IAMG Newsletter

No. 69 December 2004

Official Newsletter of the International Association for Mathematical Geology

Contents

From the Editor

Surprised to see this Newsletter in your mail? Did you expect to get an e-mail notifying you to download it instead? Well, we have a new IAMG administration, and this is one of the first changes Frits Agterberg, our new president, put into action. You can find the list of the new officers and councilors on p. 2 or p. 4. It is, as usual, a group of outstanding people coming from North America as well as Europe and Australia, representing fields such as statistics, mathematical geology, GIS, mining and geostatistics

The Association decided to return to printing hardcopy of the semiannual Newsletter and to deliver it by postal service to all members in good standing. The Newsletter will still be uploaded as PDF file to the Organization's website iamg.org. For this issue we will print the entire Newsletter in color (so that the pictures of glorious Florence won't look so drab). There were increasing requests from members for hardcopies, and IAMG will have a number of extra copies to distribute at various conferences with the hope of attracting new members.

Let us know how you view this change — did you prefer electronic media for the Newsletter with e-mail notification, or is the paper in hand a more convenient way to keep up with IAMG news?

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://www.iamg.org/awards/awards_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.

The proponent may ask the nominee to send a CV directly to the Awards Committee and s/he may also get additional information or support for the proposal from other IAMG members. Examples of successful nominations can be found on our web page: http://iamg.org/awards/awards2003.html

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.

International Association for Mathematical Geology

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PRESIDENT'S FORUM

This is the first President's Forum I am writing for our Newsletter, after formal installation of the new Council during the International Geological Congress in Florence last August. Recently, I have communicated with all our new Council members. We are eager to continue the excellent work performed by the preceding Councils, and look forward to co-operate with all members in the management of the IAMG. Please send us your comments and suggestions.

I remain optimistic with respect to the future of mathematical geology.

A strong and active IAMG membership is required to actively support our activities which continue to be mainly in the publication field although we have several other programs as well (conferences, student grants, distinguished lecturers, and awards). We publish three journals: *Mathematical Geology* continues to provide articles with new theory and applications of mathematics in the geosciences. *Computers & Geosciences* is exceedingly successful in publishing articles of newly developed computer programs by scientists covering a broad spectrum of earth-science subdisciplines including geophysics, remote sensing, geochemistry, physical geography, environmental geoscience and geoinformation. *Natural Resources Research* (formerly named *Nonrenewable Resources*) was started at the time that geoscience budgets were rapidly decreasing in size and libraries were cutting back on their subscriptions to scientific journals rather than acquiring new journals. Nevertheless, *NRR* has developed to obtain its own distinct character. Your special support for *NRR* continues to be required both in submitting manuscripts for publication and for helping it to obtain new subscribers.

During the past 10 or 20 years we have seen a marked decline in practitioners and budgets in a number of the classical subfields of geology. This unfortunate trend reflects the diminished status of geology in the eyes of politicians and the public at large. Government institutions (geological surveys) in particular have been downsized significantly but industry and universities have not been spared either. On the other hand, some geoscience subfields including environmental geology, geochronology and the new geoinformation field have been expanding. We should make special efforts to recruit new members from these expanding fields.

The rise and fall of interest in science and geoscience among government officials and the public is nothing new. Such cycles have occurred repeatedly in the past. It is one of our advantages that we are flexible in that mathematical/statistical techniques developed in one subfield of geoscience often are applicable in other subfields as well. I remain optimistic with respect to the future of mathematical geology. One reason is that mathematical applications are closely tied to computer use, and nowadays all earth scientists are active computer users. They have easy access to all kinds of software including mathematical, statistical and geostatistical techniques. If such methods are seen to produce useful results, the user is likely to develop an interest in the mathematical background of these techniques. This brings him or her into the sphere of mathematical geology. Also, most geoscientists have to cope with various sources of uncertainty because the physical extent of domains of projection for observations on the Earth's surface is very limited. Providing techniques to cope with this kind of uncertainty also is one of the hallmarks of mathematical geology.

Mathematical geology has two parents: mathematical statistics and classical geology. These two approaches to science are both relatively young with statistics starting in the mid-1700s and geology about 200 years ago. When and how averaging started is illustrated in the following excerpt from a publication in 1755 by T. Simpson in a paper on "The advantage of taking the mean of a number of observations in practical astronomy". It says: "It is well-known that the method practiced by astronomers to diminish the errors arising from the imperfections of instruments and of the organs of sense by taking the mean of several observations has not been so generally received but that some persons of note have publicly maintained that one single observation, taken with due care, was as much to be relied on, as the mean of a great number."

"There is, perhaps, no beguilement more insidious and dangerous than an elaborate and elegant mathematical process built upon unfortified premises".
T.C. Chamberlin

The aim of mathematical statistics is to discover new facts by combining many observations with one another in a meaningful way. This approach is often more successful than devising a better method that produces single numbers, which are more precise and accurate. However, the preceding quotation illustrates that it took a long time before thinking along these lines became commonplace.

With respect to the history of use of mathematics in geology, one of my favorite citations comes from a paper in 1899 by T.C. Chamberlin entitled "Lord Kelvin's address on the age of the earth as an abode fitted for life". It reads: "The fascinating impressiveness of rigorous mathematical analysis, with its atmosphere of precision and elegance, should not blind us to the defects of the premises that condition the whole process. There is, perhaps, no beguilement more insidious and dangerous than an elaborate and elegant mathematical process built upon unfortified premises".

At the end of the 19th century it was already well-known to geologists that it took millions of years to produce what we can observe in most rocks. Kelvin thought otherwise on the basis of some ill-conceived physical modeling that predated the discovery of radioactivity. Disputes like the one between Chamberlin and Kelvin strengthened the idea that mathematics initially could not contribute significantly to problem-solving in classical geology. Until recently, many practitioners in classical geology did not use any mathematics in their work although this included the construction of remarkably accurate geological cross-sections using observations at the surface and non-mathematical geological process models. Today's mathematical geologists can do what could not be achieved in the past in the area of solving geological problems by means of mathematics.

Frits Agterberg
Trondheim, October 30, 2004

Association Business

IAMG Election Results

Every four years - the year of the Summer Olympics and the International Geologic Congress - our Association changes leaders. The election in May of this year produced a new board of officers and council members who were presented at the IGC in Florence, Italy in August. We want to thank the outgoing Council under Graeme Boham-Carter for four years of progressive leadership and advancement of IAMG. They have been responsible for several far-reaching innovations and changes including the new IAMG office, the new dues structure, the Distinguished Lecturer program and the student grants. Now we welcome the new crew under Frits Agterberg and wish them a successful reign for the next four years. They are:

Officers:

President: **Frits P. Agterberg**
Geological Survey of Canada

Vice President: **Nick Fisher**
ValueMetrics, Australia

Secretary General: **Clayton V. Deutsch**
University of Alberta, Canada

Treasurer: **Gina A. Ross**
Lawrence, KS, U.S.A.

Past President: **Graeme F. Bonham-Carter**
Geological Survey of Canada

Past Secretary General: **Carol A. Gotway Crawford**
National Center for Environmental Health, Atlanta, GA

Councilors:

Antonella Buccianti
Università di Firenze, Italy

Qiuming Cheng
York University, Toronto, Ontario, Canada

Roussos Dimitrakopoulos
The University of Queensland, Australia

Brigitte Doligez
Institut Français du Pétrole

Ian Jackson
British Geological Survey

Maria João Pereira
Instituto Superior Técnico – CMRP, Lisboa, Portugal

IGC Councilor: **Felix M. Gradstein**
University of Oslo, Norway

Members of the new board present for the General Assembly at IGC: Frits Agterberg, Gina Ross, Antonella Buccianti, Qiuming Cheng

Report of the IAMG Distinguished Lecturer Committee

The IAMG Distinguished Lecturer Series committee currently consists of Alexandre Desbarats (Geological Survey of Canada), Jianping Chen (China University of Geosciences), Natalya Hunter-Williams (Geological Survey of Ireland), Sean McKenna (Sandia National Laboratories) and Graeme Bonham-Carter (ex-officio). This will be the last report from the present committee since its term is about to end. Sean McKenna has indicated that he would be prepared to take over the chair subject to council approval. Alexandre Desbarats is willing to stay on as a member in order to assist with the transition to a new committee.

The lecture tours by John Davis, the first IAMG (2003) Distinguished Lecturer, have concluded. After a highly successful tour of geoscience institutions in the southern hemisphere this past winter (publicized in the June newsletter), Frits Agterberg, the 2004 DL, is now on what is shaping up to be an equally intense and productive tour of seven institutions in Europe this fall.

As announced in the IAMG June 2004 newsletter, Dr. Lawrence J. Drew of the United States Geological Survey will be the 2005 DL lecturer. The DL committee believes that Larry will be an outstanding and enthusiastic ambassador for the IAMG and an engaging speaker with appeal to a wide range of geoscientist audiences.

Alexandre J. Desbarats
Committee Chair

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 Distinguished 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 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 interpretation 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 specialized topic.
c. Interact and hold discussions with individuals, both professionals and students, on applications of mathematical 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

Member News

Happy Birthday, Heinrich Siemes…

Prof. Heinrich Siemes turned 75 on August 15, 2004. He is emeritus Professor of Mineralogy at Aachen University of Technology (Germany), where for more than 35 years he championed the development of computer applications in geosciences. He developed and applied methods of fabric and texture analysis to study natural and experimental deformation processes of ores, and applied geostatistics in ore reserve estimation in South America. He has published numerous scientific papers contributing to applications of texture analysis; he is also coauthor (together with H. Akin) of the book "Praktische Geostatistik" (Springer, Berlin, 1988).

I am indebted to Heinrich as an academic teacher and PhD supervisor. Since these days, he has continued to support me in many ways with stimulating advice and encouragements. He got me in touch with geostatistics, he endured my excursion to groundwater flow modeling, and, in particular, he has always spurred my enthusiasm for the mathematics of fabric, microstructure and texture analysis. I would like to thank Heinrich and wish him to enjoy life as he has always done.

Helmut Schaeben

Dan Tetzlaff has moved his main job location from Ridgefield, Connecticut, to Cambridge, Massachusetts (near Boston), as part of the ongoing move of Schlumberger-Doll Research (or SDR) where Dan is Senior Research Scientist. Curiously, one of the company's other main research labs (Schlumberger Cambridge Research, or SCR) is in Cambridge, United Kingdom. To avoid confusion, the company refers to the Massachusetts location as "Boston". Schlumberger supports research in geomathematics and counts several IAMG members among its ranks. Dan's email continues to be dtetzlaff@slb.com

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John Harbaugh writes: I've been appointed adjunct professor of geology at the University of Kansas, and research associate at the Kansas Geological Survey. My wife Audrey and I divide our time between her house in Fairway, Kansas (greater Kansas City) and my house at Stanford. When I'm in Fairway, it is an easy commute to Lawrence.

On the mathematical geology side, Hugh Howard and I are embarking on schemes using ARCVIEW procedures to search for subtle rings and ellipses in digital terrain files (DTMs) on the presumption that some of these features may stem from geologically ancient impacts of large meteorites. Visually, we've found four or five rings and ellipses in Kansas and one in Iowa

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Carol Gotway Crawford has two new books out: One is "Waller and Gotway (2004) - Applied Spatial Statistics for Public Health Data. New York: John Wiley and Sons," for which *http://www.sph.emory.edu/~lwaller/WGindex.htm* offers additional datasets and program code. The second one is "Statistical Methods for Spatial Data Analysis" by Schabenberger and Gotway, Chapman & Hall, to be published in December 2004.

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After "retiring" from the Kansas Geological Survey in 2002, and teaching for a while at Baker University, **John Davis** now has an appointment as Universitätsprofessor at the Montanuniversität-Leoben in Austria. In conjunction with this, he also has a position as Chief Geologist for Heinemann Oil GmbH, a consulting firm also in Leoben. Right now, they are working on a model for production simulation of a new middle eastern giant reservoir, in conjunction with a national oil company.

John spends approximately half of his time in Austria, and has two courses to teach at the university: Reservoir Engineering for Geoscientists, and Geostatistics. He'll be commuting across the Atlantic monthly for at least the next two years.

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Report from the Awards Committee

Members of the Awards Committee are Qiuming Cheng (Canada), Stephen Henley (UK), Andre Journel (USA), Hugh Rollinson (UK), Heinz Burger (Germany, chair).

In 2004 the Awards Committee had to evaluate the proposals for the Krumbein Medal and the Griffiths Teaching Award. There were four nominations for the Krumbein Medal (winner: R. Olea) and three nominations for the Griffiths Award (winner: R. Schuenemeyer). Details about the evaluation procedure and laudatios were printed in IAMG Newsletter No. 68. According to our rules the laudatios will also be published on the IAMG website and in Mathematical Geology and Computers and Geosciences.

The main (internal) problem of the evaluation procedure is that numerical scores in the range from 1-10 must be given to each candidate. Not all Committee members can take the time to read the proposals so carefully that they can judge with such a fine scale. Instead of 10-scale scores the preferred evaluation method was ranking (1=best, etc.). Therefore also the numerical scores were transformed into ranks and the winner was determined by the lowest sum of ranks from all committee members. This decision – although not according to our Bylaws – was confirmed by the IAMG president. We conclude that the guidelines should be changed so that the evaluation can be based on ranks instead of numerical scores on a 1 to 10 scale.

During the last few years we had about 10 nominations for the Krumbein Medal and 3-4 nominations for each other award. This year we had only four nominations for the highest IAMG award! Calls for nomination are published in the IAMG newsletter (see p.1), and the IAMG president has sent a memo to all IAMG members by e-mail. Both versions contain all necessary details about the nomination procedure.

In the preceding Awards Report I've stated: A high number of qualified candidates is a prerequisite for assuring meritorious winners. Experience has shown that personal contacts to heads of research groups, institutes etc. are the best way to increase the number of suitable nominations. Especially IAMG Council members and other interested IAMG members are encouraged to activate their own contacts with respect to this task.

Obviously this is not sufficient to increase the number of nominations. Special efforts will be necessary to encourage non-English-speaking people to send in nominations. Steve Henley suggests that "not just the preparation of candidates' proposals" is difficult for them, but "with the way in which our system operates at present I'm sure this does bias the process. Possibly one partial solution would be deliberately to select members of the awards committee to provide broader geographic and linguistic coverage – say one each from North America/Western Europe, former USSR, Eastern Asia, Africa/Latin America".

It would also be helpful to publish an example of a "good" proposal on the IAMG website.

H. Burger
Chair, IAMG Awards Committee

Student Grants Report

This year we received 18 applications/proposals for IAMG student grant awards. The number is up significantly over the last two years. The Committee's review of the proposals is in progress.

The number of applicants by country of origin are:

India -- 1
China -- 2
Russia -- 2
Spain -- 2
Canada -- 1
Brazil -- 1
USA -- 9

The US proposals are from a variety of universities, including Louisiana State University, Colorado School of Mines, University of Arizona, University of South Carolina, Rice University, University of Illinois at Chicago, Southern Illinois University, and University of New Mexico.

Tim Coburn

Chair, IAMG Student Grants Committee

Latest News from Kansas

The University of Kansas has announced that the Director of the Kansas Geological Survey, Dr. M. Lee Allison, has accepted a one-year appointment as "Science and Energy Advisor to the Governor." Allison will step down from his position as Survey Director to "…devote full time to the new duties beginning August 16, 2004." The new appointment comes one month after Allison's compulsory five-year performance review as Director of the Kansas Geological Survey.

Dr. Allison will be familiar to members of the IAMG for having disbanded the **Mathematical Geology Section** of the Kansas Geological Survey, a research group that worked in mathematical geology for almost 40 years. The section was founded by **Daniel F. Merriam** in the early 1960's and was for decades a center for development of computer applications in geology and petroleum exploration. The dismissed members of the section include two past Presidents of the IAMG, two Krumbein Medalists, and one recipient of the Griffiths Award.

As the Mathematical Geology Section's last collective contribution to the IAMG, Section members organized IAMG2001, the Association's annual meeting that was held in Cancun, Mexico. The previous Director of the KGS had approved Survey sponsorship of the conference, but Allison declared that Survey support for such out-of-state activities was "inappropriate," disavowed any Survey association with the conference, and denied all travel support for KGS staff to participate in the meeting. As a consequence, KGS staff members used their vacation time to travel to Mexico and organize the conference. Although the meeting was severely affected by events of 9/11, it was regarded as a success under difficult circumstances.

After the disbanding of the Mathematical Geology Section, Allison repeatedly asked for financial records from IAMG2001, stating that the KGS was entitled to a share of the "profits" from the meeting even though he had previously denied that the Survey was a sponsor. After being provided copies of the Association's by-laws and financial report for IAMG2001, Allison dropped his request for money, but reportedly advised Survey administrators that no one on the KGS staff was to have anything to do with the Association.

Dr. Allison's performance review noted that although Survey contract income had increased during his administration, scientific contributions and scholarly publications had dropped dramatically.

The Kansas Geological Survey will initiate a search for a new Director in January. In the meantime, Dr. William Harrison will serve as Interim Director.

John C. Davis

GIS Masters Degree Program in Germany

The University of Bonn, Germany, has started to offer a new Masters Program on the subject "Geoinformationssysteme". Students applying are expected to a have degree in one of the geosciences or informatics. This curriculum includes courses in the areas of geography, geodetics, and data processing and extends over four semesters. A masters thesis is part of the requirements for the degree. More information is available at www.mscGIS.de or from Holger Voss at voss@giub.uni-bonn.de.

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IAMG Journal Report

Computers & Geosciences Best Paper Award 2003

The best paper for 2003 has been awarded to Dr. **Hongxing Liu** for his paper entitled "Derivation of surface topography and terrain parameters from single satellite image using shape-from-shading technique", which appeared in Computer & Geosciences, volume 29, issue 10, pp. 1229-1239. The paper was accompanied by program codes which are available on the server at http://www.iamg.org/CGEditor/index.htm.

Hongxing Liu is an assistant professor in Department of Geography at Texas A&M University. He received his B.S. degree in Geography from Shaanxi Normal University in China, an M.S. degree from Beijing University in China, an M.A. degree in urban and regional planning from University of Sydney in Australia, and Ph.D in geography from the Ohio State University in USA in 1999. His research interests are primarily in remote sensing, geographical information sciences (GIS), terrain and hydrological modeling, 3D urban models, land use and land cover change studies. He has developed various algorithms and software tools for geospatial analysis. His recent research projects have been funded by NASA, NSF, and NOAA Sea Grant programs.

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Mathematical Geology Best Paper Awards

The 2002 award was given to **Andre Haas** and **Philippe Formery** for the outstanding contribution "Uncertainties in facies proportion estimation, I. Theoretical framework: the Dirichlet distribution" in *Mathematical Geology* vol. 34, number 6, pp. 679-702

The award for 2003 goes to **J. Antonio Vargas-Guzman** and **Roussos Dimitrakopoulos** for their excellent paper: "Successive nonparametric estimation of conditional distributions" in *Mathematical Geology* vol. 35, number 1, pp.39-52

Winners of the Best Paper award receive a free subscription to *Mathematical Geology* for one year, paid by the Association. They also receive a certificate signed by the IAMG President and by the Secretary General.

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Changes at Kluwer

Kluwer Academic Publishers who publish two of the three IAMG journals, *Mathematical Geology* and *Natural Resources Research*, have recently merged with Springer-Verlag. As a result, the Kluwer internet website will be migrated to Springer's website and KluwerOnline will be merged with SpringerLink. The changes are expected to be complete in early January 2005. Once the migration is completed and tested, visitors to KluwerOnline will automatically be redirected to SpringerLink. There will be no immediate changes to URLs.

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Publications Committee Report 2004

Mathematical Geology

Submissions during 2004 are running behind what they should, and at the moment the numbers are similar to those in 2001. An additional 5 articles have been submitted as part of a special issue in honor of Michael David. As in previous years, time from receipt of a manuscript to time of publication is about one year. The number of papers to be published in 2004 is similar to that of previous years:

	1999	2000	2001	2002	2003	2004
Papers	46	47	44	50	50	45
Book Reviews	8	9	6	9	8	9
Letters to Editor	1	3	2	0	3	1
Assoc. Announcements	6	1	3	3	2	1
Notes	0	0	1	0	1	0
Teacher's Aides	0	0	3	0	0	0
Submissions	75	87	54	74*	75*	31!

* excluding special issues.

! period January through June.

The scientific content of the journal is determined entirely by the nature of the manuscripts submitted. For example, no teacher's aides or notes have been published because there were no submissions. At the present time the editor is publishing all manuscripts that pass review. For the editor to exercise any direction over the scientific content of the journal under the current page agreement, annual submissions would need to reach at least 90 per year.

With the November issue, the publication schedule for the journal should again be on time after lagging by about 3 months over the past year. This was accomplished with the help of a graduate assistant from the school of library and information science. The assistant has now left for a full time job and I will be seeking another assistant as a replacement in September.

Kluwer has now moved to a system where notice of proofs is sent out by e-mail and the authors can download their proofs as PDF files. They are then expected to return any corrections by fax. Last year at the publications committee meeting in Portsmouth, the issue of on-line submissions was discussed. An on-line submission system for Mathematical Geology was inaugurated on the 16th of June. However, the editor is currently using the system only for authors in remote locations. It is expected that it will be a year before the system is fully implemented. As of necessity there will be a period in which the old paper system must be meshed with the new online system.

One problem encountered early this past spring was the threat by the U.S. Treasury Department to prosecute anyone editing or publishing scientific manuscripts from certain countries. As a result, one manuscript in proof was pulled by Kluwer. While this threat has now been relaxed, it still remains a possibility.

W. Edwin Sharp, Editor-in-Chief

Computers & Geosciences

Volume 29 (2003) contained 10 issues, a total of 1307 pages, 115 regular articles, 7 short notes and 2 book reviews. Number 3 was a special issue on the topical but technical subject of "Reactive Transport Modeling in the Geosciences", edited by Lauren Browning and William Murphy. Of the 122 papers published in volume 29, 71 (58%) were accompanied by code that was made available for public access on the IAMG server. The number of papers submitted in 2003 was over 200, up from about 180 in 2002. The rejection rate was about 35%.

The Impact Factor published by ISI for 2002 was 0.52, and for 2003 was 0.709, I think the best ever. However, I have no idea how significant this is—we may come crashing down again next year! Elsevier publishes a report annually on the most frequently downloaded articles—the paper by Alan Witten (University of Oklahoma) entitled "Geophysica: MATLAB-based software for the simulation, display and processing of near-surface geophysical data" was first for 2002-2003, and it so happened that this paper was selected independently as Best Paper for 2002. The statistics on code downloads developed by our Webmaster Eric Grunsky also showed that this was a popular code. The Best Paper for 2003 was by Hongxing Liu (Texas A&M) for his paper entitled ''Derivation of surface topography and terrain parameters from single satellite image using shape-from-shading technique'', which appeared in volume 29, number 10, pages 1229-1239.

Elsevier reports that nearly 2000 libraries have electronic access to the journal. This represents a substantial improvement in access to the journal over the earlier years of print-only, and may be responsible for the increase in the number of submitted articles. The average number of code downloads from the IAMG server is about 5,000 per month.

The journal has now moved to a fully electronic system for manuscript submission via the Elsevier Author Gateway. This cuts down on mailing costs and volume of paper, but is not without its problems. Kathryn MacKinnon is retiring as Managing Editor this month, and is being succeeded by Jean Hubay. Kathryn has done a terrific job, and will be sorely missed. She is moving on to a challenging career as an ordained church minister, and we wish her every success. Eric Grunsky is the new Deputy Editor, Tom Jones Book Review Editor, and Roussos Dimitrakopoulos is now an Associate Editor.

Now in its 30th year of publication, the journal will shortly have a new contract between IAMG and Elsevier. Last year, the journal generated $50,514 in royalties for the Association, indicating a healthy growth in excess of inflation.

Graeme Bonham-Carter, Editor-in-Chief

Natural Resources Research

At present I have only six manuscripts in hand - two of which will be rejected and possibly a third. To my knowledge I have had maybe six paper by AAPG members submitted (as part of a symposium). We definitely need to have their support. Rejection rate varies from year to year but ranges from about 21 to 38%.

It may be we are getting rejects from journals such as AAPG Bulletin and Basin Research (I think they are our main competition). We are getting a lot of manuscripts from overseas or at least by foreign authors. My coeditors (at MG and C&G) are good to direct manuscripts to NRR that are appropriate and publishable. It may be our scope is too broad, but there is a problem than needs to be resolved. I would guess the NRR distribution is not large, however, some of our recent papers have received considerable attention (that helps our image).

Encourage your colleagues and friends to submit papers for consideration and please do so yourselves.

Daniel F. Merriam, Editor-in-Chief

IAMG Studies In Mathematical Geology (SMG)

Jo Anne DeGraffenreid (USA), Editor.
Associate Editors: Thomas A. Jones (USA), Heinz Burger (FRG).

The most recent monograph in the Oxford University Press series "IAMG Studies in Mathematical Geology," *Geostatistical Analysis Of Compositional Data* by Vera Pawlowsky-Glahn and R.A. Olea, 2004, appeared in early May. Both authors report they are pleased by the quality and appearance of the 181-page volume. At my insistence, the cover of SMG No. 7 was done in the style of the original five SMG monographs: dark buckram [volumes seem to range from black to navy to (most recently) dark blue] with the title, etc. and IAMG logo in gold. I have also requested that future reprints of SMG No. 6, *Modern Spatiotemporal Geostatistics* by G. Christakos, 2000, be done in this style. The "Millennium-look" (?) of George's title with its saddle-brown, smooth "leather" cover and copper-tone printing was a great shock!

Although copy for SMG No. 7 shipped to Oxford on 5 June 2003 was camera-ready, it took them almost a year to publish the volume. Oxford seems to have an amazing turn-over in personnel in their editorial and production staff, which accounts for much of the delay. Apparently they decided to make amends by providing a very generous number of personal copies to the authors and to the editor, as well. The copies I have received will be used for display, etc. at IAMG meetings and appropriate other conferences.

In response to my request for information about sales, current in-print numbers, and plans for reprinting SMG numbers, Oxford Assistant Editor John Rauschenberg reports the following "lifetime" sales numbers:

No.2 *Oil and Gas Forecasting* (out of stock) 642 copies, (since 1990)
No.3 *Geostatistical Glossary and Multilingual Dictionary* 795 copies (since 1991)
No.5 *Computers in Geology* 644 copies (since 1993)
No.6 *Modern Spatiotemporal Geostatistics* 830 copies (since 2000)
No.7 *Geostatistical Analysis of Compositional Data* 222 copies (since May 2004)

Mr. Rauschenberg has inquired about reprint plans for the out-of-stock book (SMG No. 2) but as of now has received no answer from the Oxford "marketing folks."

During the period since the last "Studies in Mathematical Geology" report (August 2003–July 2004), I have received inquiries about two possible "monographs" for inclusion in the series. Both inquiries dealt with collections of papers, one of which might better be described as a Festschrift and was deemed inappropriate in terms of what Oxford expects and is willing to publish. After initial discussions about the other tentative proposal, the ball has stalled in the court of the group who suggested the topic.

After receipt on May 8, 2004, of a release from the author's estate, work is underway on the manuscript described in last year's report: the unpublished work on statistical methods for estimating petroleum resources written by the late P.J. Lee during his tenure at National Cheng Kung University in Taiwan. John Rauschenberg is optimistic about the project and said to submit the proposal and draft directly to Earth Science Editor Cliff Mills, "…since he's the official editor for this series, and will need to pursue approval to publish a new book in it. But it sounds like it will be a great topic!"

Jo Anne DeGraffenreid, Editor

32 IGC and IAMG 2004 in Florence, Italy

The old fortress - venue of the conference

Opening Session ...

The 2004 Annual IAMG Meeting took place in Florence Italy in conjunction with the 32nd International Geological Congress. The venue was the old Renaissance fortress at the northern edge of the old town which has been remodelled into a huge convention center. Some 7200 delegates from over 120 countries gathered here for a week. The more heavily represented nations were:

Italy	1840
USA	657
Russia	526
China	478
Japan	337
Germany	257
France	225
UK	223
Spain	171
Canada	170
Brazil	154
India	103
Australia	102
Switzerland	98
Kazakhstan	96

Registration Area

... and Math Geology talks

Special Poster (and sampling) Session

Old friends meeting again

IAMG organized or sponsored 14 sessions of various topics. In addition, there were many other sessions and talks of interest for IAMG members. A General Assembly was held to report on Association matters and to introduce the new board members. Jack Schuenemeyer and Ricardo Olea were honored at the Awards Ceremony and gave scientific presentations.

The meeting gave plenty of opportunity to meet collegues and old friends, as well as sample the culture and cuisine of the beautiful city of Florence.

Beautiful Florence

New IAMG President
Frits Agterberg

2005 Dist. Lecturer Larry Drew

IAMG General Assembly

the "old" Council: Agterberg, Gotway-Crawford, Bonham-Carter, Weltje, Buccianti, Schafmeister

Vaclav Nemec

Coffee break at IAMG lecture room 18

1st Meet of CGI (Commission on Geoscience Information) at top Kristine Asch & John Whalley

2004 Krumbein Medal for Ricardo Olea

Zhang Chaosheng

Enjoying Italian food and wine

2004 Griffiths Award to Jack Schuenemeyer

Ricardo with Nishi

Jack is pleased

and at the end of the day ...

JOURNAL CONTENTS

MATHEMATICAL GEOLOGY

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Identification of mineral grains in a petrographic thin section using phi- and max-images — Ye Zhou, J. Starkey and L. Mansinha

A hybrid neuro-fuzzy model for mineral potential mapping — A. Porwal, E.J.M. Carranza and M. Hale

Multifractility as a measure of spatial distribution of geochemical patterns — A. Panahi and Q. Cheng

Fractal and multifractal properties of geochemical fields — S. Xie and Z. Bao

BOOK REVIEW: Using Geochemical Data: Evaluation, Presentation, Interpretation by H.R. Rollinson — Reviewed by W.E. Sharp

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Correcting the smoothing effect of ordinary kriging estimates — J.K. Yamamoto

Local sensitivity analysis of a numerical model of volcanic Plinian columns through automatic differentiation — I. Charpentier & J.M. Espindola

SHORT NOTE: A modified Terzaghi consolidation factor for first-order estimation of overpressure resulting from sedimentation: review and synthesis — S. Ellis & D. Darby

BOOK REVIEW: Geodynamics, 2nd ed. by D.L. Turcotte & G. Schubert — Reviewed by G. Ranalli

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Co-phased median filters, some pecularities of sweep signal processing — V.I. Znak

BOOK REVIEW: Analyzing Categorical Data by J.S. Simonoff — Reviewed by T.A. Jones

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Computers & Geosciences

(Articles with * have code available on http://www.iamg.org/CGEditor/cg2004.htm)

C&G Volume 30, C&G Volume 30, Number 5 (2004)

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New discrimination techniques for Euler deconvolution — FitzGerald, D.

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Transient transport of reactive and non-reactive solutes in groundwater* — Fares, Y.R.

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POWGRAF2: a program for graphical spectral analysis in cyclostratigraphy* — Pardo-Iguzquiza, E., Rodriguez-Tovar, F.J.

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Delivery: an open-source model-based Bayesian seismic inversion program* — J. Gunning

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MINLITH: an experience-based algorithm for estimating the likely mineralogical compositions of sedimentary rocks from bulk chemical analyses* — O.M. Rosen, A.A. Abbyasov, J.C. Tipper

Finite-element formulation for solving the hydrodynamic flow equation under radial flow conditions — C. Axness, J. Carrera, M. Bayer

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Automatic geobody detection from seismic data using minimum message length clustering — Xu, Y., Caers, J., Arroyo-Garcia, .

AMPH-CLASS: An Excel spreadsheet for the classification and nomenclature of amphiboles based on the 1997 recommendations of the International Mineralogical Association* — Esawi, E.K.

On the estimation of kinetic parameters of organic matters using linearization methods* — Uraz, I., Akin, S., Kok, M.V.

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Morphometric analysis in geographic information systems: applications of free software GRASS and R* — Grohmann, C.H.

DETACH: an Excel spreadsheet to simulate 2-D cross sections of detachment folds* — Wilkerson, M.S., Wilson, J.M., Poblet, J., Fischer, P.

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Construction of lineament maps related to groundwater occurrence with Arcview and Avenue scripts* — Kim, G-B., Lee, J-Y.,Lee, K-K.

Best Paper Award 2003

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Natural Resources Research

volume 13, number 3 — 2004

Minimum acceptance criteria for geostatistical realizations, by O. Leuangthong, J.A., McLennan, and C.V. Deutsch.

A GIS analysis to evaluate areas suitable for crushed stone aggregate quarries in New England, USA, by G.R. Robinson, Jr., K. E. Kapo, and G.L. Raines.

Availability of bauxite reserves, by F.M. Meyer.

Weights-of-Evidence modeling of mineral potential: a case study using small number of prospects, Abra, Philippines, by E.J.M. Carranza.

Sparse data division using data segmentation and Kohonen Network for neural network and geostatistical ore grade modeling in Nome offshore placer Deposit, by B. Samanta, S. Bandopadhyay, R. Ganguli, and S. Dutta

Statewide estimates of undiscovered deposits of gold, silver, copper, lead, and zinc, by R.B. McCammon, D.H. Root, and P.G. Schruben

Book Review: Introduction to Ore-Forming Processes. Laurence J. Robb, Blackwell Publishing, 2005, 373 pp. by Ronald R. McDowell

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Hubbert's petroleum production model: an evaluation and implications for world oil production forecasts, by A.J. Cavallo.

Evaluation of Horner Plot-corrected log-derived temperatures in the Danish Central Graben, North Sea, by D.W. Waples and M.R. Pedersen

Correction of a single log-derived temperatures in the Danish Central Graben, North Sea, by D.W. Waples, M.R. Pedersen, and P. Kuijpers

Injection experiments and thermal recovery in corehole OH-1, Lake City, California, by J.R. McKenna, W.R. Benoit, C.B. Goranson, and D.D. Blackwell.

Validation of the relation between structural patterns in fractured bedrock and structural information interpreted from 2D-variogram maps of water-well yields in Loudoun County, Virginia, by L.J. Drew, S. Southworth, D.M. Sutphin, G.A. Rubis, J.H. Schuenemeyer, and W.C. Burton.

Zipf's Law: a viable geological paradigm?, by D.F. Merriam, L.J. Drew, and J.H. Schuenemeyer

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Conference Reports

GIS IDEAS'2004, Hanoi, Vietnam

The second "International Symposium on Geoinformatics for Spatial and Infrastructure Development in Earth and Allied Sciences" (GIS IDEAS'2004) took place in Hanoi from Sep 16 to 18, 2004. It was organized by the Japan-Vietnam Geoinformatics Consortium (JVGC). It is an international conference and an event of Japanese-Vietnamese cooperation in science and science politics of first order. The opening ceremony was graced by the Vietnamese Vice-Minister of Education and the Japanese Ambassador to Vietnam. The symposium attracted more than 150 participants from more than 7 countries (Vietnam, Japan, Thailand, USA, Canada, Germany, Italy, etc.). Three invited keynote lectures were given by (i) Prof. Katsushi Ikeuchi, The University of Tokyo, "Representing Cultural Heritage Through Observation", (ii) Prof. em. Shunji Murai, The University of Tokyo, "Mapping from High Resolution Satellite Imagery in GIS Age", and (iii) Prof. Nhuan Mai Trong Nhuan, Vice-President, Vietnam National University, "GIS and Remote Sensing in Vietnam - Some Problems and Perspectives".

There were sessions on "disaster management and mitigation", "landslides and debris flow", "coastal zones and oceanography", "water resource management", "erosion, terrain evaluation and landuse", "geophysical methods, algorithm and system development", "socio-informatics", "remote sensing and evironmental monitoring", and two special session on "historical GIS", and "ASTER". In these technical sessions a total of 50 oral and 18 poster presentations of high quality were given. The organizers of the symposium edited a proceedings volume of 495 pages including almost all contributions, and the presentations can also be accessed at http://gisws.media.osaka-cu.ac.jp/gisideas04/schedule.php .

Having enjoyed the first meeting, I participated in the second one with a poster and an oral contribution. I was generally impressed by the knowledge of all aspects of GIS, particularly with respect to remote sensing, cultivated in Vietnamese academia and consulting agencies.

With this note I would like to encourage everybody to consider her/his participation in the next GIS-IDEAS Symposium coming up in Ho Chi Minh City, formerly known as Saigon, in 2006.

Helmut Schaeben

Technische Universität Bergakademie Freiberg

American Statistical Association, Toronto

A topic-contributed session entitled "Environmental Applications of Mathematical Geology" co-sponsored by the IAMG and the Section on Statistics and the Environment of the American Statistical Association was held on Wednesday, August 11th, 8:30 – 10:20am, during JSM 2004 in Toronto, Canada. It was organized by your Vice President and chaired by Abdel H. El-Shaarawi, Environment Canada. The program consisted of oral presentations of the following five papers:

"Revisiting the Join-Count Statistics to assess spatial association without assuming first-order homogeneity" – Sandos Kabos, Eotnos Lorand University, Hungary; Ferenc Csillag, University of Toronto.

"Spatial-temporal frequency analysis of run-off and groundwater in the Greater Toronto Area, Canada" – Qiuming Cheng, York University/China University of Geosciences.

"Estimation of background and threshold in applied geochemistry" – Robert G. Garrett, Geological Survey of Canada; Peter Filzmoser, Vienna University of Technology; Clemens Reimann, Geological Survey of Norway.

"Spatial distribution of metals in the environment around a copper smelter in western Quebec, Canada" – Graeme Bonham-Carter, Geological Survey of Canada.

"Conditional independence testing in the Weights-of-Evidence method" – Frederik P. Agterberg, Geological Survey of Canada.

These oral presentations were followed by a floor discussion. JSM (the Joint Statistical Meetings) is the largest gathering of statisticians held in North America. This 5-day event is held jointly with the American Statistical Association, the International Biometric Society (ENAR and WQNAR), the Institute of Mathematical Statistics, and the Statistical Society of Canada. Attended by over 4000 people, activities of the meeting include oral presentations, panel sessions, poster presentations, continuing education courses, exhibit hall, and networking opportunities. IAMG Secretary General Carol Gotway Crawford as 2004 Program Chair for ASA's Section on Statistics and the Environment (ENVR) has helped to arrange that our IAMG-cosponsored topic-contributed session was held in Toronto. In a letter to our President dated 1 June 2004, the IAMG has been invited to participate in a competition for an invited session at JSM 2005, the next Joint Statistical Meetings to be held in Minneapolis, August 7-11, 2005.

Frits Agterberg

A note about IAMG2005 Conference

21-26 August 2005, in Toronto, Canada

The IAMG2005 annual conference will be held August 21-26, 2005, in Toronto, Canada. The conference location is Hart House at the University of Toronto main campus. The principal theme of the conference is "GIS and Spatial Analysis" including new theories, methods and applications of mathematical geology and spatial information systems for solving complex problems in earth systems, natural resource management and environmental assessment. We will also provide a programme of symposia of sufficient breadth to attract state-of-the-art contributions from across the full range of mathematical geology.

Development and application of spatial analysis and modelling theory and techniques have been one of the main focuses of IAMG since its creation. The integration of spatial analysis including geostatistical techniques and other modelling techniques with geographical information systems (GIS) has not only significantly advanced GIS technology but also increased the usefulness and effectiveness of mathematical modelling techniques in solving geo-problems. In order to solve complex spatial problems using GIS, more sophisticated mathematical techniques have been developed and integrated with the GIS. The methods include not only conventional statistical and stochastic ones but non-linear and chaotic approaches for solving problems in geology, mineral resource assessment, geological hazards and environmental impact prediction that are related to chaotic, singular and non-linear dynamics.

The preparations for the conference are going smoothly and the second circular will be out shortly. About 20 tentative sessions are planned, and we are still open for suggestions to add more sessions and workshops, short courses and sponsorships. If you are interested in proposing a session in your area please contact the conference chairs **Qiuming Cheng** at qiuming@yorku.ca or **Graeme Bonham-Carter** at gbonhamc@NRCan.gc.ca. Both oral and posters presentations are encouraged. Some exhibition spaces will be reserved for companies, institutions and research centers to display their programs and products. Five keynote speakers have been confirmed, and the Chayes and Vistelius award winners will also be invited to deliver keynote lectures. At least one Field Trip is being organized, as well as a number of social events. We look forward to welcoming you to Toronto. More information about the conference can be found at www.iamgconference.com.

The keynote speakers confirmed include:


Shaun Lovejoy
McGill Univ.


Nick Fisher
Australia


Don Turcotte
Univ.of California


Ferko Csillag
Univ. of Toronto


Mark Gahegan
Penn State Univ.

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY
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❑	Ordinary member – Lifetime	US$	120.00
❑	Student member (proof of enrollment required)	US$	5.00
❑	Institutional member (includes library subscriptions to all 3 journals, etc)	US$	3,500.00

OPTIONAL: Discounted rates on our journals

❑	Mathematical Geology	US$	42.00
❑	Computers & Geosciences, regular	US$	78.00
❑	Computers & Geosciences, student (proof of enrollment required)	US$	39.00
❑	Computers & Geosciences, electronic subscription, regular or student*	US$	39.00
❑	Natural Resources Research	US$	55.00

* Password and instructions will be assigned by IAMG Office

OPTIONAL: IAMG Monograph Series (Price represents discount over non-member price; excludes shipping**)

❑	#3: "Geostatistical Glossary and Multilingual Dictionary" edited by Ricardo A. Olea	US$	45.50
❑	#5: "Computers in Geology: 25 Years of Progress" edited by J.C. Davis and U.C. Herzfeld.	US$	49.00
❑	#6: "Modern Spatiotemporal Geostatistics" by George Christakos	US$	42.00
❑	#7: "Geostatistical Analysis of Compositional Data" by V. Pawlowsky-Glahn and R.A. Olea	US$	59.50

**Add $5.00 (one book) plus $1.50 (additional books) for US orders, OR $10 plus $5 for orders outside US.

OPTIONAL: CD's

❑	Computers & Geosciences Silver CD: 25 years of computer code	US$	25.00
❑	Proceedings IAMG'2001 in Cancun	US$	10.00
❑	Proceedings IAMG'2002 in Berlin	US$	10.00
❑	Proceedings IAMG'2003 in Portsmouth	US$	10.00

OPTIONAL: Donation to IAMG (please fill in amount) ..... US$_____

TOTAL ..... US$_____

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Kingston, ON K7K 1Z7
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E-mail: office@iamg.org
FAX: +1 613 531 0626
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PROOF OF STUDENT ENROLLMENT

Student Name _____

Degree Objective _____

University Name _____

University Address _____

_____

_____ Country _____

I hereby certify that the student named on this form is currently enrolled at this University, where I am a professor.

Professor's Name _____

Professor's Signature _____

Date _____

Upcoming Meetings

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. Note: Ute Herzfeld and Qiuming Cheng are organizing an IAMG session at this meeting.

GIS, GPS & Remote Sensing (GEOMATICS), Beltsville, MD, USA, **24-27 Jan. 2005**. Applied Technology Institute. Lisa Hardy, 12960 Linden Church Road, Clarksville, MD 21029, Phone: 410-531-6034 FAX: 410-531-1013, EMail: ATIcourses@aol.com, Web: http://www.ATIcourses.com

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

European Geosciences Union (EGU), XXX General Assembly, Nice, France, **25–29 April 2005**. EGU Office, Max-Planck-Str. 13, 37191 Katlenburg-Lindau, Germany; Phone: +49-5556-1440; Fax: +49-5556-4709; E-mail: egu@copernicus.org; Web Site: www.copernicus.org/EGU/EGU.html

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

EUROCK 2005 (International Symposium), Brno, Czech Republic, **18–20 May 2005**. International Society for Rock Mechanics, Dr Pavel Konecnˇ, Inst. of Geonics AS CR, Studentská 1768, CZ-70800 Ostrava-Poruba, Czech Republic; Phone: (+420) 69 6979111; Fax: (+420) 69 6919452; E-mail: konecpa@ugn.cas.cz

American Geophysical Union, Canadian Geophysical Union, and the Society of Exploration Geophysists (Joint Assembly), New Orleans, Louisiano, USA, 2**3–27 May 2005**. 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

SIAM Conference on Mathematical and Computational Issues in the Geosciences, co-sponsored by INRIA, Palais des Papes, Avignon, France, **7-10 June 2005.** Co-chairs: Lynn Bennethum, University of Colorado, Denver, Alain Bourgeat, University of Lyon, France, http://www.siam.org/meetings/gs05/index.htm

Madrid 2005, 67th EAGE Conference & Exhibition, Madrid, Spain, **13–17 June 2005.** European Association of Geoscientists & Engineers, E-mail: eage@eage.org; Web Site: http://www.eage.nl/conferences/index2.phtml?confid=17

American Association of Petroleum Geologists (AAPG) and Society for Sedimentary Geology (SEPM), 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

DYNAMIC PLANET 2005 "Monitoring and Understanding A Dynamic Planet with Geodetic and Oceanographic Tools", Cairns, Australia, **22-26 Aug. 2005.** Joint Assembly of the IAG, IAPSO and IABO. Dynamic Planet 2005 Secretariat, GPO Box 2609, Sydney NSW 2001, Australia, Phone: + 61 2 9241 1478 FAX: + 61 2 9251 3552, EMail: nicoleh@eventplanners.com.au, Web: http://www.dynamicplanet2005.com

PEDOMETRICS 2005: Frontiers in Pedometrics, The Naples Beach Hotel & Golf Club, Naples, Florida, USA, **12-14 Sep. 2005.** University of Florida / IFAS. Sharon Borneman, PO Box 110750, Gainesville, Florida 32611-0750, Phone: 352-392-5930 FAX: 352-392-9734, EMail: spborneman@ifas.ufl.edu, Web: http://conference.ifas.ufl.edu/pedometrics

World Tribology Congress III. ASME, STLE. Washington, DC, USA, **12-16 Sept. 2005.** +01 212 591 7787, email: Noha El-Ghobashy. Tribology, lubrication, wear, friction.

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

2006 Joint Statistical Meetings, Seattle, Washington, **06 -10 August 2005.** . Elaine Powell, Phone: 703-684-1221 or 800-308-8943, Fax: 703-684-8069, EMail: jsm@amstat.org, www.amstat.org/meetings/index.cfm?fuseaction=main

<>

IAMG 2006 Annual Conference

on

"Geology from Multiple Sources"

Université de Liège

Department of "Georesources, Geotechnologies and Building Materials GEOMAC"

Professor Eric PIRARD
Tel: 32-4-3669528
Fax: 32-4-3669520
E-mail: eric.pirard@ulg.ac.be
http://www.ulg.ac.be/geomac

Treasurer's Report

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY

STATEMENT OF ASSETS, LIABILITIES AND NET ASSETS - MODIFIED CASH BASIS
As of December 31, 2003 and 2002

ASSETS

	2003	2002
CURRENT ASSETS		
Cash and cash equivalents	$ 100,403	$ 208,306
INVESTMENTS	579,211	424,103
Total Assets	$ 679,614	$ 632,409

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY

STATEMENT OF REVENUES COLLECTED, EXPENSES PAID AND CHANGES IN NET ASSETS - MODIFIED CASH BASIS
For the Years Ended December 31, 2003 and 2002

	2003	2002
REVENUES		
Membership and subscriptions	$ 39,638	$ 41,754
Royalties	60,627	56,397
Investment return	30,419	9,972
Other income	1,000	2,069
Total Revenues	131,684	110,192
EXPENSES		
Member and publication	42,637	49,326
Grants and awards	11,000	5,060
Conferences, meetings, and travel - net	17,411	12,836
Website and computer	3,301	721
Accounting	2,760	2,670
Contracted services	6,030	6,435
Investment expense	1,340	1,718
Total Expenses	84,479	78,770
CHANGES IN NET ASSETS	47,205	31,422
NET ASSETS, beginning	632,409	600,987
NET ASSETS, ending	$ 679,614	$ 632,409

IAMG Membership Report

June 30, 2004

Membership Type	Renewed	New	Reinstated*	Total Paid	Not Renewed**
Ordinary – no subscription	66	17	0	83	23
Ordinary – with subscription	280	19	10	309	148
Subtotal – Ordinary Members	**346**	**36**	**10**	**392**	**171**
Student – no subscription	3	4	–	7	3
Student – with subscription	5	6	1	12	12
Subtotal – Student Members	**8**	**10**	**1**	**19**	**15**
Institutional	0	0	0	0	–
Grand Total	**354**	**46**	**11**	**410**	

former member did not pay 2003 – rejoined in 2004
*** paid 2003 not paid for 2004*

IAMG Membership Report
June 30, 2003

Membership Type	Renewed	New	Reinstated*	Total Paid	Not Renewed**
Ordinary – no subscription	55	18	–	73	–
Ordinary – with subscription	376	30	20	426	113
Subtotal – Ordinary Members	**431**	**48**	**20**	**499**	**113**
Student – no subscription	2	3	–	5	–
Student – with subscription	11	5	0	16	1
Subtotal – Student Members	**13**	**8**	**0**	**21**	**1**
Institutional	0	0	0	0	–
Grand Total	**444**	**56**	**20**	**520**	**114**

former member did not pay 2002 – rejoined in 2003
*** paid 2002 not paid for 2003*

IAMG Membership Report

November 30, 2003

Membership Type	Renewed	New	Reinstated*	Total Paid	Not Renewed**
Ordinary – no subscription	55	20	–	75	–
Ordinary – with subscription	385	36	20	441	111
Subtotal – Ordinary Members	**440**	**59**	**20**	**516**	**111**
Student – no subscription	2	5	–	7	–
Student – with subscription	11	7	0	18	1
Subtotal – Student Members	**13**	**12**	**0**	**25**	**1**
Institutional	0	0	0	0	–
Grand Total	**453**	**71**	**20**	**544**	**112**

former member did not pay 2002 – rejoined in 2003
*** paid 2002 not paid for 2003*

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY

NOTES TO FINANCIAL STATEMENTS
For the Years Ended December 31, 2003 and 2002

Note 1 - Summary of Significant Accounting Policies

The accounting policies described below have been followed on a consistent basis.

Nature of Activities

International Association for Mathematical Geology is a not-for-profit organization established on August 22, 1968 to promote international cooperation in the application and use of mathematics in geological research and technology.

Basis of Accounting

The Association prepares its financial statements on the modified cash basis method of accounting. This modified cash basis differs from accounting principles generally accepted in the United States of America since revenues are recognized when collected rather than when earned, and expenses are recognized when paid rather than when the obligation is incurred. Generally, noncash transactions are not recognized in the financial statements, but the Association has elected to record its noncash unrealized gains and losses on its investments in the statement of revenues collected, expenses paid and changes in net assets - modified cash basis. This exception is a departure from the cash basis of accounting, but is in accordance with accounting principles generally accepted in the United States of America.

Basis of Presentation

The Association reports information regarding its financial position and activities according to three classes of net assets: unrestricted net assets, temporarily restricted net assets, and permanently restricted net assets.

Use of Estimates

The preparation of financial statements requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Cash Equivalents

The Association considers all highly liquid debt instruments with a maturity of three months or less to be cash equivalents.

Investments

In accordance with accounting principles generally accepted in the United States of America, investments in marketable securities with readily determinable fair values and all investments in debt securities are reported at their fair value in the statement of financial position. Unrealized gains and losses are included in the change in net assets.

Contributions

Contributions received by the Association are recorded as unrestricted, temporarily restricted, or permanently restricted support depending on the existence or nature of any donor restrictions.

As of the financial statement date, there are no contributions on which restrictions, permanent or temporary, have been imposed.

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY

NOTES TO FINANCIAL STATEMENTS
For the Years Ended December 31, 2003 and 2002

Note 1 - Summary of Significant Accounting Policies (Continued)

Income Taxes

The organization is exempt from federal income tax under section 501(c)(3) of the Internal Revenue Code and from state income tax under applicable state law.

Note 2 - Investments

The Association's investments consist of marketable securities that are valued at fair market value. Investments are presented in the financial statements in the aggregate.

	December 31, 2003		December 31, 2002	
	Cost	Market	Cost	Market
Government and Gov't Backed Securities	$ 82,140	$ 86,133	$ 99,274	$ 107,227
Mutual Funds	552,991	493,139	388,159	316,876
	$ 635,131	$ 579,211	$ 487,433	$ 424,103

The following schedule summarizes the investment return and its classification in the statement of activities for the years ended:

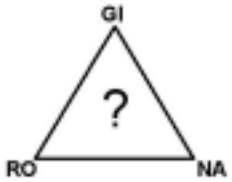
	December 31, 2003	December 31, 2002
Interest income	$ 329	$ 1,048
Dividend income	18,815	10,957
CD income	5,866	6,743
Unrealized gains [losses]	7,409	[11,992]
Realized gains [losses]	-	[3,484]
Total investment return	$ 30,419	$ 9,972

Note 3 - Concentration of Credit Risk

Financial accounting standards require disclosure of information about financial instruments with off balance sheet risk and financial instruments with concentrations of credit risk.

Financial instruments which potentially subject the Association to concentrations of credit risk consist principally of cash and cash equivalents. The Association places its cash and cash equivalents with financial institutions and investment brokers. The Association does not have any bank depository accounts with balances in excess of FDIC depository insurance coverage. Investments with investment brokers are not covered by FDIC depository insurance coverage and are, therefore, exposed to credit risk to the extent of the cash and cash equivalents deposited in these accounts. The Association's credit exposure was $77,922 and $135,626 as of December 31, 2003 and 2002, respectively.

Announcements



2nd Compositional Data analysis Workshop Girona 19-21 October 2005

CoDaWork 05

http://ima.udg.es/Activitats/CoDaWork05/index.html

Organisers

Honorary Chair: John Aitchison
Workshop Chairs: Josep A. Martin-Fernández, Vera Pawlowlsky-Glahn, S. Thió-Henestrosa

Introductory course to statistical analysis of compositional data
October 18th 2005

Objective: To provide an introduction to theoretical and practical aspects of statistical analysis of compositional data.

Methodology: From a variety of practical compositonal problems this course will set out the important theoretical principles of statistical analysis of compositional data. Different case studies will be presented and analyzed using CoDaPack, a freeware software based on EXCEL.
Teachers: Dr. C. Barceló-Vidal, Dr. S. Thió-Henestrosa, Dr. J.A. Martín-Fernández
Language of the course: English

Call for Papers

The Workshop on Compositional Data is intended as a forum for discussion of hot points related to the statistical treatment and modelling of compositional data, as well as their applications and interpretation. 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 2hour sessions on the above 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.

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

For more information contact Dra. G. Mateu-Figueras: codawork05@ima.udg.es.