IAMG Newsletter

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Official Newsletter of the International Association for Mathematical Geology

Contents

I n the last Newsletter I discussed the "greying of IAMG", but also expressed hope that the many young faces seen at the Annual IAMG Meeting in Portsmouth could mean some new blood for our membership.

Since then an encouraging potential new movement has started. One of the young attendees in Portsmouth was motivated to propose starting a student chapter of IAMG at his college - Southern Illinois University in Carbondale. His engagement was further encouraged by a lecture given there by Distinguished Lecturer Dr John C. Davis.

From the Editor

The Chair of the Department of Geology, Dr. Steven P. Esling, is a quantitative geologist and has offered to head the proposed IAMG student chapter. Several students have voiced interest in joining IAMG. Abani Ranjan Samal, who has formulated the proposal, has volunteered to serve as the first campus representative to IAMG. The student chapter will seek support from the IAMG specifically to sponsor the visit of distinguished lecturers to the campus. In addition, members will seek financial support from IAMG in terms of registration and/or travel grants.

The IAMG Council is generally in favor of such student activities and has approved the formation of the SIU chapter, but also thinks it might not be possible to financially support many such groups in different locations or countries. One suggestion is to support activities which allow young scientists from different places to build a news- or discussion group on the internet, which could then gather at IAMG meetings (perhaps at reduced fees) with special sessions.

The question is whether a single student chapter will really contribute much to IAMG. However, a grass-roots development from such a motivated group might be more effective than planning a campaign to recruit student members. Perhaps SIU could be an example for other chapters to follow. The Council is considering various options and will set up a commission to study the best way to proceed. If you have an opinion or suggestion please contact the IAMG president.

Encouraging the formation of student chapters would fit nicely with IAMG's concern for attracting students. We already have a student grant program in place (see p.3 and 7) which gave awards to four students from four different US universities last year. Perhaps those students would be motivated to start an organization on their own campuses.

Harald S. Poelchau

Call for Award Nominations

The Association invites all members to submit nominations for the

2005 Vistelius Award and the **2005 Chayes Prize**.

Deadline: January 31, 2005

The Vistelius Award "shall be presented to a young (less than 35 years) scientist for promising contributions in research" and the "Felix Chayes Prize shall be given for excellence in research in Mathematical Petrology".

For details about prerequisites for nominations see the "Guidelines for Awards within the IAMG" on the Organization's web page, section "Guidelines and Procedures": <http://iamg.org/awards_guidelines.html>http://iamg.org/guidelines.html. There you can also find a list of recipients and their laudatios. Please have a look at it before sending your proposal!

The (informal) documents which should accompany each proposal are:

• a short statement summarizing the relevant qualifications of the nominee

• a curriculum vitae of the nominee.

Please submit documentation in electronic format (preferably in .rtf format) to:

Heinz Burger - Chair, Awards Committee
Freie Universität Berlin - Geoinformatik
Malteserstr. 74-100
12249 Berlin, GERMANY
E-mail: hburger@zedat.fu-berlin.de

Call for Proposals to Organize the
IAMG 2007 Conference

The Association is now accepting proposals for organizing the tenth annual IAMG conference during the summer or fall of 2007.

The deadline for proposals is **February 15, 2005**. Individuals or organizations interested in hosting IAMG 2007 should follow the instructions in "Guidelines to prepare IAMG conferences" available at the web site

http://iamg.org/conference.html

Bids should be sent to the IAMG President. In addition, it would be helpful for planning purposes for the President to receive some forewarning — a notice of intent to submit a proposal — ahead of the official deadline, preferably by December 25, 2004.

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PRESIDENT'S FORUM

This is the last President's Forum that I will write for the Newsletter, with the new Council to be installed at the upcoming General Assembly at IGC in Florence in August, so it's time to reflect on our activities over the past four years. The 2000-2004 Council has overseen a few small changes to the Association — changes that I believe will strengthen our organization — and has kept the IAMG 'ship' on course.

In 2002, a Membership Commission chaired by Ricardo Olea recommended changes to our membership categories—changes that were implemented in modifications to our By-Laws at a special General Assembly in Berlin.

A practical change also made in late 2002 was the contracting of our office services to Events & Management, a company in Kingston, Ontario, Canada. E&M now looks after our membership dues, manages the subscriptions to our three journals (and deals directly with the publishers over problems that often arise), circulates our Newsletter and sends out blanket e-mails from time to time. The 'office' now provides the Treasurer and President monthly statements about membership, and financial accounts related to membership, journals, and the sale of items such as memoirs and CDs. These services have changed IAMG into a more professionally managed body. Prior to the hiring of E&M the Treasurer was greatly stretched to deal with these important but time-consuming matters, whereas now he (or she in the future?) can focus on the important task of managing IAMG's money. E&M is currently in the process of conducting our first electronic ballot — the ballot for the new council. E&M is also directly involved in managing the logistics for IAMG 2005 in Toronto.

The 2000-2004 Council has implemented two initiatives that were set up during the previous Council: the Student Grant and Distinguished Lecturer programs. It is perhaps too early to assess the impact of these two activities, but they are both under way, and there is every indication that they are working well.

The Student Grant Committee chaired by Tim Coburn has conducted two competitions for grants in 2002 and 2003, and the 2004 competition will be completed before the General Assembly in Florence (see announcement in this Newsletter, p.7). This program has certainly raised awareness amongst students about the Association, judging by the large number of applications each year for grants. Perhaps as a result of this awareness, a proposal was received to start a Student Chapter at the University of Southern Illinois at Carbondale—an idea that Council has voted to accept, hoping that this will be the start of a wider involvement of students in IAMG affairs.

Alex Desbarats has chaired the Distinguished Lecturer Committee, also in its third year of operation. The first lecturer, John Davis, was succeeded by Frits Agterberg. Both John and Frits have done sterling work on their lecture tours (Frits just back from a southern hemisphere tour, described on p. 6 in the Newsletter). The latest news is that Larry Drew has accepted the position of our third Distinguished Lecturer, and will be busy with this in the coming year.

Meanwhile, our core programs (Awards, Publications, Conferences) continue to flourish. Our system of awards continues to recognize excellence in our profession. Our publications are, I believe, in a healthy state, and they continue to generate a significant annual income that supports several of our activities. And over the past four years we have had some memorable conferences: Cancun, Berlin and Portsmouth have all been financial and scientifically successful.

It would be nice to report that we have a growing membership, and that we were attracting large numbers of new members, particularly students. Our numbers remain about the same, with a core of long-term members and a fluctuating number of members who come and go. Despite our modest numbers, our journal readership is I suspect at an all time high, thanks to electronic access through libraries, and we continue to get excellent attendance at our conferences.

I believe that the good 'ship' IAMG is on course.

Thank you to all the outgoing Council members for all your hard work, thank you to all our committee chairs and members, thank you to our membership and nomination commission chairs and members, thank you to all our conference organizers, thank you to our editors, thank you to our Webmaster, thank you to Pam Lyons and her crew at E&M, and a special thank you to Harald for his long record of producing first class Newsletters. Hope to see you in Florence.

Graeme Bonham-Carter
Ottawa, May 9, 2004

I believe that the good 'ship' IAMG is on course.

Most important books for mathematical geology?

Sergey Kotov writes from St. Petersburg (Russia):

"Our faculty got a grant for translation of scientific books into Russian. I was asked for recommendations regarding modern approaches of mathematical methods in geology. I would very much appreciate if you could give me advice. Do you know any deserving book? Particularly, we do not have in Russian any appropriate Geostatistical book."

Please write Sergey at <kotov@gtn.ru> with suggestions (or talk to him at IGC32 in Florence). Here is your chance to make your, or somebody else's book famous in Russia!
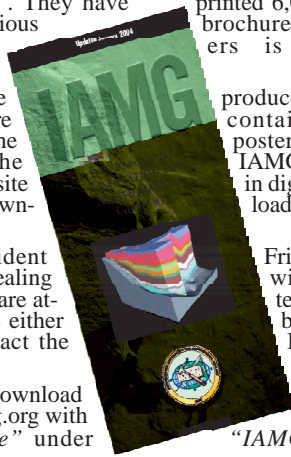
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Association Business

New IAMG Brochure

The old brochure has been updated and revamped by the Ottawa-based company "Accurate Design". They have printed 6,000 copies - the same number as the previous brochure. The total cost of the brochures and posters is close to US$2,000.

At the same time, they have produced a poster, using the same elements as are contained in the brochure — but enlarged. The posters are available in hard copy from the IAMG office, and will also be put on our web site in digital form — thereby allowing anyone to download and print off new copies themselves.

Many thanks to Vice-President Frits Agterberg for handling the update and dealing with Accurate Design on this matter. If you are at tending a con-ference where you could use either brochures, or poster, or both, please contact the IAMG Of-fice.

To view the new brochure, download the pdf from the IAMG website iamg.org with the link "*Read the IAMG Brochure*" under "*IAMG Member-ship Information*"

Call for Nominations

The Association invites nominations for

The 2006 IAMG Distinguished Lecturer

Deadline :   March 31, 2005

It is already time to seek nominations for the 2006 Distin-guished Lecturer, who will be announced at the IAMG meeting in Toronto. In 2000, the IAMG council voted to establish a Distinguished Lecture series. Dr. John Davis and Dr. Frits Agterberg are the IAMG Distinguished Lecturers for 2003 and 2004, respectively, and Larry Drew has just been anounced for 2005.

The purpose of the IAMG Distinguished Lecture series is to demonstrate to the broader geological community the power of mathematical geology to address routine geological interpreta-tion and to deliver this knowledge to audiences in selected parts the world. Therefore, the IAMG Distinguished Lecture Series Committee is seeking nominations for outstanding individuals who meet the following criteria:

a.   A demonstrated ability to communicate mathematical concepts to a general geological audience.

b.   A clear enthusiasm for mathematical geology.

c.   Recognition for work in their field.

d.   Established skill in working with individuals and in group discussions on geological problems.

The Distinguished Lecturer must be ready to travel and to perform the following duties:

a.   Prepare and present a lecture suitable for a general geological audience.

b.   Prepare and present one or two lectures on a more special-ized topic.

c.   Interact and hold discussions with individuals, both professionals and students, on applications of mathemati-cal geology to local problems of interest.

Letters of nomination should include a curriculum vitae of the nominee and a short statement summarizing the ways in which he or she fulfills the nomination criteria.

Letters should be directed to the Chair of the Distinguished Lecture Series Committee by e-mail to :

desbarat@NRCan.gc.ca
Alexandre Desbarat
Distinguished Lecture Committee Chair
Geological Survey of Canada
601 Booth St. Ottawa, ON, K1A 0E8, Canada

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Krumbein Medal and Griffiths Award for 2004

The Awards Committee, consisting of Stephen Henley, Qiuming Cheng, André Journel, Hugh Rollinson, IAMG president Graeme Bonham-Carter (non-voting) and chair Heinz Burger, has completed the selection of award recipients for 2004, who are:

2004 Krumbein Medal: Ricardo Olea, USA

2004 Griffiths Award: John H.Schuenemeyer, USA

Following the By-Laws and guidelines of our association, evaluation of all nominees was based on resumes and accompanying statements distributed electronically among all members of the Committee.

According to the guidelines, Committee members assigned numerical scores to all candidates in relevant categories that vary from award to award. For the Krumbein Medal there are three criteria, for which R. Olea got the high-est ranks: A] distinction in application of mathematics or informatics in the earth sciences; B] service to IAMG; and C] support to professions involved in the earth sciences, while J. Schuenemeyer got the highest rank for out-standing teaching in general and teaching that involves application of mathematics. So he is winner of the 2004 Griffiths award.

All nominees who did not make it in this round will be automatically con-sidered for the next selection, but fresh nominations are welcome. Please look at page xxx ìCalling for Nominations for 2005î and take a couple of minutes for collecting names of your favorite candidates. You may simu-late the procedure of the Awards Committee and write a short proposal for the winner of your private evaluation.

I would like to thank the following persons for their active support to the Awards Committee during the 2004 selection process, either as submitters of nominations and/or writers of laudations. It makes the work much more pleasant and, without their effort, our task would be impossible.

F. Agterberg
J. Doveton
L. Drew
E. Grunsky
R. B. McCammon
N. Nishiwaki
V. Pawlowsky
JJ Royer
H. Schaeben
A. Siehl

Presentation of all the awards is scheduled to take place during the coming IGC32 conference in Florence, Italy. Laudatios of the recipients will ap-pear in the Association's site at the Internet. Furthermore, citations of Krumbein medalists will be published in Mathematical Geology and of Griffiths awardees in Computers & Geosciences.

Heinz Burger, Chair
Awards Committee

2004 Griffiths Award to Jack Schuenemeyer

John H. (Jack) Schuenemeyer was born in St. Louis, Missouri, and grew up in St. Louis County. He began college at Washington University in St. Louis in electrical engineering and interrupted his academic training for a four-year tour of duty in the U.S. Air Force where his primary duty stations were Shemya, Alaska, in the Aleutian chain and Denver, Colorado, where he met his future wife Judy. He completed his undergraduate work in 1969 in applied mathematics at the University of Colorado and continued with a master's degree in mathematics from that same institution. It was during this period that he started working for the U.S Bureau of Mines in Denver and gained an appreciation for statistics and their use in mining and geol-ogy.

In 1971, Jack moved to Athens, Georgia, where, in 1975, he completed his PhD in statistics at the University of Georgia. Jack's advisor was Rolf Bargmann, Professor of Statistics, University of Georgia. Professor Rolf Bargmann came from the old school– originally Berlin and then the Uni-versity of North Carolina—and graduate students were expected to solve linear models on a Wang calculator even as computers were coming of age. "It was good for you," he said. One of his great frustrations was expressed as, "Why don't you Americans learn English?" Jack completed his disser-tation on a topic in multivariate analysis.

During this period, he worked part time for the U.S. Geological Survey (USGS) where he gained insight into the challenging problem of oil and gas resource assessment. He was a pioneer in the development of discovery process models for oil and gas assessment. Discovery process models, a procedure to estimate numbers and sizes of undiscovered oil and gas depos-

its that incorporates geology and statistics, has been used in U.S. National and world assessments. He developed subjective–volumetric procedures used by the USGS in oil and gas assessments of Northern Alaska. Jack's spatial research led to the development of uncertainty estimates for the U.S. National Coal Assessment.

In 1976, Jack began a 25-year career as assistant professor, associate professor, full professor, Director of the Statistical Consulting Laboratory, and head of the statistics program at the University of Delaware. He continued his association with the Branch of Resource Analysis at the USGS and engaged in consulting activities with NBC News, the Professional Golfers' Association, and others. Jack also had joint appointments with the Department of Geology and the Department of Geography. In 1999, he became Professor Emeritus and a research mathematical statistician for the USGS. In 2001, Jack moved to Cortez, Colorado, where he began Southwest Statistical Consulting to work on problems in the earth sciences. For the past two years, he has been a University of Phoenix online faculty member, teaching MBA statistics and research methods courses. He also is currently co-authoring a graduate-level text on statistics for earth and environmental scientists.

Over his career Jack has taught numerous courses in applied the theoretical statistics. He developed and taught a graduate-level course on statistics for earth scientists at the University of Delaware. He conducted seminars for earth-science students on spatial statistics. He supervised 15 doctoral students and served on approximately 50 master and doctoral committees for students in earth-science disciplines. He also served as co-chair of the University of Delaware's Center for Teaching Effectiveness Advisory Board, established the Statistical Consulting Laboratory at the University, and co-developed an internship masters program in statistics with the DuPont Company and other industries. He was also active in the University's Math Teacher Training Center, where he worked with high school teachers and students on special projects.

In his professional career, Jack played a leading role in advancing the state of knowledge in statistical education and consulting through writing, and through leadership positions in the American Statistical Association (ASA), including organizer and first chair of the ASA Section on Statistical Consulting. This activity also included participation on the ASA/MAA Committee on Statistics (a committee designed to foster math education).

Jack has been an organizer and presenter at numerous workshops including those sponsored by IAMG, Mathematical Geologists of the U.S., the Canadian Gas Potential Committee, Los Alamos National Laboratory, the MIT Energy Lab, and the USGS.

Over the course of his career, Jack has authored over 100 publications. His research interests, in addition to earth-science applications, include statistical modeling, uncertainty analysis, and spatial statistics. Among his major research accomplishments have been to further the work in discovery process modeling. He is also involved in the assessment of methane hydrates in the offshore U.S.

Awards received by Jack include being elected a Fellow of the American Statistical Association, the 1989 EDUCOM/NCRIPTAL National Award for Best Tutorial Package for a set of 25 interactive computer-assisted statistical lessons, and an ASA Council of Chapters award for outstanding service.

Jack has been a member of IAMG since 1978. He is also a member of ASA, and the American Association of Petroleum Geologists. He is currently an Associate Editor of the Journal of Mathematical Geology and is a reviewer for numerous journals and government statistical agencies. He is a past chair of the ASA Committee on Energy Statistics (an advisory committee to the U.S. Energy Information Administration), and has rendered scientific judgment in many venues.

Larry Drew

2004 William Christian Krumbein Medal for Ricardo Olea

Dr. Ricardo Antonio Olea has been selected by the IAMG Awards Committee (Chair, Heinz Burger) as the twenty-fifth winner of the William Christian Krumbein Medal of the International Association for Mathematical Geology. Out of four nominees, he was judged the clear winner for 2004 based on ag-

gregate point scores for the three main selection criteria: distinguished research, service to IAMG, and service to the profession. The Krumbein medal is the highest honor bestowed by the IAMG. It has been awarded every year from 1976 to 1996, and every second year thereafter.

Born and educated in Chile, Ricardo originally obtained the Mining Engineering degree from the Universidad de Chile, Santiago, in 1966. The Istituto de Ingenieros de Minas de Chile awarded him the Juan Brüggen Prize for being best graduating mining engineer in the country for 1966. In 1970 he came to the Kansas Geological Survey in Lawrence, as Visiting Industrial Research Scientist. In 1982 he became Doctor of Chemical and Petroleum Engineering at the University of Kansas after successfully defending his dissertation on "Systematic approach to sampling of spatial functions". Among his degrees there is an MSc in Computer Science awarded by the same university in 1972 for a thesis entitled "Application of regionalized variable theory to automatic contouring". Other honors received include the 1993 Best Paper Award, Mathematical Geology.

After occupying various positions at KGS in Lawrence, and also at the Empresa National del Petróleo, Santiago, Chile, Ricardo became Senior Scientist in the Mathematical Geology Section, KGS, in 1995. He retired from this position in 2003 but retains Emeritus Scientist status at KGS. Currently he is Visiting Research Scholar in the Department of Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, N.C., USA.

Ricardo has distinguished himself in application of mathematics in the earth sciences. He has authored or co-authored more than 200 publications including three books. He edited the geostatistical glossary and multilingual dictionary in 1991. His important single-author textbook "Geostatistics for Engineers and Earth Scientists" published in 1999 is already making an impact. The latest IAMG monograph "Geostatistical Analysis of Compositional Data" (Pawlowsky-Glahn and Olea, 2004) also will be very helpful to many.

CORRELATOR, the interactive computer program for high-resolution lithostratigraphic well-log correlation, was one of many projects on which Ricardo worked while at the Kansas Geological Survey. This highly original and influential software package is widely known. Since 1985, it went through many updates with improvements. Its final state-of-the-art version was completed only recently (in 2003).

Ricardo's service to the IAMG has been second to none. Initially it included chairing the IAMG Geostatistics Committee (1985-1989), and chairing the IAMG Membership Committee while being a Council Member (1989-1992). Later he was IAMG Secretary-General (1992-1996), IAMG President (1996-2000), and IAMG Past-President (2000-2004). The legacy left from when Ricardo was President is note-worthy in that it includes many new features, e.g. IAMG scholarships for graduate students. Ricardo personally drafted many of the guidelines now on the IAMG web site.

The organizational changes wrought by Ricardo were based on extensive consultations. He always insisted on being democratic gradually working his way toward broadly-based consensus. His influence persists. In 2003, Ricardo chaired the IAMG Membership Commission that resulted in significant re-structuring. Several improvements resulted from responses

Photo by Lucinda Thompson, UNC

to an elaborate questionnaire distributed to the IAMG Membership near the end of Ricardo's term as President.

As mathematical geologist, Ricardo always maintained professional affiliations with engineering associations, e.g. by serving on the American Society of Civil Engineers Task Committee on Geostatistical Techniques in Geohydrology (1987-1989) which got him an Excellence Award along with the rest of the Task Force Committee. His engineering background helped him to formulate precise definitions and rules from which we as mathematical geologists continue to benefit, e.g. by consulting the geostatistical glossary or the IAMG guidelines.

As a person, Ricardo is modest. He is always keen to highlight excellence in others. During his career he has proposed many colleagues in the field of mathematical geology for the Krumbein medal or other honors. He felt that others should be honored before him. In recent years, Ricardo has added significantly to his many earlier achievements, both by producing major new publications and by his services to IAMG and the profession. It is fitting that the IAMG has awarded him its highest honor, the Krumbein Medal, in recognition of his invaluable contributions.

Frederik P. Agterberg

IAMG Distinguished Lecturer Series :

Dr. Lawrence J. Drew - IAMG 2005 Distinguished Lecturer

The IAMG Distinguished Lecturer Series Committee is pleased to announce the selection of Dr. Lawrence Drew of the United States Geological Survey as the IAMG's 2005 Distinguished Lecturer. Lawrence is well-known to IAMG members as an associate editor and frequent columnist for Natural Resources Research where he comments on issues related to resource analysis. He is a highly sought-after speaker on topics ranging from mineral deposits to hydrogeology to oil and gas resource assessments and he has received the IAMG's 2000 John Cedric Griffiths award for outstanding teaching. Institutions interested in hosting a lecture by Dr. Drew are invited to submit a proposal to Alexandre Desbarats, chair of the IAMG Distinguished Lecturer Committee (desbarat@NRCan.gc.ca) or directly to Dr. Drew (ldrew@usgs.gov). Dr. Drew's term as Distinguished Lecturer will start in January 2005, after the conclusion of tours by Dr. Frits Agterberg, the current DL. The IAMG will fund the speaker's travel expenses to the extent allowed by the DL series budget; However, host institutions will be expected to contribute toward the speaker's meals and accommodation as their resources permit. Dr. Drew has prepared a selection of talks suitable for a variety of earth science audiences and technical levels:

1. Regional Geochemistry—Baselines for Complex Geological Terranes

GIS and Statistical/Graphical methods are used to establish baseline regional geochemical signatures for complex geological terranes: The State of South Carolina comprises multiple geological terranes that range from high-rank metamorphic and igneous rocks to volcanic rock with ore bodies to Tertiary sediments. These terranes occur in many geomorphic land forms—upland, fall zones, incised sedimentary sections, and the coastal plain. The goal is to unravel a complex puzzle using geomathematical tools.

2. Hydrologic Significance of the Association Between Well-Yield Variography and Structures in Fractured Bedrock Aquifers

A surprising result has been recently obtained: the structural characteristics of fractured bedrock aquifers are directly associated with patterns in variogram maps and directional variograms. Variogram mapping on nets of initial yields of water wells decodes complex underlying tectonic information in the bedrock.

3. Oil and Gas Discovery Process Modeling

Based on research published in several books and many papers, a summary of the importance of discovery process modeling to forecasting undiscovered oil and gas is presented. The question "what is a field- size distribution?" is addressed.

4. Mineral Deposits—Grades to Tonnages to Economic Filters

Why do we use such terms as "mineral deposit" and "mineral occurrence"? The answer lies somewhere in the nexus among mineral deposit models, grade and tonnage models, and the metric for the probabilities for mineral-deposit occurrence.

5. Ecocentrism and Anthropocentrism—Are They End Members in Environmentalism or Not?

This lecture is based on over 30 columns and papers written on the environmentalism associated with the production of raw materials with some microeconomics thrown in.

6. From Bayan Obo to Muruntau to Porphyry Copper Deposits

It began with two super-giant mineral deposits, one in China and the other in Uzbekistan, and then continued with tectonics and structural geology. The author will tell the tale of his interlude into economic geology beginning with these two super-giant mineral deposits and then on to research in the occurrence of ore bodies through the eye of a tectonicist and structural geologist.

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Highly successful IAMG Distinguished Lecturer tour of the Southern Hemisphere

From February 23 to May 5, Frits Agterberg, as 2004 IAMG Distinguished Lecturer, toured New Zealand, Australia, South Africa, and Brazil giving a total of fourteen lectures. During his tour, he met and had discussions with numerous geologists, geostatisticians and mathematicians, both faculty members and students. Special thanks are due to Roger Cooper, Roussos Dimitrakopoulos, Christien Thiart, and Hernani Chaves for invaluable help in putting together the itinerary. Other generous hospitality was received from Mike Hills, Tom Blenkinsop, Margie Scott, Mike Dentith, Danie Krige, Maarten De Wit, and Gordon Cooper. Frits was accompanied enthusiastically by his wife Codien.

While the IAMG contributed about US$ 6,000 for international airline travel for the tour, various national organizations provided approximately US$ 15,000 for accommodation, meals and to cover other expenses. Major financial support from the Institute for Geological and Nuclear Sciences (New Zealand), the W.H. Bryan Mining Geology Research Centre at the University of Queensland (Brisbane, Australia), Cape Town University (South Africa), and Rio de Janeiro State University (Brazil) is gratefully acknowledged. Generous hospitality also was provided by University of Waikato, James Cook University, and University of the Witwatersrand.

Frits plans future DL travel to China and Europe later this year. Lectures at the China University of Geosciences in Beijing and Wuhan are currently being scheduled, as well as visits to the Free University of Berlin, the University of Oslo, the NTN University of Trondheim, the University of Girona, and Delft Technical University in the Netherlands. Other institutions interested in hosting a DL visit this year (or early 2005) should contact Alec Desbarats, Chair of IAMG DL Committee, or Frits Agterberg directly.

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Student Research Grants in Mathematical Geology

ANNOUNCEMENT AND PROPOSAL SOLICITATION:

The International Association for Mathematical Geology (IAMG) is pleased to announce the availability of the 2004 Student Grants program. The Student Grants Program supports graduate student research in broad areas of mathematical geology for the purposes of advancing the development and application of quantitative methods in the geosciences. Recipients of the awards, which typically amount to $2,000 US, must be enrolled in a formal university program in which they are pursuing a graduate degree (i.e., masters or doctoral students). The competition is not restricted to students sponsored by members of IAMG.

Project proposals and requests for support must include the following:

- Applicant's name
- Applicant's contact information (postal address, home address, telephone, fax, email address, etc.)
- University in which the applicant is enrolled, degree being pursued, and planned completion date of degree
- Transcripts of undergraduate and graduate course work completed to date (or a statement from the applicant's academic advisor that details the applicants academic credentials)
- Lists of prior awards and honors received by the applicant
- Professional and work experience, as well as extra-curricular activities
- Title of the project proposal, an abstract of no more than 500 words, and the target completion date for the project
- An endorsement of the project signed by at least one faculty member from the academic department in which the student is enrolled
- Detailed project budget

All proposals will be evaluated on the basis of the applicant's academic record, endorsement from the sponsoring university and faculty, relevance and feasibility of the project, and financial need. Additional guidelines concerning the competition can be found on the Internet at www.iamg.org. Incomplete proposals cannot be accepted.

Written proposals for 2004 funding, which must be received no later than close of business on August 15, 2004, should be submitted to:

Donna Dennison

Student Grants Committee, IAMG Office

4 Cataraqui St., Suite 310

Kingston, ON K7K 1Z7 Canada

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30 years ago in IAMG Newsletter

Proper Function and Role of IAMG in the Revolution in Geological Sciences

The modern revolution in geological sciences, which is sweeping out of existence many of the classical attitudes in geology, results from our new ability to look at the Earth from space, our new understanding of the surprisingly profound differences between continents and the ocean floor and lastly, our new capability for mathematically checking our geological conceptions. The International Association for Mathematical Geology is responsible for development in the last area. This is a large responsibility, as we will improve, or fail, the whole of geological science.

Experience indicates that mathematical geology can be developed along the following lines. Major geological features are the realizations of stochastic processes, and random fields in particular. There is an urgent necessity for investigation into the nature of the organization of the medium of geological processes. Mathematics should be introduced into geology in a form adequate to test models of geological conceptions or hypotheses. Obtaining significant results requires non-trivial mathematics with special definitions of probability measures and the thorough elaboration of specific statistics. Models should be developed for definite types of random processes, and statistics should consider dependent observations. The most important recent problem in mathematical geology is creation of fundamentals in the form of models of the most important geological processes. These fundamentals will permit us to obtain the soundest results of both scientific and industrial importance.

There are dangerous elements in the modern development of mathematical geology. These include a natural desire to solve big industrial problems on the basis of inadequate and oversimplified mathematics. There is also a naive conviction that big collections of programs and large modern computers can generate serious, stable results without a profound mathematical analysis of the geological problems. We tend to overestimate our newly found abilities. All these perils lead to a vulgarization of mathematical geology . This can discredit our science and deprive geology of a most important line of development at the crucial moment in scientific evolution. Caution, thoroughness, self criticism, and caution again must be the basis for our activities.

Andrew B. Vistelius
Past President

Member News

Ricardo Olea is Visiting Research Scholar for the year 2004 with the University of North Carolina at Chapel Hill. He is working on epidemiologic and environmental modeling with George Christakos and Marc Serre.

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John Harbaugh, Dan Merriam, and Jorgina Ross have recently completed a manuscript entitled "Hillshade Mapping of the Fine-Scale Crustal Fracture System in Kansas." The focus of the paper deals with the pervasive effect of the "fine-scale" fracture system on the topographic evolution of Kansas. The analysis is based on hillshade display of digital elevation ("DEM") data.

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IAMG Journal Report

Mathematical Geology: starting electronic MS review

At the publications committee meeting in Portsmouth, we discussed with Linda Paul of Kluwer Publishing the possibility of electronic submissions. Ms. Paul is now ready to move ahead using a system which they have purchased known as "Editorial Manager", a web based manuscript submission, review tracking and reporting system.

A number of other journals (e.g., AAPG Bulletin, Groundwater, and Water Resources Research) have been using similar electronic web based reviewing systems successfully and have reported increased efficiency and shortened lag times for publication of manuscripts. We hope that the same will be true for MG.

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Mathematical Geology: The "Iran" problem

In March, MG Editor Ed Sharp received the following letter from Kluwer, the publisher of Mathematical Geology.

Dr. Sharp:

We regret to inform you that this article from Iran must be pulled from this February 2004 issue of Mathematical Geology 36(2).

This article will be pulled from this issue and the issue will be re-paginated. I will send this issue to press as soon as possible.

This is an unfortunate consequence of a trade embargo. However, for the protection of the company, we need to abide by the Springer ECs request.

We can no longer accept manuscripts from the following countries: Cuba, Iran, Iraq, Libya and Sudan

.... I apologize for any inconvenience caused.

Thank you.

Sincerely, Jason Tom, Esq.

Tom refers to the following letter from Springer's Editor in Chief:

Dear colleagues:

The U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC") administers U.S. trade sanctions on a number of countries, including Cuba, Iran, Iraq, Libya and Sudan. OFAC recently issued an interpretive ruling which held that it is a prohibited "export of services" to Iran (or any of the other above embargoed countries) to assist an author in that country in editing or preparing manuscripts for publication, including the creation of illustrations and even minor editorial activity such as reordering of paragraphs or sentences, correction of syntax or grammar or replacement of inappropriate words. The OFAC ruling further held that the provision of marketing or business consulting services involved in the publication of a book is similarly prohibited. Significant civil and criminal penalties apply for violations of the OFAC ruling. However, OFAC left open the door to authorizing individual projects on a case-by-case basis through issuance of specific licenses.

Thus, under the ruling, Springer Verlag in the United States and its U.S. affiliates are no longer able to publish manuscripts and books on behalf of a person in a U.S.-embargoed country, nor may a person in such a country publish a manuscript or book on our behalf.

Although this ruling raises obvious First Amendment issues and has caused considerable concern within the publishing industry, and after thorough discussions with our lawyers we have currently no choice but to abide by it unless and until it is modified or rescinded. Accordingly, you should immediately cease any work on manuscripts and books from the above-listed countries and consult with me on whether it might be feasible to obtain a specific license from OFAC authorizing further work.

Please share this with your editorial reports and make sure that we have no exposure.

Thank you so much for your understanding.

Best wishes, Rüdiger Gebauer

Editor Ed Sharp notes:

.... Most likely I would also have had to order its removal even if Kluwer did not. This is because the copyright was owned by IAMG and Kluwer would not have in anyway come to our defense and we are too small a society to afford the financial cost if we had been selected for review. In addition, any defense required, might have required all of my personal resources. However, the American Institute of Physics, Elsevier and John Wiley are ignoring the directive and are working on the political front to resolve this situation and seem to be prepared to bring suit over the matter. I think we must just wait and see how this resolves itself over the coming months.

and President Graeme Bonham-Carter:

.... So far as I am aware, Elsevier is not affected by this policy, because their publishing office is in Amsterdam--and of course, the editorial office of C&G is in Ottawa. The Publishing Editor of C&G from Elsevier is going to be here next week, and I will discuss it with her. As long as Elsevier is OK with it, the solution is simple--and we will simply publish the affected papers in C&G. However, even had IAMG wished to publish these papers in MG, the decision was out of our (editor's) hands because Kluwer made a corporate decision to withdraw any such papers. I suppose they felt vulnerable because the editorial office (formerly Plenum office) is in New York City. I gather that there are a number of influential academic groups in the US up in arms over this, so the issue will not die.

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Conference Report

Workshop on Stratigraphic Modeling - Challenges.

On April 12, 13, and 14, 2004, several of us attended a meeting in Brazil organized by Tecgraf and the Pontifical Catholic University (PUC) of Rio de Janeiro, with sponsorship by Petrobras. Luiz Martha of the Pontifical Catholic University was in charge of the meeting, whose formal title was "Workshop on Stratigraphic Modeling - Challenges." The focus was on the state of the art in modeling nearshore processes, including sedimentation and geomorphology. Most of the participants were local and represented either Petrobras, Tecgraf, or the Pontifical Catholic University. Invitees from outside Brazil included Ron Boyd and Cedric Griffiths of Australia, Dan Bosence and Michael Summerfield of Great Britain, Didier Grandjeon of France, and Christopher Kendall and me from the US. The meeting was held in the Portobello Resort and Safari in Angra dos Reis, about 60 km west of Rio, along the coast. Among the revelations at the meeting, we learned of the plan by Tecgraf and the PUC, with Petrobras sponsorship, to create an integrated series of computerized applications in exploration geology and geophysics.

John Harbaugh

JOURNAL CONTENTS
Computers & Geosciences

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Evaluating micas in petrologic and metallogenic aspect: Part II—Applications using the computer program Mica+ — Fuat Yavuz

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A new equation of state and Fortran 77 program to calculate vapor–liquid phase equilibria of CH_4–H_2O system at low temperatures — Rui Sun, Zengfang Huang and Zhenhao Duan

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Editorial: Multi-dimensional geospatial technology for geosciences — Li, Z., Gold, C.

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Natural Resources Research

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A comparative analysis of favorability mappings by weights of evidence, probabilistic neural networks, discriminant analysis, and logistic regression, by DeV Harris, L. Zurcher, M. Stanley, J. Mrlow, and G. Pan

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A bootstrap approach to computing uncertainty in inferred oil and gas reserve estimates, by E.D. Attanasi and T.C. Coburn

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Specific heat capacities of rocks, minerals, and subsurface fluids, Part 1: Minerals and nonporous rocks, by D.W. Waples and J.S. Waples

A review and evaluation of specific heat capacities of rocks, minerals, and subsurface fluids, Part 2: Fluids and porous rocks, by D.W. Waples and J.S. Waples.

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Recent Books of Interest

At long last! – Oxford University Press has announced the availability of our new IAMG monograph, *Studies in Mathematical Geology* No. 7.

Geostatistical Analysis of Compositional Data

by Prof. Vera **Pawlowsky-Glahn**, Dept. of Informatics and Applied Mathematics, University of Girona, SPAIN and Dr. Ricardo A. **Olea**, Dept. of Environmental Sciences & Engineering, University of North Carolina, USA

> 208 pages; 6 halftones & 24 line illus.;
> 6-1/8 x 9-1/4 in.
> 0195171667, hardback, 208 pages.
> Due: May 14, 2004
> Price: $85.00**
> S&H: $5.00 (US) $10.00 (INTL)

Visit the OUP website at http://www.us.oup.com/us

Studies in Mathematical Geology No. 7 deals with the analysis and estimation of compositional data in a spatial setting. This particular topic has not been addressed in book form, despite the importance of compositional data in the Earth sciences. Here, the authors extend the statistical concepts of Aitchison and Matheron to develop a model that allows the spatial dependencies of the variables that constitute a regionalized composition to be investigated without the distortions of spurious spatial correlations.

** Here's the good news for IAMG Members: In case you've forgotten, with the usual 30% Member-Discount, you pay only **$59.50** plus Shipping & Handling!

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Mathematische Geologie

Volume 6 (August 2002):

"Mathematical methods and data bank systems in the paleontology."

Contents:

Size and shape variation in Egyptian Eocene Loxoconcha (Ostracoda) studied by morphometric methods: a methodological study.-- R. A. Reyment, A. M. T. Elewa.

The paleobiogeography of Postpaleozoic corals analyzed by methods independent of taxonomy.-- H. Löser (in German).

Testing evolutionary hypotheses with adaptive landscapes: Use of random phylogenetic-morphological simulation studies.-- N. MacLeod.

PaleoWeb - Integrated access to distributed heterogeneous paleontological databases.-- P. S. Kullmann, J. Kullmann (in German).

Presentation of an universal minimum data structure for taxonomic, geographic and stratigraphic data in paleontology.-- H. Löser (in German).

Database and GIS based analysis of distributional areas for mammalian communities.-- I. Raufuss (in German).

Registration of systematic and stratigraphies as well as inventory of paleontological data by the computer.-- O. Dietl (in German).

Computer-based 3D reconstructions in paleontology using serial sections.-- K. Henßel, D. Schmid, R. R. Leinfelder (in German).

Volume 7 (December 2003):

"Mathematical methods applied to geology and mining".

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Geostatistical description of heavy metal content variation in soil of the Olkusz region (Poland), against a background of geological structure, by GIS method.-- B. Namyslowska-Wilczyñska, K. Rusak..

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On the effects of water extracting of mines in karstic areas.-- M. László, J. Kovács.

Steel ball milling seen as a stochastic process.-- R. Richter, F. Stapelfeldt (in German).

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Professor's Signature_____

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Upcoming Meetings

MONITORING, SIMULATION and REMEDIATION of the Geological Environment (International Conference), Segovia, Spain. **5–7 July 2004**. Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton,SO40 7AA, UK; E-mail: gmckeogh@wessex.ac.uk; Web Site: http://www.wessex.ac.uk/conferences/2004/geoenvironment04

10th Int'l Congress on MATHEMATICAL EDUCATION, Tech. University of Denmark, Copenhagen, **4-11 July 2004**. Congress Consultants, Martensens Alle 8, DK-1828 Frederiksberg C, Denmark, Tel: +45 70 20 03 05, Fax: +45 70 20 03 15, E-mail: icme@congress-consult.com, www.ICME-10.dk

American Statistical Association Joint Statistical Meetings, Toronto, **8-12 August 2004**. Sponsored by ASA, ENAR, WNAR, IMS and SSC. Linda Minor, 1429 Duke St., Alexandria, Virginia 22314-3415. Tel.: +703-684-1221, E-mail: meetings@amstat.org, Web: www.amstat.org/meetings

SIAM Annual Meeting 2004 (AN04), Portland, Oregon, **12-16 July 2004.** http://www.siam.org/meetings/an04/

IGC - Int'l Geological Congress, Florence, Italy, **15-28 Aug. 2004**. Scient. Sec. Chiara Manetti, Dip'to di Scienze della Terra, Univ. di Firenze, Italy, ph.+39 055 2382146, E-mail: casaitalia@geo.unifi.it, http://www.32igc.org; 703-648-6112, EMail: jbriskey@usgs.gov, Web: http://www.32igc.org/home.htm

Paleoceanography (8th International Conference), Biarritz, France, **5–10 September 2004**. ICP8 Organizing Committee, DGO – UMR 5805 EPOC, Université Bordeaux I, Avenue des Facultés, 33405 Talence, France; E-mail: icp8@epoc.u-bordeaux1.fr; Web Site: www.icp8.cnrs.fr/

Near Surface 2004 (10th European Meeting of Environmental and Engineering Geophysics of the Near Surface Geoscience Division of the EAGE), Utrecht, The Netherlands, **6–9 September 2004**. E-mail: eage@eage.org; Web Site: www.eage.nl/conferences/index2.phtml?confid=26

Fractured Rock Conference: State of the Science and Measuring Success in Remediation, Portland, Maine, USA, **13-15 Sep 2004.** National Ground Water Association, 601 Dempsey Road, Westerville, Ohio 43081, Phone: (614) 898-7791, FAX: (614) 898-7786, EMail: customerservice@ngwa.org Web: http://www.ngwa.org/e/conf/0409135017.shtml

HOLIVAR: "Holocene Climate Forcing", LESC Workshop, Lucerne, Switzerland**, 22 - 24 Sept. 2004**. Joanne Goetz, http://www.esf.org/holivar

Seventh International GEOSTATISTICS Congress, **26 September - 1 October 2004**, Banff, Alberta, Canada. Clayton Deutsch, Centre for Computational Geostatistics, University of Alberta, +1 (780) 492-6157, Info@geostats2004.com, www.geostats2004.com

SEG 2004: Predictive Mineral Discovery Under Cover, University of Western Australia, Perth, WA, Australia, **27 Sep-01 Oct 2004.** Society of Economic Geologists (SEG), Geoconferences WA, and Society for Geology Applied to Mineral Deposits (SGA). Susan Ho, P.O. Box 80, Bullcreek WA 6149, Australia, Phone: (61 8) 9332 7350 FAX: (61 8) 9310 6694 EMail: susanho@geol.uwa.edu.au Web: http://www.cgm.uwa.edu.au/geoconferences/index.asp

Eurock 2004 and 53rd Geomechanics Colloquy (Regional Symposium), Salzburg, Austria, **7–9 October 2004**. Sponsored by the International Society for Rock Mechanics. Austrian Society for Geomechanics, Paracelsusstrasse 2, A-5020 Salzburg, AUSTRIA. Phone: (+43) 662 875519; Fax: (+43) 662 886748; E-mail: salzburg@oegg.at; Web Site: www.oegg.at/engl/index.html)

SEG International Exposition & 74th Annual Meeting, Denver, Colorado, US, **10-15 Oct 2004**. Debbi Hyer, 8801 S. Yale, Tulsa OK 74137, Phone: (918) 497-5500 EMail: dhyer@seg.org Web: http://meeting.seg.org

GROUNDWATER FLOW UNDERSTANDING: from local to regional scales, Zacatecas City, Mexico, **11-15 Oct 2004**. International Assoc. of Hydrogeologists & ALHSUD. Dr. Joel Carrillo, Instituto de Geografia, UNAM, 04510 Mexico DF, Phone: +52 55 5622 4360 x45509 FAX: +52 55 5616 2145 EMail: aih@igiris.igeograf.unam.mx Web: http://www.igeograf.unam.mx/aih

Fifth European Conference on GEOSTATISTICS FOR ENVIRONMEN-

TAL APPLICATIONS — geoENV 2004, University of Neuchatel, Switzerland, **13 - 15 October 2004**. Philippe Renard, Centre for Hydrogeology, University of Neuchâtel, 11, rue Emile Argand, CH - 2007 Neuchâtel, Phone:+41 (0)32 718 26 9, Fax :+41 (0)32 718 26 03, Email: geoenv.2004@unine.ch, www.unine.ch/chyn/geoenv

Deep-Water Sedimentary Systems of Arctic and North Atlantic Margins, Statoil Conference Center, Stavanger, Norway, **18-20 Oct 2004**. Norwegian Geological Society, Ole J. Martinsen, Norsk Hydro Research Center, N-5020 Bergen, Norway, Phone: 47-55996937, FAX: 47-55995704, EMail: ole.martinsen@hydro.com Web: http://www.geologi.no/cgi-bin/geologi/imaker?id=1657

Penrose Conference: SECULAR VARIATION IN TECTONICS AND ALLIED FIELDS, Holiday Inn Resort, Hotel and Convention Center, St. George, Utah, USA, **Oct 22-28 2004**. Dwight Bradley, 4200 University Drive Anchorage, AK 99508, Phone: 907-786-7434, FAX: 907-786-7401

SUSTAINABLE POST-INDUSTRIAL LAND MANAGEMENT, Krakow, Poland, **4-5 November 2004.** dr Joanna Kulczycka, IGSMiE PAN, ul. Wybickiego 7, 31-261 Krakow, Poland, kulczycka@min-pan.krakow.pl, tel/fax +4812 632 2245, Email: lca@min-pan.krakow.pl, www.min-pan.krakow.pl/pbs

GSA Annual Meeting: Geoscience in a Changing World, Colorado Convention Center, Denver, CO, USA, **07-10 Nov 2004**. Geological Society of America. GSA Meetings, Phone: (303) 357-1000, FAX: 303-357-1072, EMail: meetings@geosociety.org, Web: http://www.geosociety.org/meetings/2004/

American Geophysical Union (Fall Meeting), San Francisco, California, USA, **13–17 December 2004**. AGU Meetings Department, 2000 Florida Avenue, NW, Washington, DC 20009 USA ; Phone: +1 202 462 6900; Fax: +1 202 328 0566; E-mail: meetinginfo@agu.org; Website: http://www.agu.org/meetings

INTERNATIONAL STATISTICAL INSTITUTE, 55th Biennial Session (includes meetings of the Bernoulli Society, the International Association for Statistical Computing, the International Association of Survey Statisticians, the International Association for Official Statistics and the International Association for Statistical Education), Sydney, Australia, **5-12 April 2005**. ISI Permanent Office, Prinses Beatrixlaan 428, P.O. Box 950, 2270 AZ Voorburg, The Netherlands, Phone: +31–70–3375737, Fax: +31–70–3860025, E-mail: isi@cbs.nl

Halifax 2005, Dalhousie University, Halifax, Nova Scotia, Canada, 1**5-18 May 2005**.Geological Association of Canada, Mineralogical Association of Canada, Canadian Society of Petroleum Geologists, Canadian Society of Soil Science. Mike MacDonald, Dept. of Natural Resources, P.O. Box 698, Halifax, NS B3J 2T9 Canada, Phone: 902-424-2523 FAX: 902-424-7735 EMail: hfx2005@gov.ns.ca Web: http://www.halifax2005.ca

Madrid 2005, 67th EAGE Conference & Exhibition, Madrid, Spain, **13 - 16 June 2005**. http://www.eage.nl/conferences/index2.phtml?confid=17

American Association of Petroleum Geologists and Society for Sedimentary Geology (SEPM) (Joint Annual Meeting and Exhibition), Calgary, Alberta, Canada, **19–22 June 2005**. AAPG Conventions Dept., P.O. Box 979, Tulsa, OK 74119, USA; Phone: +1-918 560 2679; Fax: 1-918 560 2684; E-mail: convene@aapg.org Website: www.aapg.org

2005 Joint Statistical Meetings, Minneapolis, Minnesota, **7-11 August 2005**. ASA, Phone: +1 (703) 684-1221, http://www.amstat.org/meetings/

Earth System Processes 2, Calgary, Alberta, Canada, **08-11 Aug 2005**. Geological Society of America, Geological Association of Canada. Diane Matt, P.O. Box 9140, Boulder, CO 80301-9140, Phone: 1- (303) 357-1014 FAX: 1- (303) 357-1074 EMail: dmatt@geosociety.org Web: http://www.geosociety.org/meetings/esp2/

IAMG 2005, Toronto, Canada, **14-19 August 2005**. Qiuming Cheng, York University, www.iamg.org

SPE Annual Technical Conference and Exhibition, Dallas, TX, USA, **09-12 Oct 2005**. Society of Petroleum Engineers. Debbie Weaver, P.O. Box 833836, Richardson, TX 75083-3836, FAX: 972-952-9435 EMail: dweaver@spe.org Web: http://www.spe.org)

GSA Annual Meeting, Salt Lake City, Utah, USA, **16-19 Oct 2005**. Geological Society of America. GSA Meetings,, PO Box 9140, Boulder, CO 80301-9140, Phone: (303) 357-1000, FAX: (303) 357-1072 EMail: meetings@geosociety.org Web: http://www.geosociety.org/meetings/2005/)

SEG International Exposition and 75th Annual Meeting, George R. Brown Convention Center, Houston, Texas, USA, **06-11 Nov 2005**. Society of Exploration Geophysicists. Steve Emery, 8801 S. Yale Ave, Tulsa, OK 74137, Phone: 918-497-5539 FAX: 918-497-5552 EMail: semery@seg.org Web: http://www.seg.org

IAMG 2006 Liège, Belgium, **18 - 23 June 2006**. Eric Pirard, Université de Liège, Chemin des chevreuils – B52 / 3, Sart Tilman, B-4000 Liège, BELGIUM, Tel: 32-4-3669528, Fax: 32-4-3669520, E-mail: eric.pirard@ulg.ac.be, http://www.ulg.ac.be/geomac

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The **32nd International Geological Congress (IGC)**

Florence (Italy), August 20-28, 2004.

The congress is being organised in co-operation with, and under the sponsorship of the International Union of Geological Sciences (IUGS), and various members countries of the Mediterranean Consortium. The main objective of the congress is related to a global geological renaissance and the main title is: "From the Mediterranean Area Toward a Global Geological Renaissance (Geology, Natural Hazard, and Cultural Heritage)".

The Scientific program of the 32nd IGC consists of Plenary Lectures, Special Symposia, Topical Symposia, General Symposia, Workshops, Short Courses and Field trips. The structure and the list of sessions are available on the internet: http://www.32igc.org>http://www.32igc.org.

IAMG sponsors the following sessions:

21 August am G-17.01 Computer techniques in the modeling and analysis of biological form, growth and evolution

21 August am G-13.05 Understanding geology through geomathematical analysis of remote sensing data

21 August pmG13.01 Compositional data analysis: from theory to practice

22 August am G-13.04 Geographic information system for exploratory spatial data analysis

22Augustpm G-13.06 Mathematical geology for resource exploration

22August 17.30-19.30   GENERAL ASSEMBLY
  Agenda: Brief announcement of Award winners
            Vote on Change in Statute referring to election procedures
            Announce Election results

23Augustam & early pm G-13.03 New applications of mathematical statistics in Earth Sciences

23August pm G-21.12 Sedimentology of volcanoclastic sediments

24August am G-21.16 Systematics in sedimentary petrology

25 August IAMG 9:00-12:00 noon Awards Ceremony

• Ricardo Olea - Krumbein medalist for 2004:
"Successful mathematical correlation of colluvial sediments in two sites in Thailand where neither seismic nor visual correlation produced results"

• Jack Schuenemeyer -2004 Griffiths Award winner:
"A statistician's Journey through the World of Earth Sciences"

26Augustpm T-08.01 New trends in reservoir characterisation

26Augustpm T-22.01 National/international geological map databases

26August early am   G-03.08 Statistical and mathematical methods in land resource survey: application to environmental geochemistry

26August late am & pm G-03.03 Coastline changes: interrelation of climate and geologic processes

27Augustam&pmT-22.03 Dictionaries, standards and technologies for geoscience data management and delivery

28August am T-22.02 Examples of innovative geoscience information delivery

This schedule may change slightly, but at the present time, we do not expect any big changes.

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COMPOSITIONAL DATA ANALYSIS WORKSHOP

CoDaWork'05

OCTOBER 19-21, 2005   GIRONA, SPAIN

After a successful first CoDaWork'03 (http://ima.udg.es/Activitats/CoDaWork03/), the Network on Compositional Data, headed by the Girona Compositional Data Group, is very proud to announce the second edition of the workshop, CoDaWork'05. It will take place in the city of Girona in the third week of October 2005.

The Workshop on Compositional Data is intended as a forum for discussion of hot points related to the statistical treatment and modelling, as well as applications and interpretation, of compositional data. The goal of such discussions is to get some insight into the most appealing future lines of research in the field.

In order to attain this general but clear goal, we intend to get together a significant number of specialists, users and interested people to collect critical contributions and open a stimulating brainstorming.

The contributions and discussions are planned to move around the following points:

- Geometry and statistics in the simplex
- Design of teaching and computing tools
- Applications to archaeology
- Applications to geology and environment
- Other fields of application

The workshop will consist of 2 hour sessions on the above tentative points. The chair of each session will present a summary of the contributions and will stimulate an open discussion on the concerned topics. Written contributions on these topics, and particularly on applications, are welcome.

IMPORTANT DATES

February 28, 2005   Abstracts due
April 30, 2005   Author notification
June 30, 2005   Electronic paper due

ABSTRACT SUBMISSION

The Organising Committee welcomes abstracts of contributions on the workshop topics. Abstracts should be submitted in English and should be sent by e-mail to codawork05@ima.udg.es in TeX-LaTeX, MSWord or PDF formats as a text attachment.

You will find more information in our web page: http://ima.udg.es/Activitats/CoDaWork05/ or you can contact Glòria Mateu-Figueras sending an e-mail to codawork05@ima.udg.es

The research of the Girona Compositional Data Group gravitates around compositional data analysis, following the ideas introduced in the eighties by J. Aitchison. The group is lead by Vera Pawlowsky-Glahn and is formed by seven scientists from the University of Girona. Present scientific cooperation with other universities and institutions, mainly in Europe (Spain, UK, Italy, Slovenia and Germany) but also in other countries (USA, Argentina, Canada, Russia and Ukraine) has motivated the organization of a network. The Compositional Data Analysis Network is integrated by groups from the following universities: UPC (Barcelona), UB (Barcelona), FUB (Berlin), USF (Firenze), UdG (Girona), Universität Göttingen, NTU (Nottingham).

Looking forward to welcome you in Girona!

S. Thió-Henestrosa and J.A. Martín-Fernández
Chairs of CoDaWork'05

Announcements

Journal of Maps:
a new multi-disciplinary, international journal

Website: http://www.journalofmaps.com

Launch: 4th May 2004

Mike J Smith, School of Earth Sciences and Geography, Kingston University, Kingston-upon-Thames, Surrey, KT1 2EE

michael.smith@kingston.ac.uk

We are pleased to announce a "call for papers" for the newly created **Journal of Maps** (JoM). The establishment of JoM has come out of the realisation that academic map publication is in gradual decline. JoM will provide a channel for researchers to publish map based material not normally accepted by traditional journals that can then be referred to and viewed by others.

JoM has been established as a UK charity, aiming to publish original, bespoke, maps from *any* discipline. The editorial panel has been specifically put together to provide a broad range of knowledge, expertise and experience. As a journal, we suspect that initial emphasis will be upon traditional geo-subjects, however other subject areas will be strongly encouraged to submit original work.

JoM is an entirely electronic, online journal. All published material will be given away freely and therefore JoM has opted to follow a reverse publishing model. The author will pay a nominal fee to cover the review and distribution process. The journal's website (http://www.journalofmaps.com) will provide a fully searchable front-end to JoM's published materials. We accept that not everyone will want to view maps electronically and therefore all materials will be of press publishable quality.

In order to use the online facilities of JoM, a user needs to register. Basic registration allows access to published materials; personal details need to be provided in order to submit a map for publication. The principal author will need to supply a press-quality map *and* a short article ready for review. The article should describe the data presented in the map and any pertinent techniques used during the collection/mapping process. We *will not* accept long articles incorporating data analysis and interpretation, as these would be better published in traditional subject-based journals. The principal author should also supply the details of two people who may act as external referees; these persons should not have recently published with the author(s) or work at the same institution. When submitted, an article will be reviewed by two members of the editorial panel, in addition to the two external referees.

Postdoctoral Research Fellow

The **WH Bryan Mining Geology Research Centre, Australia** (BRC) is a world R&D leader in mining geostatistics, operations research and optimization in mine design and planning. It is part of The University of Queensland, one of the largest mining and mineral research centres in the world. The BRC is self-funded with substantial links to industry, including collaborative research projects with major mining companies Rio Tinto, De Beers, BHP Billiton, AngloGold, AngloCoal, Xstrata, Newmont and Western Mining Corporation. In addition to valuable industry and research contacts, the Centre provides state-of-the-art facilities and a stimulating, high tech professional environment for advanced research, industry consulting and graduate training.

The successful applicant will have a PhD in geostatistics/spatial statistics or a closely related field. Applicants should have a good research record, industrial experience, strong computing skills and be able to work both independently and as part of a team. The successful applicant will undertake independent research, research training and teaching activities within the scope of the Centre. They will be responsible for selected BRC research projects and will be expected to collaborate and interact with the mining industry and the Centre's other stakeholders. This is a fixed term full-time appointment for 1 year, with possible renewal up to 3 years subject to funding. The level of appointment will be commensurate with qualifications and experience. The remuneration package includes an employer superannuation contribution of 17%, and will be in the range AUD$52,929–64,466 *pa*. *There is no closing date for applications*.

Applications including a curriculum vitae and the names of three referees should be sent to WH Bryan Mining Geology Research Centre, The University of Queensland, Brisbane Qld 4072, AUSTRALIA

(tel +61-7-3365-3473; fax +61-7-3365-7028; brc@uq.edu.au)

SCHOLARSHIPS FOR GRADUATE STUDIES

Geostatistics

The **WH Bryan Mining Geology Research Centre at The University of Queensland, Brisbane, Australia** (BRC) is offering scholarships for research on projects of significance to the development of geostatistical models.

Eligibility: Applicants should have good mathematical/statistical and computing skills.

The BRC is a world R&D leader in mining geostatistics, operations research and optimization in mine design and planning. It is part of The University of Queensland, one of the largest mining and mineral research centres in the world. The BRC is self-funded with substantial links to industry, including collaborative research projects with major mining companies Rio Tinto, De Beers, BHP Billiton, AngloGold, AngloCoal, Xstrata, Newmont, KCGM, Western Mining Corporation and Anaconda. In addition to valuable industry contacts that increase future employment prospects, the Centre provides state-of-the-art facilities and a stimulating, high tech professional environment for advanced research, industry consulting and graduate training.

Applications including a curriculum vitae, academic transcripts and the names of at least two referees should be sent to:
Professor Roussos Dimitrakopoulos
Director, WH Bryan Mining Geology Research Centre
The University of Queensland
Brisbane Qld 4072, AUSTRALIA

Applications must be received by 1 August 2004. For further information, contact the BRC on tel: +61-7-3365-3473 fax: +61-7-3365-7028

brc@uq.edu.au   www.minmet.uq.edu.au/~bryan