming conference in Barcelona have received 230 abstracts of intended presentations and more than 400 pre-registrations.

The Association skips IAMG conferences in "olympic years" (years divisible by four). Instead, the Association organizes a symposium in mathematical geology in conjunction with the International Geological Congress. The XXXI International Geological Congress will be held in Rio de Janeiro, Brazil, in the year 2000. Thus, following IAMG'99, the next opportunity to organize an IAMG conference will not come until the year 2001.

The **deadline** to receive proposals is **October 13, 1997**. The Council will make a decision before the end of that month. Those individuals who are interested in organizing IAMG'99 should obtain a copy of the "Guidelines to Prepare IAMG Conferences" from any of the Council members. Bids should be sent to the President (see inside front cover for addresses).

PRESIDENT'S FORUM

I want to take advantage of this opportunity to call to your attention the two largest sources of income in the 1996 Statement of Revenue and Expenses prepared by Treasurer **Dan Tetzlaff** on page 11.

The \$50,053 is a private donation by Mrs. Irene H. Chayes, wife of the late **Felix Chayes**. This is the largest donation ever received by the Association. It was given by Mrs. Chayes to honor the memory of her dear husband, who died as a result of injuries received in a car crash not far from his home in Kensington, Maryland, in January of 1993. Dr. Chayes spent most of his career at the Geophysical Laboratory of the Carnegie Institution in Washington working on the application of statistics to the understanding of igneous processes and the classification of igneous rocks. For his accomplishments the Association presented him with the ninth Krumbein Medal in 1984.

Earlier this year, Natalie C. Tenney--sister of Dr. Chayes--increased the endowment by contributing an additional \$15,000. At the present time a commission chaired by John Harbaugh, in consultation with the Chayes family, is discussing details on the implementation of the memorial.

Consistently with previous years, royalties paid by publishers remain the Association's largest true and systematic source of income. The amount that the Association charges for subscription is at cost. We act mostly as a collection agency for the publishers, forced by lessons learned early in the life of our first journal--Mathematical Geology. At that time the publisher received the payments and it was close to impossible to know who was a member of the Association and the complaints about journal mailing were rampant.

If one does not consider membership dues and monograph orders as true income, the only two systematic sources of income are the royalties that we receive from the publishers and the interest on investments, which in 1996 were \$55,329 and \$10,940 respectively. In a typical year like 1996, royalties from our publications accounted for 83% of our regular true income. Without such royalties there would be no IAMG, at least not the flourishing organization we have the privilege to enjoy today.

Members join the Association by subscribing to our journals. Besides its financial importance, our journals are the entry way to IAMG and one of our main products. Thus to care about quality of publications, to increase their circulation, and to negotiate favorable contracts is to work for the future of IAMG at a time when the publication market is beginning a revolution comparable to the invention of the press. Today compact disks and electronic files are here to challenge paper as the main medium for distribution of scientific ideas. Even our own Computers & Geosciences is waiting managerial and marketing decisions from its publisher to go online.

I have recently received the approval of the Council to establish an IAMG committee to look after our publications and coordinate efforts among Computers & Geosciences, published by Pergamon Press, now a subsidiary of Elsevier; Mathematical Geology and Nonrenewable Resources, published by Plenum Press; and the Oxford University Press Monograph Series on Mathematical Geology.

Frederik "Frits" Agterberg has accepted to serve as chairman of the new Publications Committee at least until the year 2000. Frits has begun a phased retirement after working for the Geological Survey of Canada in Ottawa for thirty-five years. Frits is a founding father of the Association, was a member of the first IAMG Council and then served another term as Councilor in 1976-80. His contributions to mathematical geology were recognized early in IAMG's life and in his career when he received the third Krumbein Medal in 1978. He is the author of the classic book Geomathematics and hundreds of papers, two of them winners of the Best Paper Award in Computers & Geosciences in 1979 and 1982. His professional experience includes serving as Associate Editor of the Canadian Journal of Earth Sciences (1969-1976), of Mathematical Geology since 1995, and of both Nonrenewable Resources and Computers & Geosciences for the entire life of the journals.

The Publications Committee and I look forward to receiving your valuable comments.

Ricardo Olea

Report on the IAMG Awards Commission

The IAMG Commission on Awards was established in autumn 1996 by President Ricardo Olea. John Harbaugh of Stanford University has been asked to chair the committee. The commission presently includes **Frits Agterberg** (Canada), **Graeme Bonham-Carter** (Canada), **Hernani Chaves** (Brazil), **Carol Gotway Crawford** (United States), **John Cubitt** (Great Britain), **Ghislain de Marsily** (France), **Olivier Dubrule** (England), **Tom Jones** (United States), **Vera Pawlowsky** (Spain), **Ulf Nordlund** (Sweden), **Tim Whitten** (Great Britain).

The goal of the commission is to provide guidelines for the IAMG's four major awards, namely the **Krumbein** medal, the **Vistelius** award, the **Chayes** medal, and the **Griffiths** medal. The Chayes and Griffiths medals are new and have not yet been

presented. The challenge is to maximize the effectiveness of the awards. The relatively small size of the IAMG overall is an aspect of the problem. Another issue stems from the fact that an endowment of the Chayes medal has been provided by the Chayes' family, whereas the other awards are not endowed.

The commission is currently formulating a series of recommendations that may result in reclassification of some of the medals as awards, as well as providing monetary stipends as aspects of some awards. Recommendations of the commission are expected by midsummer, in time for consideration at the IAMG's annual meeting in Barcelona in September.

John Harbaugh



Upcoming Meetings

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>

KNOWLEDGE MANAGEMENT for the Oil and Gas Industry, Houston, Texas, **23 - 25 June 1997**. Organisers: First Conferences, Tel: +44 171 404 0424, Fax: +44 171 404 7733, E-mail: cathy@firstconf.com, URL: <http://www.firstconf.com/>

ANTARCTICA and Global Change, int'l symposium, Hobart, Australia, **14-18 July 1997**. International Glaciological Society. Secretary General, IGS, Lensfield Rd., Cambridge CB2 1ER, U.K. Fax: 44 1223 336543. E-mail: 100751.1667@compuserve.com

WATER POLLUTION MODELING, Measuring, and Prediction, int'l conf., Southampton, U.K., **18-20 July 1997**. Wessex Institute of Technology, Ashurst Lodge, Ashurst Southampton SO40 7AA, U.K. Fax: 44/1703-292853. E-mail: WIT@wessex.witcml.ac.uk. URL: <http://www.witcml.ac.uk>

1997 INT'L GEOSCIENCE AND REMOTE SENSING SYMPOSIUM. Singapore. **4-8 August 1997**. Tel. 713/291-9222, fax: 713/291-9224, e-mail: tstein@phoenix.net.

International Congress of SPELEOLOGY, La Chaux-de-Fonds, Switzerland, **10-17 Aug. 1997**. Martina Golden. Phone: 810/666-1683. URL: <http://www.unine.ch/UIS97/>

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, Zürich, 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

PaleoForams '97, conf. and field trips, Bellingham, Wash. **17-21 Aug. 1997**. C.A. Ross, Dept. of Geology, Western Washington University, MS-9080, Bellingham, 98225. Fax: 360/650-3148. E-mail: rossjrp@henson.cc.wvu.edu

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.

2nd Regional APCOM'97 SYMPOSIUM on COMPUTER APPLICATIONS AND OPERATIONS RESEARCH IN THE MINERAL INDUSTRIES, Moscow, Russia, **24-28 August 1997**. Prof. Evgeny V. Kuzmin or Dr. Marina K. Peshkova, National Organizing Committee, Moscow State Mining University, Lenin Ave. 6, 117935 Moscow, Russia, Fax: (+7095) 956 9042, E-mail: ekuzmin@aha.ru

LARGE METEORITE IMPACTS and Planetary Evolution, Sudbury, Ontario. **30 Aug. - 5 Sept. 1997**. Dr. B.O. Dressler, Lunar and Planetary Institute, 3600 Bay Area Blvd., Houston, Texas 77058-1113. Fax: 713/486-2162. E-mail: dressler@lpi.jsc.nasa.gov

Shortcourse RISK ANALYSIS FOR OIL AND GAS PROSPECTS, at IFP in Paris, **1-5 September 1997**. Taught by Johannes Wendebourg of IFP, John C. Davis of the Kansas Geological Survey, and John W. Harbaugh of Stanford University. The shortcourse will make use of the Pergamon book by the lecturers: "Computing Risk for Oil Prospects: Principles and Programs" (1995). Contact Johannes Wendebourg, Institut Français du Pétrole, 1 & 4 Ave. de Bois Preau, F-92506 Rueil - Malmaison, FRANCE, Tel +33 - 1 - 47.52.71.29, Fax

+33 - 1 - 47.52.70.67, e-mail: johannes.wendebourg@ifp.fr

INTERACTIONS and OBSERVATIONS, ann. conf, Reading, U.K., **2-4 Sept. 1997**. Remote Sensing Soc. K. White, Dept. of Geography, Univ. Reading, Whiteknights, Reading, RG6 6AB, UK, Fax: 01734 755865, e-mail: k.h.white@geography.reading.ac.uk

AQUIFER SEDIMENTOLOGY, Symposium, Heidelberg, Germany. **2-4 September 1997**. T. Aigner, Institute of Geology, University of Tübingen, Sigwartstr, 10, 72076, Tübingen, Germany. Ph: 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

COAL SCIENCE, int'l conf., Essen, Germany, **7-12 Sept. 1997**. Conference Secretariat. Phone: 49-40-639-0040. Fax: 49-40-630-0736

FAULTS and SUBSURFACE FLUID FLOW: Fundamentals and Applications to Hydrogeology and Petroleum Geology, Penrose Conference, Albuquerque and Taos, New Mexico, **10-15 September 1997**. Dr. William C. Haneberg, New Mexico Bureau of Mines and Mineral Resources, New Mexico Institute of Mining and Technology, 2808 Central Ave. SE, Albuquerque, 87106, Tel: +1 505 262 2774, E-mail: haneberg@nmt.edu

RECOVERIES '97: Biotic Recoveries from Mass Extinctions, mtg., Prague, Czech Republic, **12-14 Sept. 1997**. Petra Hovorkova, Recoveries '97, Eurocongress Centre, Budejovicka 15, CZ 140 00 Praha 4, Czech Republic. E-mail: recovery@gli.cas.cz, URL: <http://www.gli.cas.cz/conf/recovery/recovery.htm>

EXPLORATION 97, Toronto, **14-18 September 1997** (decennial conf. on exploration technology with a session on Integrated Exploration Information Management). <http://www.geosoft.com/exploration97/explore97.html/>. Graeme Bonham-Carter is coordinating a preconference workshop on "Current topics in GIS and analysis of mineral exploration datasets", 9-13 September in Ottawa, see URL http://www.nrcan.gc.ca/gsc/explore/exp1_97.htm

Applications of GIS, Remote Sensing, Geostatistics, and Solute Transport Modeling to the Assessment of Non-point Source Pollutants in the VADOSE ZONE, mtg., Riverside, Calif. **19-24 Oct. 1997**. AGU, Meetings Department, 2000 Florida Ave., N.W., Washington, D.C. 20009, Phone: 202/462-6900 or 800/966-2481, Fax: 202/328-0566, E-mail: meetinginfo@kosmos.agu.org, URL: <http://www.agu.org>

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>

Natural Waters and Water Technology: Microorganisms and Chemistry in AQUATIC SYSTEMS, San Feliu de Guixols, Spain, Convenor: Ph. Behra (Strasbourg), **4 - 9 October 1997**. Dr. Josip Hendekovic, Head of EURESCO Unit, European Science Foundation, 1 quai Lezay-Marnésia, 67080 Strasbourg Cedex, France. Tel.+33 3 88 76 71 35 Fax.33 3 88 36 69 87 or E-mail: euresco@esf.org

The Mining Research Symposium "MATHEMATICAL METHODS IN GEOLOGY", Prague, Czech Republic, **6-10 October, 1997**. Dr. Václav Nežmec, K rybníckému 17, 100 00 Praha 10 - Strahov, Czech Republic, ph. 00420 (2) 7811801, fax 00420 (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

SPACE-TIME MODELLING of Bounded Natural Domains: Virtual Environments for the Geosciences, Convenor H.R.G. Hack (Delft), near Kerkrade, Netherlands, **9-14 December 1997**. Dr. Josip Hendekovic, Head of EURESCO Unit, European Science Foundation, 1 quai Lezay-Marnésia, 67080 Strasbourg Cedex, France. Tel.+33 3 88 76 71 35 Fax.33 3 88 36 69 87 or E-mail: euresco@esf.org

INRES '97, The 2nd International Non-Renewable Energy Sources Congress, Hormozgan, Iran, **16-21 December 1997**. Organisers: University of Illinois, Tel: +1 312 996 0801, E-mail: mansoori@uic.edu, URL: http://www.uic.edu/~mansoori/INRESC.97_html

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**

International Conference on PERMAFROST, Yellowknife, N.W.T., Canada, **23-27 June 1998**. J.A. Heginbottom, Geological Survey of Canada, 601 Booth St., Ottawa, Ontario K1A 0E8, Canada. Phone: 613/992-7813, Fax: 613/992-2468, E-mail: permafrost.conference@gsc.emr.ca, URL: http://www.nrcan.gc.ca/gsc/permaf_e.html

IAMG'98, Ischia, Italy, **5-9 October 1998**. Antonella Buccianti, Dept. Earth Sciences, University of Florence, Via La Pira, 4 50121-Firenze Italy, phone: +39-55-275 7496, fax: +39-55-284571, e-mail: buccianti@cesit1.unifi.it

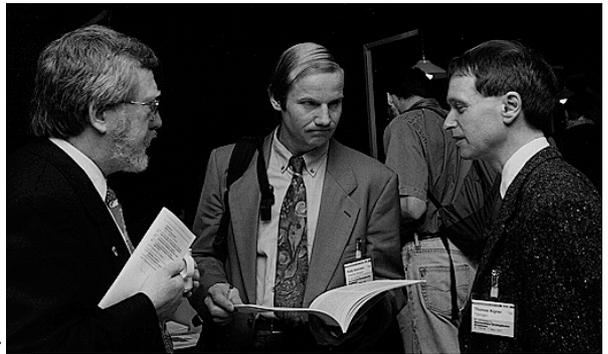
International Section on GEOETHICS, Pribram, Czech Republic: **12-14 October 1998**. Václav Nežmec, K rybníckému 17, 100 00 Praha 10 - Strahov, Czech Republic, ph. 00420 (2) 7811801, fax 00420 (306) 23169, e-mail: nemcoval@vse.cz

Meeting Reports: Fundamental Geologic Processes

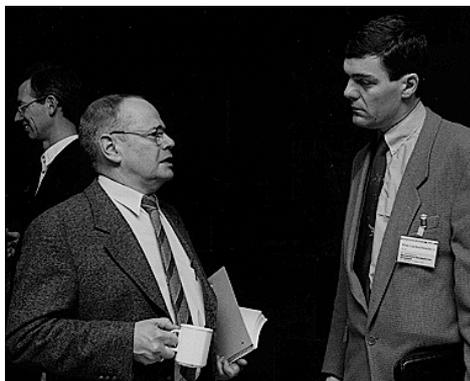
The Annual Meeting of the Geologische Vereinigung met in Jülich in February to present papers and posters on topics related to case histories, experiments and modelling in a variety of fields. There were some

outstanding presentations among the 21 invited keynote papers, e.g., by **Ulf Nordlund** (Uppsala) on application of fuzzy logic in geologic modelling and **Tim Cross** (Colorado School of Mines) on stratigraphic process-response systems and sequence stratigraphy. The meeting, sponsored by IAMG, was

organized by Ulrich Mann, **Harald S. Poelchau** and Dietrich Welte of the



Session chairmen *Rudy Swennen (c.)* and *Tom Aigner (r.)* in earnest discussion with one of the organizers



Jan Harff (l.) and *Klas Lackschewitz* at coffee break

Institut für Chemie und Dynamik der Geosphäre at the Forschungszentrum Jülich. Over 200 people attended the meeting and some 100 posters provided material for extended discussions among the participants. The abstracts are available as first issue of the 1997 volume of *Terra Nostra*, and several of the papers will be published in the *Geologische Rundschau*. H.H.

XXth SYMPOSIUM ON APPLYING MATHEMATICAL METHODS AND INFORMATICS IN GEOLOGY - Krakow, Poland, 22-23 April 1997

The series started in 1972, and for a long period these symposia used to be the most representative regular meetings of mathematical geologists in Poland. In the course of the last years the audience and the number of presented papers have decreased to about 50%. Nevertheless 14 papers were presented to a total of about 70 participants. Two papers came from the Czech Republic, the others from Polish authors from Krakow, Warsaw and Wroclaw. The subjects ranged from informatics of mineral databases, regional geology, and paleontology, to statistical applications, geophysics and hierarchical analysis of resources.

Abbreviated texts of papers or abstracts (only in Polish language) have been published by the organizers. The only Polish regular IAMG member, Professor M.Niec, was present to the symposium. I had also the occasion to inform the audience on recent activities of the IAMG. The IAMG publications appear to be accessible in some Polish libraries.

Václav Nežmec



First circular and call for papers IUGS/UNESCO DEPOSIT MODELING PROGRAM Workshop



31 August: Arrive in Almaty
1-2 September: Conference
3-12 September: Excursion
13-14 September: Workshop in Issyk-Kul
16 September: Return to Almaty
17 September: Departure in Almaty

Paleozoic granite-related Au, Cu, Mo, W, REE deposits and epithermal gold deposits Kazakhstan and Kyrgyzstan
August 31 - September 16, 1997

For full details and complete first circular
Send to: Dr. G. Gaál Hungarian Geological Survey
Geol. Institute of Hungary, H-1442 Budapest
POB 106, Hungary, fax: +36-1-251-0703

Registration fee: 50 USD
Excursion fee: 800 USD
Hotel (Almaty): 70-150 USD/day

Name: _____ Company/Institution _____
Address: _____
Tel: _____ Fax: _____ e-mail _____
I intend to present a paper I do not intend to present a paper
Preliminary title: _____
Probability of participation: sure good fair
I will need support: registration Excursion fee Hotel



IAMG Journal Report

New IAMG Publications Committee

Following the initiative taken by our President, I was recently appointed as Chairman of the new Publications Committee which will primarily be concerned with safeguarding and expanding royalty income from our publications. This poses an important challenge because we live in a time of significant change with the Internet emerging as the alternative publication outlet of choice. My first task was to help select the committee members. The Editors-in-Chief of our three journals are most concerned with publishing matters. I am happy to announce that **Graeme F. Bonham-Carter** (Computers & Geosciences), **Daniel F. Merriam** (Mathematical Geology) and **Richard B. McCammon** (Nonrenewable Resources) all immediately agreed to serve, as well as **Michael Ed. Hohn**, future Editor-in-Chief of Mathematical Geology. In order to increase representation from outside North America, **Niichi Nishiwaki-Nakajima** (Japan) and **John C. Tipper** (Germany) were invited and have joined as well. At the end of May 1997, this seven-person composition of the Publications Committee was fully approved by IAMG Council.

Arrangements have been completed for a student discount for IAMG membership with subscription to Computers & Geosciences (see side bar). This is an important new development. Upon providing proof of studentship by means of endorsement by a faculty member at their university, students can become members at a 50% discount which will later apply to Computers & Geosciences Online as well. The cost of the discount (currently US\$32.50) will be shared in equal parts by the Association and the Publisher (Elsevier). At a regular cost to IAMG members of US\$65 per year, Computers & Geosciences is more expensive than Mathematical Geology (US\$30) and Nonrenewable Resources (US\$45). The C&G discount comes into effect immediately. Students eligible for the discount at present will not have to provide proof of studentship at the end of the year when memberships are due for renewal. However, continued endorsement by a faculty member will be required for subsequent renewals.

IAMG members are cordially invited to provide members of the new Publications Committee with comments and new ideas.

Frits Agterberg

Chairman, IAMG Publications Committee

Geological Survey of Canada, 601 Booth Street, Ottawa, K1A 0E8, Canada, E-mail: agterberg@gcs.nrcan.gc.ca

COMPUTERS & GEOSCIENCES

50% DISCOUNT ON NEW STUDENT SUBSCRIPTION !!!
(in words: Fifty percent!)

Current full IAMG membership with Computers & Geosciences subscription is US\$65.

New student* rate for membership and G&C is US\$32.50

*Application form, to be certified by a faculty member, available from the IAMG Treasurer, Dan Tetzlaff (e-mail: dmt@sunserv17.aws.waii.com)

!!!! WIN A FREE SUBSCRIPTION TO COMPUTERS & GEOSCIENCES !!!!

The editors of Computers & Geosciences wish to change the cover design periodically and are soliciting the very best in images, simulations, or graphic design. As such, a contest is being held so that participants may submit materials for consideration. The person who submits the entry selected by the editorial staff will win a free 12 month subscription to the journal.

Cover images submitted must:

- scale so as to fit into the bounds (19cm wide x 14cm high).
- be of interest to the readership and pertain to the subject matter of Computers & Geosciences, i.e., relate to both computers and Earth Sciences
- be self explanatory
- be colourful and eye-catching
- not be cluttered

entries must be received by 15 August 97

-> **Winner to be announced @
IAMG'97 in Barcelona, Sept. 22-27** <-

To submit an image -

-> post (upload) it with ftp as follows:
ftp nrm1.nrcan.gc.ca
login: anonymous
password: *your e-mail address*
cd pub/incoming
binary
put *myname.zip*
quit

-> please advise Tony Fowler by e-mail:
afowler@uottawa.ca

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- pp. 175-187 — Mass types, element orders and solution schemes for the Richards equation — S-H JU, K-JS KUNG
- pp. 189-194 — Least-squares fit of an ellipse to anisotropic polar data: application to azimuthal resistivity surveys in Karst regions — D HART, AJ RUDMAN
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- pp. 221-223 — Internet benefits -- an organizations perspective — B ABRAHART, JC BUTLER
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- pp. 226-227 — Spatial Reasoning for Effective GIS, by Joseph K. Berry — G BOHLING
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- pp. 267-272 — A spatially distributed hydrologic model utilizing raster data structures — DL JOHNSON, AC MILLER
- pp. 273-282 — DATA BASEment: a geological data base for the study of the Paleozoic successions of the Northern Apennines basement, Central Italy — C VERRUCCHI, A MINISSALE
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- pp. 305-315 — Stassage: A Fortran program to decode stratigraphic ages from the international IGBADAT database — AT AL-MISHWAT
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1. Guest editorial; Exploratory cartographic visualization: advancing the agenda, by A. M. MacEachren and M.-J. Kraak
2. Exploring spatial data representation with dynamic graphics, by J. Dykes
3. Dynamic graphics in a GIS: more examples using linked software, by D. Cook, J. Symanzik, J. J. Majure, and N. Cressie
4. Visualizing spatial data uncertainty using animation, by C. R. Ehlschlaeger, A. M. Shortridge, and M. F. Goodchild
5. Modelling and visualizing multiple spatial uncertainties, by T. J. Davis, and C. P. Keller
6. Dynamic display of spatial data reliability: does it benefit the map user?, by B. J. Evans
7. Time-series animation techniques for visualizing urban growth, by W. Acevedo and P. Masuoka
8. Role of dynamic cartography in simulations of landscape processes based on multi-variate fields, by L. Mitas, W. M. Brown, and H. Mitasova

Call for nominations of editors

Editor **McCammon** is planning his retirement from the US Geological Survey. As part of this planning he is considering to step down as Editor-in-Chief of both publications under his direction: **Nonrenewable Resources** and the Monograph Series **Studies in Mathematical Geology** published by Oxford University Press.

Michael Hohn, currently the Deputy Editor of **Nonrenewable Resources**, is soon to be Editor-in-Chief of **Mathematical Geology**, taking over from **Daniel Merriam** who has been filling in until Michael finished his term as President of IAMG. Because of this new assignment, Michael has gracefully removed himself from consideration as future Editor-in-Chief of **Nonrenewable Resources**.

Neither **Nonrenewable Resource** nor the Monograph Series have a clear successor to replace Dick. The search is open and Editor McCammon is willing to receive suggestions from the Council to replace him in either of his capacities. The future editor does not have to be a super-editor as Dick. Applications will be considered for individuals willing to take over only one of the publications.

Once the Publications Committee and the Council agree on the new editors, obviously there will be a transition period which may take the better part of a year.

9. New media and their application to the production of map products, by W. Cartwright
 10. Principles of hypermaps, by M.-J. Kraak and R. Van Driel
 11. Visualization and interaction tools for aerial photograph mosaics, by Fernandes J. P. Fernandes, A. Fonseca, L. Pereira, A. Faria, H. Figueira, I. Henriques, R. Garcao, and A. Camara
 12. The use of VRML for cartographic presentation, by D. Fairbairn and S. Parsley
 13. Cognitive spaces and metaphors: a solution for interacting with spatial data, by N. Neves, J. P. Silva, P. Goncalves, J. Muchaxo, J. M. Silva, and A. Camara
 14. Commentary: Going virtual with geographic information and scientific visualization, by T. M. Rhyne
 15. ANON: Evolution of Internet Resources in Spain, by K. Bitzer, and J. C. Butler
- Volume 23, Number 5 (1997)**
1. Guest editorial, by John C. Butler
 2. Moving beyond the current state of the Internet, by Edward S. Chen and Diniel B. Davison
 3. The future of scientific communication in the earth sciences, by Tim R. Carr, Rex C. Buchanan, Dana Adkins-Heljeson, Thomas D. Mettelle, and Janice Sorensen
 4. The Internet in universities, by John Pickering
 5. A virtual geoscience professor, by John C. Butler
 6. Insights on WWW-based teaching: climbing the first-year cliff, by Michelle N. Lamberson, Mark Johnson, MaryLou Bevier, and J. Kelly Russell
 7. Using the Internet in teaching and learning, by Paul Browning and Jane Williams
 8. Searching the World Wide Web for geoscience resources, by Steven H. Schimmrich
 9. Creating a course-based web site in a university environment, by Bernard R. Robin and Sara G. McNeil
 10. Computer-based learning and assessment: a palaeontological case study with outcomes and implications, by A. P. Boyle, D. N. Byron, and C. R. C. Paul
 11. Assignment of World Wide Web virtual museum projects in undergraduate geoscience courses, by Timothy R. Patterson
 12. The UCLA electronic statistics textbook, by Jan De Leeuw
 13. Cross-disciplinary education: the use of interactive case studies to teach geophysical exploration, by Thomas M. Boyd and Phillip R. Romig
 14. Virtual seminars, by H. Roice Nelson Jr.

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 Additive models in mining and exploration, *Konrad Walder*
 Classification of Mineral Deposits into Types using Mineralogy with a Probabilistic Neural Network, *Donald A. Singer and Ryoichi Kouda*
 Raw Materials Activities of the Manhattan Project on the Colorado Plateau, *William L. Chenoweth*
 Fractal Lognormal Percentage Analysis of the U.S. Geological Survey's 1995 National Assessment of Conventional Oil and Gas Resources, *Robert A. Crovelli, James W. Schmoker, and Richard H. Balay*
 Long-term Implications of New U.S. Gas Estimates, *E.D. Attanasi and J.W. Schmoker*
 Book Review, European Coal Geology, *Richard F. Bonskowski*
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 Introduction to Special Issue on the loss of cultural heritage - An international perspective, *Catherine M. Cameron*
 Past imperfect, future tense - Archaeology and development, *Karen D. Vitelli and K. Anne Pyburn*
 Looting, collecting, and the destruction of archaeological resources, *Ricardo J. Elia*
 Museums and the market - Exploring Santa Fe, Stephen H. Lekson
 Mali's many shields of its past, *Roderick J. McIntosh, Boubacar Hama Diaby* (with sidebar by Tereba Togota)
 Private property: National legacy - Protecting privately owned archaeological sites in the United States, *Mark Michael*
 A regional approach to cultural preservation - A Central American example, *Frederick W. Lange and Mario Molina C.*

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- Directions Column: Matchboxes and dice, *Lawrence J. Drew*
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 Quantitative estimates of the geology of large regions and their application to mineral-resource assessment, *John C. Griffiths, A. D. Pilant, and Chester M. Smith, Jr.*
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 Book Review: U.S. Coal Reserves - A review and update, *Michael E. Hohn*

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- Directions Column: Minerals, national security, and foreign policy, *W. David Menzie*
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 Quantitative evaluation of coal as source rocks, *Yachun Wang, Xiongqi Pang, Shuangfang Lu, and Zhangming Chen*
 An approach to reserve estimation enhanced with 3-D seismic data, *Renfang Pan and Xinhua Ma*
 Geologic risk, economic assessment, and optimal decision-making of petroleum plays in the Bohaiwan basin, northern China, *Gonyan Chen, Gongquan Li, and Zezhong Wang*
 Information gain in prospect assessment using basin modeling, *Ruoze Qin, Yanhui Li, and Yongmei He*
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 Uncertainty analysis and the relative contributions of geological factors for the Qingshankou source rocks in the North Songliao

Basin, northeastern China, *Xiongqi Pang, Zhangming Chen, and Ian Lerche*

- A probabilistic method for resource appraisals in a petroleum play and its application, *Jingzhen Xu, Xiaodong Liu, Zhangming Chen, and Chunwen Gao*
 Risk and decision making analyses and applications to the petroleum exploration in a certain PSC area, *Mingyin Zhang, Xiaokang Fu, and Shibin He*
 Conditional simulation as a tool for measuring uncertainties in petroleum exploration, *Guocheng Pan*
 Oil- and gas-resource assessment in certain South America basins - An application of the modified Arps-Roberts discovery process modeling system[ARDS (ver. 5.0)], *Lawrence J. Drew and Jack H. Schuenemeyer*
 Application of Discovery Process Models in Estimating Petroleum Resources at the Play Level in China, *Zhuoheng Chen, Richard Sinding-Larsen, and Xinhua Ma*

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 A variance-ratio test for supporting a variable mean in Kriging, *P.K. Kitanidis*
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 Directional effects on convergent flow tracer tests, *X.S. Vila, and J. Carreira*
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 ASSOCIATION ANNOUNCEMENT: The eighth general assembly of the IAMG (Beijing, China).

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 Implications of low-pass filtering on power spectra and auto-correlation functions of turbulent velocity signals, *A.G. Roy, P. Biron, and M.F. Lapointe*
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 Statistical characterization and stochastic modeling of pore networks in relation to fluid flow, *R.D. Hazlett*
 Flexible spectral methods for the generation of random fields with power-law semivariograms, *J. Bruining, D. van Batenburg, L.W. Lake, and A.P. Yang*
 SHORT NOTE: Random field generation using simulated annealing vs. fractal-based stochastic interpolation, *J.H. Fang and P.P. Wang*

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Spatial stochastic modeling of fault populations by a marked-point
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Modeling spatial variability with one and multidimensional
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Scales of reservoir heterogeneities and impact of seismic resolution
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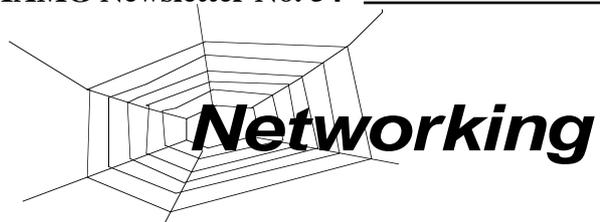
Harmonic analysis of sedimentary cyclic sequences in Kansas,
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Improved estimation of the Box-Cox transform parameter and its
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Comparison of the methods of rock-microscopic grain-size
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P. Rozsa*

A simple and robust lognormal estimator, *D. Marcotte and P.
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Permutation methods for determining the significance of spatial
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Interesting web sites:

Interested in **Geostatistics**? Here are some pages with links
to various sites dealing with this discipline:

Intera Inc.'s page:

<http://www.intera.com/link/lnkstat.html>

Yvan Pannatier's link page:

<http://www-sst.unil.ch/geostatistics.html>

The Norwegian SAND link page:

<http://www.nr.no/home/SAND/wwwSites.html>

Centre de Géostatistique, Fontainebleau, France:

<http://cg.ensmp.fr/>

Home of the PCRaster research team (GIS, environmental
modelling and geostatistical modelling.) is The Netherlands
Centre for Geo-ecological Research (ICG):

<http://www.frw.ruu.nl/pcraster/pcraster.html>

Mathematical Geology: Studies for Students

An initiative from the IAMG Education Committee

One goal of the IAMG is to show how the various approaches that
are part of mathematical geology are best used. To help do this, the
Education Committee has started to develop a series of articles on
mathematical geology that lead by example. It is developing this
series with selected international journals.

This initiative has now received an extremely positive response from
a wide variety of internationally respected journals and societies, and
this response has more than justified the Committee's initial hopes
for the initiative. The spectrum of positive replies ranges through:

- Exploration Geophysics and Petroleum Geology ('Geophysics',
'Petroleum Geoscience');
- General Geology and Geological Education ('Geoscience Canada',
'Journal of Geological Education', 'Journal of the Geological
Society of London', 'The Compass');
- Geography, Soil Science, Engineering Geology and the
Environment ('Applied Geography', 'Environmental Geology',
'European Journal of Soil Science', 'Quarterly Journal of
Engineering Geology');
- Mathematical Geology ('Computers & Geosciences', 'Journal of
Mathematical Geology');
- Paleontology ('Palaeontology');
- Sedimentology and Stratigraphy ('Journal of Sedimentary
Research', 'Sedimentary Geology').

It is now time for the second stage of the initiative - implementation -
and this **requires your help**. What the Committee now wants are
articles on topics in mathematical geology that fit within the format
of the series and are appropriate for publication in any of these
participating journals. The individual articles will appear in the
journals for which they are most appropriate: only articles that are
purely mathematical or computational will appear in the IAMG's
own journals ('Mathematical Geology' and 'Computers &
Geosciences'). This will ensure that each article gets to be read by
the people for whom it is written - the students and professionals
who find they need to work on that topic.

The series is aimed at students and professionals alike, and each
article in it should cover one distinct topic in mathematical geology,
in its broadest sense. The articles should be clear and systematic;
each article should cover its topic from a relatively basic level
through to one of some sophistication, all the time showing by
example just how that type of work is properly done, how the
principal pitfalls can be avoided, and where to look to get help.

Topics for the series should be ones that can be handled relatively
completely within articles that are more like book chapters than
whole books - and topics, above all, that are both interesting and
important to get right. Many varieties of topic are appropriate: if

The IAMG server has been moved from Victoria, British
Columbia to Ottawa, because the Webmaster, **Eric Grunsky**
has changed jobs. Eric continues as Webmaster, and the site
address (www.iamg.org) is unchanged. The FTP site and
searchable bibliographic database for Computers &
Geosciences continue to grow in popularity, as increasing
numbers of people discover that they can download code
described in the journal.

Member News

Daniel F. Merriam retires from the Kansas Geological
Survey on June 30. A retirement dinner was held in
Lawrence on May 23. Although officially "retired", Dan will
continue to work at the Kansas Survey, and will continue to
be active in IAMG affairs.

Pierre Goovaerts received an offer for an appointment as
Assistant Professor in the Department of Civil and
Environmental Engineering in Ann Arbor and I will be back
in the US in September.

.....
someone wants to write a strictly methodological article for the
series, then they can do it; if someone else wants to write on
analysing one type of data, or on developing one type of model, or
on one specific case-study, or on the physical and chemical
principles behind one type of geological process, then that's ok too.
As to authorship, the only criteria are competence, skill in
presentation, and willingness to do the job. If you fit those criteria
and you've always wanted to show people how some particular type
of work really should be done, then the IAMG Education
Committee wants to hear from you. Yes, p YOU!

John C. Tipper (Chair, IAMG Education Committee)
Geologisches Institut, Albert-Ludwigs-Universität, Albertstrasse
23B, D-79104 Freiburg, Germany, Fax: 0761-203-6483, email:
john@perm.geologie.uni-freiburg.de



Variowin: Software for Spatial Statistics. Analysis in 2D, Yvan

Pannatier (University of Lausanne, Switzerland), Springer-Verlag, 1996. IX, 91 pp. 37 figs. 3 1/2" diskette., Hardcover ISBN 0-387-94679-9, DM 78,- \$49.95

This book and diskette package provides Windows software for analyzing spatial data and state-of-the-art graphical tools for variogram surfaces, directional variograms, h-scatterplots, and variogram clouds. By making use of several measures of spatial continuity it provides a unique environment for geostatistical estimation or simulation. The four components to the software will enable researchers in spatial statistics and geostatistics to interactively analyze and model the spatial continuity of spatial data, produce variogram surfaces and directional variograms in any direction, interactively mask data pairs thought to adversely affect measures of spatial continuity, and produce maps of experimental and modelled variogram surfaces. As a result, all researchers concerned with this subject will find this an invaluable desktop tool.

Ocean Circulation Theory, J. PEDLOSKY (Woods Hole Oceanographic Institution, MA), Springer-Verlag, 1996, 464 pp., 166 illus., hardcover \$89.95, ISBN 3-540-60489-8

The waters of the earth are gathered in irregular, interconnecting basins that, when heated by the sun and driven by the rain, circulate endlessly in a pattern called the general circulation of the ocean. In this volume, Pedlosky describes advances made in the last fifteen years in the theory underlying this pattern of flow, providing fundamental insights into the theory of the large scale physical dynamics of the oceans. The topics he covers include the theory of wind-driven circulation, the thermocline, and equatorial and abyssal circulation. Pedlosky has blended analytical and numerical results to achieve as deep a physical understanding of the dynamics of large scale circulations as possible. He compares the results of these theories with observations, reviewing the theories' successes and failures.

The Mathematics of Models for Climatology and Environment, J.I. Daz (Universidad Complutense de Madrid, Spain), Editor, (NATO ASI Series I: Global Environmental Change. Vol. 48), Springer-Verlag, 1997. XVI, 478 pp., Hardcover \$239.00 ISBN 3-540-61879-1

This book presents a coherent survey of modeling in climatology and the environment and the mathematical treatment of those problems. It examines general models as well as models related to local problems. Most of the mathematical models considered here involve systems of nonlinear partial differential equations. The topics covered include the existence and uniqueness of well-posed problems, long time behavior, stability, bifurcation, diagrams of equilibria, conditions for the occurrence of interfaces or free boundaries, numerical algorithms and their implementation, and controllability of the problems.

Stochastic Models in Geosystems, S.A. Molchanov (University of North Carolina at Charlotte, NC), W.A. Woyczynski (Case Western Reserve University, Cleveland, OH), Editors, Springer-Verlag, 1997. Approx. 460 pp. 120 figs. Hardcover \$69.95 ISBN 0-387-94873-2

This volume contains the edited proceedings of a workshop on stochastic models in geosystems held during the week of May 16, 1994 at the Institute for Mathematics and its applications at the University of Minnesota. The authors represent a broad interdisciplinary spectrum including mathematics, statistics, physics, geophysics, astrophysics, atmospheric physics, fluid mechanics, seismology and oceanography. The common underlying theme was stochastic modeling of geophysical phenomena, and papers appearing in this volume reflect a number of research directions that are currently pursued in this area. From the methodological mathematical point of view most of the contributions fall within the areas of wave propagation in random media, passive scalar transport in random velocity flows, dynamical systems with random forcing and self-similarity concepts including multi-fractals.

Undiscovered Petroleum and Mineral Resources.

Assessment and Controversy, by Lawrence J. Drew, Plenum Publishing, 1997, 0-306-45524-2, 205 pp., \$59.50 (\$71.40 outside US & Canada)

SPECIAL IAMG MEMBER PRICE: \$44.50 (\$53.40 outside US & Canada) see back cover of newsletter for details

Geostatistics for Natural Resources Evaluation, by Pierre Goovaerts, to be released by Oxford University Press in July 1997, 512 p., 100 illustrations, 8 chapters, ISBN 511538-4.

Regular price will be US\$65, but early orders will go at a 20% discount or US\$52. For orders call 1-800-451-7556. Discount price valid through 1997 only in US and Canada. Do not forget to mention that you are a member of IAMG.

Simulating Oil Migration and Entrapment in Clastic Sequences, Johannes Wendebourg and John W. Harbaugh, Pergamon Press, available second half of 1997.

The book presents the mathematics for representing three-dimensional motions of porewater and hydrocarbons in sedimentary sequences, with the computing procedures that have been employed illustrated with a number of experiments. The book also illustrates the use of SEDSIM, a three-dimensional sedimentary process simulator, for generating clastic sedimentary sequences in suitable detail for migration and entrapment experiments.

AUTODRILL, " An Oil-Exploration Simulator that Automatically Selects Optimum Drilling Locations,

Francisco J. Rocha-Legorreta (Instituto Mexicano del Petroleo), 199 pp, Branner Earth Sciences Library, Stanford University, Palo Alto, California, 94305.

A master's thesis completed in January 1997 at Stanford University. The mathematical procedures employed include discriminant-function analysis to compute discriminant scores, which in turn provide an optimum classification for prospective drilling locations in terms of the probability of success. Well-outcome probabilities obtained in this manner are tempered geostatistically for map error in accord with the distance from the nearest well or wells. Both the discriminant function and the function that relates outcome probabilities to discriminant scores can be updated after each successive well is drilled. Following the update, the entire region being explored is automatically searched for the location or locations with the highest probability of success.



Correction - please note!!

The registration package for the IAMG 1997 annual conference included a notice showing incorrect prices for IAMG monographs. Prices for journals were correct. The IAMG regrets the error. The correct prices for monographs are shown on the IAMG Application blank, next page.

Daniel M. Tetzlaff
IAMG Treasurer

The **Centre de Géostatistique** of the École des Mines de Paris has a new director, Michel Schmitt. Prof Georges Matheron, the founder of the center and its director for over a quarter of a century, retired last year. To mark this occasion, a seminar on the theory of random sets was held at Fontainebleau, the seat of the center, which attracted many renowned scientists. The staff of the center under Schmitt's direction consists of 15 senior researchers, two postdocs and nine other personnel. Further info on research at the Centre de Géostatistique can be found on their web site: <http://cg.ensmp.fr/>



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1995 - 1996 IAMG FINANCIAL DATA

The following tables show the balance sheet and financial statement, respectively, of the IAMG for the years 1995 and 1996. This information is based on a compilation of financial data from previous years by the current Treasurer, but has not been reviewed by an accountant, and therefore must be considered preliminary.

Daniel M. Tetzlaff
IAMG Treasurer

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY
BALANCE SHEETS -- CASH BASIS
December 31, 1996 and 1995

	1996	1995
CURRENT ASSETS		
Cash in checking	\$ 37,745	\$ 1,023
Cash in money market accounts	48,565	49,095
	-----	-----
	86,310	50,118
	-----	-----
OTHER ASSETS		
Investments - at market value		
U.S. government securities		
laddered trusts	69,535	79,164
Short-term world income bond trusts	18,442	12,806
U.S. treasury bonds (stripped)	29,325	30,017
FNMA bond	10,028	10,688
U.S. Treasury notes	100,245	103,718
Tennessee Valley Authority Bonds	--	12,968
GNMA unit trust accumulation		
program mutual fund	3,933	3,654
GNMA series E securities		
mutual fund	142	240
GNMA series J securities		
mutual fund	250	317
Common stock	50,053	--
	-----	-----
	281,953	253,572
	-----	-----
TOTAL ASSETS	\$ 368,263	\$ 303,690
	=====	=====
LIABILITIES	\$ --	\$ --
FUND BALANCE		
Balance at beginning of year	303,690	271,712
Net unrealized gain (loss)		
during the year on non-current	(1,876)	15,616
investments		
Excess of revenue over expenses,		
for the year	66,449	16,362
	-----	-----
Balance at end of year	368,263	303,690
	-----	-----
TOTAL LIABILITIES AND FUND BALANCE	\$ 368,263	\$ 303,690
	=====	=====

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY
STATEMENTS OF REVENUE AND EXPENSES -- CASH BASIS
Years Ended December 31, 1996 and 1995

	1996	1995
GROSS REVENUE		
Membership dues and monograph orders	\$ 43,426	\$ 36,809
Meetings	--	--
Publications - sales and fees	--	10
Royalties from publishers	55,329	51,605
Interest income		
Checking and money market		
accounts	1,900	2,332
U.S. Treasury notes and bonds	8,128	11,909
Short-term world income funds	696	1,113
GNMA-series E, J, and accumula-		
tion trust	216	286
Gain (loss) on sale of investments	--	(
200)		
Gifts and contributions	50,053	--
Other income	1,183	1,069
	-----	-----
	160,931	104,933
	-----	-----
GENERAL AND ADMINISTRATIVE EXPENSES		
Journal Subscriptions and		
membership dues	42,467	37,297
Monograph Orders	2,055	2,189
Travel expenses	6,722	1,654
Meetings	--	1,028
Grants	5,350	3,585
Journal of Nonrenewable Resources	23,951	24,577
Computer expenses (ftp & web site)	--	2,803
Math Geology color issue	--	9,166
Membership promotion	6,077	1,491
Postage	1,555	818
Supplies and printing	1,353	215
Newsletter	2,923	2,031
Legal and accounting	760	640
Investment expense and bank charges	1,269	933
Eastern Treasurer expenses of prior		
year	--	144
	-----	-----
	94,482	88,571
	-----	-----
EXCESS OF REVENUE OVER EXPENSES	\$ 66,449	\$ 16,362
	=====	=====

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Research and teaching position (half-time) from May 1, 1997, or later. 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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International Association for Mathematical Geology

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