IAMG Newsletter

No. 74 June 2007

Official Newsletter of the International Association for Mathematical Geology

Contents

Call for Award Nominations

The Association invites all members to submit nominations for the

2008 John Cedric Griffiths Teaching Award

and the

2008 Krumbein Medal –

the highest award given by the Association

Deadline: January 31st 2008

For details about prerequisites for nominations see the Guidelines on the Organization's web page http://iamg.org., section "Awards/ IAMG Awards by Awards Committee": 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 also get additional information or support for his proposal from other members of IAMG and from successful examples published on our website.

Please submit documentation (preferable in electronic form) to:

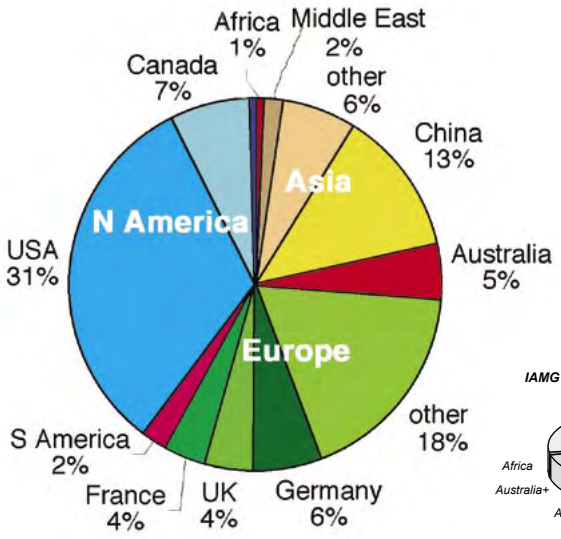
Stephen Henley – Chair, Awards Committee
Resources Computing International Ltd
185 Starkholmes Road
Matlock, Derbyshire, United Kingdom DE4 5JA
E-mail: stephen.henley@resourcescomputing.com

From the Editor
From the Editor
From the Editor

Canada is the new center of power of the IAMG. As President Agterberg mentions in the President's Forum (p. 3) all three editorial offices now are located in Canada (Montreal, Ottawa, Calgary). Both the present and past presidents live in Canada (Ottawa), as well as the Secretary General (Edmonton), and the IAMG office is in Kingston, Ontario. This represents a major shift from the previous, traditional center of power in Kansas at the Kansas Geological Survey which was the cradle of the IAMG and its precursors. The change started when Graeme Bonham-Carter took over Computers & Geosciences in 1996, and continued when the presidency and vice-presidency went to Ottawa in 2000, while the KGS Mathematical Geology Section was dismantled in 2002. (The purse strings - our Treasurer Gina Ross - are still in Kansas, as well as our Mongraphs editor Jo Anne DeGraffenreid).

Considering this shift, it is interesting to look at the geo-demographics of our membership. 616 members from 49 countries around the world are listed on the iamg.org website (you can look at these by logging in and clicking on the Member List). The top five countries, with more than 30 members, are (in descending order) USA, China, Canada, Germany, Australia. China's second place is something new, probably related to Qiuming Cheng's evangelizing and the upcoming Annual Meeting in Beijing; of the 77 Chinese members 50 are located in Wuhan, home of China University of Geosciences. Compared to the table in Newsletter 51 (12 years ago), the top of the list looks otherwise very similar. By region, Europe has increased relative to North America, perhaps because of the many Annual Meetings held there in recent years. Germany, UK, France, Spain and Russia continue contributing a significant number of members.

IAMG Membership by Region (2007)



Over the years we have lost some countries (Ireland, Israel, Denmark, Kuwait, New Zealand) and added some others (Colombia, Malaysia, Nigeria, Iran, Romania). And we have increased fourfold the number of members from the Kingdom of Saudi Arabia.

While the US percentage has decreased steadily from 45 to 31%, Canada has seen a recovery from less than 6% in 2001 to 7% today. Perhaps this shows a correlation to the increase in power there. And with the first Annual Conference on US soil in 2009, there may be a chance for increases in US membership as well.

Harald S. Poelchau

International Association for Mathematical Geology

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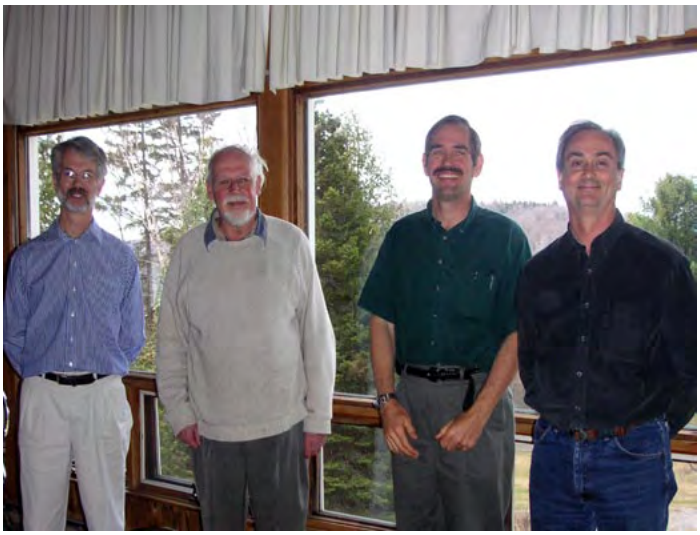
Committee Chairs

Editors

PRESIDENT'S FORUM

At the end of April, I had the pleasure of visiting old friends in Lawrence, Kansas, which is cradle. On that occasion, I collected part of our archive, which will be housed in the IAMG Office in Kingston, Ontario. Dan Merriam also helped me to obtain a complete set of all earlier IAMG newsletters. The plan is to have these scanned and put on our website for reference. A first newsletter with Graham Lea, Director of Geosystems, London, England, as editor, was published because of a decision made at an IAMG Council meeting at Kansas Geological Survey on 6 June 1970. Entries in it that remain relevant today include: "One of the most practical ways you can help IAMG is to 'persuade' a colleague to join. Dues are very modest. The membership target is 500 at the end of 1970, and 1000 before the 1972 Montreal Congress."

In 1973, John Davis became newsletter editor and the Kansas Survey supported us by absorbing printing and mailing costs until 1989. In John's first newsletter we read that the Western Section of the IAMG at that time had approximately 260 members, and: "Our goal for 1974 is 500." Later, in Newsletter 24-5 (1980), it says: "The affairs of the IAMG may appear to be conducted by a closed circle. This small group, however, is far from an Old Boy's club; rather, it is the residuum of the membership that has over the years demonstrated a determination to make the Association a success and is willing to work to this end. Others are welcome to this group at any time. All you have to do is speak up and pitch in."



Publications Committee meeting in Val-Morin: Mike Hohn (chairman), president Frits Agterberg, Jerry Jensen (NRR), Eric Grunsky (G&C); Roussos Dimitrakopoulos was unable to attend

James Carr became newsletter editor with issue no. 39 in November 1989 continuing in the job until issue no. 49 (November, 1994). Printing and mailing costs of issue No. 40 were reported to be $ 3,764 (US), an amount that was about the same as it is for the current newsletter. At that time the USGS was reimbursing us for these costs. Of the 550 IAMG members in 1989, 300 were in the U.S. and 250 in other countries. Harald Poelchau, our current newsletter editor, took over with issue no. 50 (February, 1995). As you know, Harald recently has assumed even more responsibilities: he is now our Newsletter and Website Editor.

Helen Smith in the IAMG Office prepares monthly membership reports. In April 2006 we had 473 members plus 95 who were members in 2005 but had not (yet?) paid their 2006 dues. These totals included 40 student members plus 26 students who had not renewed. We are encouraged to see that the corresponding April 2007 numbers are 523 (plus 110) for all members including 104 (plus 27) student members. Thus, there appears to be an increase in membership of 65 student members during the past year indicating that our efforts to attract students are successful. Other interesting statistics include the fact that 33 people, who were IAMG members in 2005 but did not renew for 2006, rejoined for 2007. In April 2007 it became possible, for the first time, to pay IAMG membership dues on our website. It will make renewals easier for most members. According to our strategic plan, our current aim is 1500 members by 2010. This will only be possible if there will be a significant influx of computer-oriented geo-scientists who must be made to feel at home within our society.

As you know, the largest part of IAMG's income consists of royalties received from the publishers of our journals. In the December 1997 newsletter, we read that our assets had passed one third of a million dollars (US). During the past 10 years about half a million dollars (US) were added to this nest egg. Annual expenditures are now being increased by enlargement of the scope of our programs such as student grants. Recently, the Student Affairs Committee has drafted guidelines for grant applications that can be used in 2007 (see p. 11 in this Newsletter).

Without our publications, consisting of three international journals and the monographs, our society probably would not exist. We are grateful to our past and present editors and their boards for maintaining and expanding the excellence of our publications. This year is unusual in that all three journals now have a new Editor-in-Chief. With the move of Jerry Jensen from Texas to Alberta, all three editorial offices now are located in Canada. In the beginning of May, Mike Hohn chaired a very successful 3-day retreat-type editors' meeting in Far Hills Inn north of Montreal. Good progress was being made in refining the definition of the objectives for our publications, in the drafting of new contracts with our publishers, and with procedures for the management of the contents of our website. For the first time in our history we are making use of the services of a publications lawyer who, in co-operation with Graeme Bonham-Carter, helps in the formulation and interpretation of various clauses in our contracts.

I hope to see many of you at our Annual Meeting in Beijing, during the last week of August. Next year's IAMG conference (our 40th Anniversary!) will be held during the International Geological Congress in Oslo, and IAMG-2009 will be at Stanford University in the U.S.A. Your current Council will remain at the helm until August 2008. A Nominating Commission has been formed to select candidates for the positions of officers and members of the next Council in order to secure a smooth transition. We greatly welcome your suggestions on all matters related to the running of our Association.

Frits Agterberg

Association Business

2007 IAMG Distinguished Lecturer Tour
Dr. Vera Pawlowsky-Glahn

First report

January 13 to 21: Florence, Italy
Host: Dr. A. Buccianti, Università degli Studi di Firenze
Talk organised by the Department of Earth Sciences and the Department of Mathematics "Ulisse Dini" - audience of about 12 professors and students
Local support: lodging, some food and small allowance for personal expenses

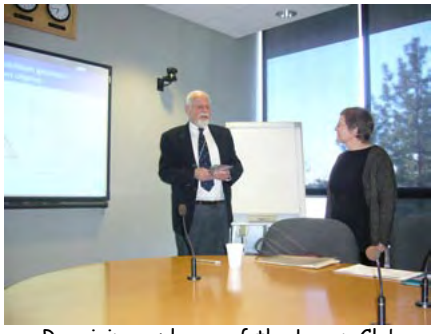
Excursion to Castiglione d'Orica (Siena), a place where it is possible to see "dangerous" natural CO2 emissions; with A. Buccianti and J.J. Egozcue

University of Firenze, Department "Ulisse Dini"

with Dr. Q. Cheng and Dr. J.J. Egozcue in Dr. Q. Cheng's office

February 2 to 7:
Toronto, Canada
Host: Dr. Q. Cheng, York University
Talk organised by the Department of Earth and Space Science and Engineering, the Centre for Research in Earth and Space Science, and the Department of Physics and Astronomy - audience of about 20 professors and students
Local support: lodging, allowance for food and personal expenses, transport to and from Ottawa

February 7 to 13:
Ottawa, Canada
Host: Dr. E. Grunsky, Geological Survey of Canada
Talk at the University of Ottawa organised by the Department of Economic Geology and the Department of Earth Sciences – audience of about 8 professors and students; talk at the Logan Club – audience of about 12 researchers
Local support: lodging, food, local transport, and cross-country skiing in Gatineau Park!



Receiving a plaque of the Logan Club Lecture Series from Dr. F. Agterberg

View of Bogotá from Montserrate

March 11 to 19:
Bogotá, Colombia;
Host: Dr. R. Meziat, Universidad de los Andes
Talk organised by the Department of Mathematics – more than 35 professors and students
Local support: lodging, allowance for food and personal expenses, and transport costs to and from Bucaramanga.

March 19 to 26:
Bucaramanga, Colombia;
Host: Dr. R. Meziat, Universidad de los Andes
Four day short course held with Dr. Egozcue at the **Instituto Colombiano del Petróleo** - 25 students and professors enrolled.
Local support: lodging, food, allowance for personal expenses.

Open air lecture room; waiting for the last students to come

Presenting the talk at the IRMACS Center

April 13 to 23:
Vancouver, Canada
Host: Dr C. Dean, Simon Fraser University
Talk organised by the Department of Statistics and the **IRMACS Center** - audience of about 40 professors and students; informal meeting with Dr. J.J. Egozcue and about 12 graduate students for discussions.
Local support: lodging and part of food expenses

PROGRESS REPORT FROM BEIJING ABOUT IAMG2007 CONFERENCE

by Conference Secretary-General Qiuming Cheng

The conference organizers, Professors Zhao Pengda, Frits Agterberg and Qiuming Cheng welcome all participants to come to the IAMG 2007 annual conference that will be held in Beijing, China this summer from August 26 to 31, 2007. The Organizing Committee of IAMG2007 has accepted more than 200 abstracts and is now open for submission of extended abstracts (maximum 6 pages) for accepted papers. The extended abstracts will be published in the conference proceedings both in CD-ROM and hardcopy formats. The papers in hardcopy proceedings will be cited by ISI product ISTP. This report provides updates about the conference preparation and important announcements.

For details on Sessions go to http://www.iamg2007.org/sessions.asp

KEYNOTE SPEAKERS

The following plenary speakers, including IAMG Award winners will deliver lectures at the conference.

Dr. Hilmar von Eynatten (Chayes prize)

Professor of Sedimentology, Geoscience Center, University of Göttingen

Dr. Raimon Tolosana-Delgado (Vistelius award)
Research Fellow, Sedimentology & Environmental Geology, Geoscience Center, University of Göttingen

Title of lecture: *Geostatistics for vectors from Euclidean spaces: revisiting cokriging of compositions and indicator functions*.

Dr. Wynand Kleingeld (George Matheron Lecturer)
Group Manager, Mineral Resources, De Beers

Title of lecture: *Narrating On A Journey To Solve A Sampling Problem*

Dr. Ian Jackson
Director of Information at the British Geological Survey

Title of lecture: *OneGeology – making geological map data for the Earth accessible*

Dr. Kanti V. Mardia
Senior Research Professor
The University of Leeds, UK

Dr. Heinz H. Burger
Research Associate (Mathematical Geology)
Freie Universität Berlin

IMPORTANT ANNOUNCEMENTS

The deadline for submitting papers electronically via web upload is June 15, 2007 and the early registration is June 15, 2007.

To book hotel rooms at conference reduced rate one needs to register through the conference via web site. Please do it before June 15.

Posters will be printed by the conference locally. If one wishes to have their posters printed by the conference free of charge please prepare your poster, save it as PDF or Word and upload it via website.

Book your workshop and field tour before June 15 so that we can determine how many workshops and field tours will be offered.

Authors and titles of their abstracts are available at the conference website. Please have a look and let the conference organizers know if you encounter any errors.

Please check the third circular at the conference website
www.iamg2007.org

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2007 George Matheron Lecturer

This IAMG Lecture was established in 2005 as an annual event, beginning at IAMG2006 in Liège with Jean Serra as the first George Matheron Lecturer. The Lecturers are selected by a small committee chaired by the IAMG Vice President **Nick Fisher**; **Jean-Paul Chiles** (Head, EMP Centre de Géostatistique, Fontainebleau, France) as ex officio member; **Paul Switzer** (Stanford University, U.S.A.) and **Olivier Dubrule** (Total EP Geoscience Research Centre, Aberdeen, U.K.) as voting members.

This year's lecturer chosen for the Annual Meeting in Beijing is Dr. **Wynand J. Kleingeld** (Mineral Resources, De Beers, in Wells, UK) with a lecture entitled: "Narrating On A Journey To Solve A Sampling Problem"

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2007 IAMG Award Winners

The Awards Committee under the guidance of chairman **Steve Henley** has chosen Prof. **Hilmar von Eynatten** as the recipient of the Chayes Prize and Dr. **Raimon Tolosana-Delgado** to receive the Vistelius Award for 2007. Both will deliver a keynote lecture at the IAMG Conference in Beijing in August of this year (see column on left).

Prof. Dr. Hilmar von **Eynatten** is a professor of sedimentology at the Geoscience Center, University of Göttingen. He was born in 1964 in Trier, Germany and received his eduction in Geology at the University of Mainz, finishing with a PhD in 1996. Since then he has taught in Mainz and at the University of Jena, and in 2003 received the position of Full Professor at the University of Göttingen. His areas of research interest are sedimentary petrology and provenance analysis in geological basins using trace elements, petrography, statistics and modelling of compositional data.

Dr. Raimon **Tolosana-Delgado** is a post-doctoral researcher at the Geoscience Center, University of Göttingen. A native of Barcelona born in 1976, he studied geological engineering and well log analysis in Barcelona. For his master's he worked on stream water chemistry, and did his PhD work under Vera Pawlowsky-Glahn in Girona in geostatistics. His present research in Göttingen involves modeling of sediments for prediction of composition and provenance.

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IAMG Journal Report

IAMG Flagship Journal's name changed to "Mathematical Geosciences"

Both, the Publications Committee and IAMG Council have now approved changing the name of our journal "Mathematical Geology" to "Mathematical Geosciences" in the near future. The name change had been supported in principle by the seven Voting Members present at the September 3rd 2006 Council meeting during IAMG'06 in Liège. The matter is urgent because of an advertising campaign to be started soon with the help of Springer, and a long lead time would be required for preliminary work to be completed before the change can take effect with the first issue of Volume 40 in January 2008. The new name and a note should be included in the new price list, the Springer sales department needs to be informed, timely marketing actions need to be initiated in advance, ISI needs to be informed to safeguard the impact factor, etc.

Mike Hohn (chairman of the Publications Committee) had asked Graeme Bonham-Carter last year to look into possible consequences of the proposed name change from a legal point of view. Graeme secured the help of Chalmers Adams, a lawyer in Toronto, Canada, who specializes in writing contracts with publishing firms. In general there are no legal impediments to changing the name of the journal. Concerns that we would lose ownership of the journal are unfounded as long as we take reasonable care at contract negotiation time. Chalmers made numerous recommendations, including that this is a good time to re-negotiate our existing two contracts with Springer. Mike has distributed the lawyer's report to the Publications Committee, asking for comments. He also sent it to the past editors of our journals, feeling that the more eyes looking it over the better. None of the replies noted any problems with the lawyer's report. He did receive e-mails expressing reservations over the whole idea of changing the title. However, there appears to be no legal impediment to changing the name of our flagship journal to "Mathematical Geosciences." The name change at this time applies to the journal only and not to the name of our association.

MG's new editor Roussos Dimitrakopoulos thinks that the journal is really in serious trouble. Several Editorial Members had suggested that we should change publishers. This was another reason why the IAMG has taken legal advice. Many publishing problems were in manuscript processing and production, posting of the scientific articles on the Springer website and creation/distribution of journal issues. Individual subscriptions by IAMG members have decreased. In October 2004, IAMG had 456 members with 259 (57%) subscribing to MG at the special member rate; in December 2006, IAMG had 518 members with only 215 (42%) subscribing to MG. Institutional subscriptions are at about 280 and Springer expects them to drop even lower, to 250 this year. There has been a strong decline in number of high-calibre manuscripts submitted for publication in MG. In 2006, there were only 55 manuscript submissions and at present Roussos can barely find papers for the no 3 issue of 2007. We cannot expect drastic changes in the short run. In addition, the quality of nearly half the submissions is on the low to marginal side. From September 2006 to now, we averaged 4 submissions per month, about 1/3 of which have to be rejected straightaway. However, the papers for issues up to and including 39(7) are available. The details of the upcoming MG issues can be seen on our website http://cosmo.mcgill.ca/matgeo in the section 'For Readers'.

On the positive side, the production of MG has been moved to Springer's office in Heidelberg, Germany, and a new Production Editor has been assigned. We started with them from issue 39(4). This is Springer's initiative, for which Roussos has worked hard and insisted on since last September. Springer seemed happy with this, and Springer-NYC is also happy with the move. MG is one of several journals Springer moved out of NYC. The state of production at Springer-NYC has continued to deteriorate even further than before, and, in Roussos' opinion as well as that of Ed Sharp, to a truly unreal, unbelievable and clearly unworkable level, which Ed has detailed in the past.

The start with Springer - Heidelberg has been very positive thus far, and this should put MG in line with the vast majority of stable and well functioning Springer journals. The start with the new typesetters in Estonia (instead of India) has been positive in the first issue they worked on (39(3)), but we need to do more issues than one with them before settling on an opinion. Generally, one would expect that our problems will disappear after a couple of issues from the time of the move to Heidelberg.

Springer has corrected issue 38(5) on Springer Link and will reprint this issue. Finally 38(8) was posted last week, and we can now expect printing of 38(8), 39(1) and 39(2) - with 39(3) to soon follow.

With the Springer 'standardization', you will notice that the format of the journal is different in style - starting with issue 39(3). However, it will maintain a comparable way of referencing to the past style.

The new contract negotiation with Springer and the name change is ongoing. The first draft contract Springer proposed, is substantially better than the old contract with Kluwer that is now valid. The process of settling on a new contract is slow in terms of meeting needs. We may miss the opportunity to properly set things up for Mathematical Geosciences to start with a new name in January 2008, promote the change, work on the ISI front, etc. The publisher will not move forward until there is a legal document. So, the new contract is a really urgent matter.

IAMG.org Website

You may not have noticed many obvious changes in the appearance of the Association's website, but I am trying to keep some of the features up-to-date, remove or update bad links and reorganize some of the paths that don't make much sense. The learning curve has been steep for me because the designer and builder of the website has all but disappeared, i. e., he is rarely available for explanations of how things are done in his Joomla based design.

We are trying to return most of the content of Eric Grunsky's earlier website and add a major archive with all the back issues of the Newsletters, conference proceedings, and other matters of historical interest to IAMG. That way the website will serve as an easily accessible reference library for anything one might want to look up. Already available are the lists of various award winners, the officers and councillors who have served during the history of IAMG, the Annual Meetings, some of the minutes of council meetings, the statutes and bylaws of the organization, and more. Much of that will have to be checked and amended in the near future, and other information added as well.

Some of the major changes and clean-ups, since taking over at the beginning of this year, have been a revision and update of the Distinguished Lecturer page, new links to the new Mathematical Geology page installed by Roussos Dimitrakopoulos and direct links to the publisher websites of our three journals, a revised Student Affairs page, and a more cheerful geological photo in the banner of the home page (which I may change periodically).

There are still a lot of changes planned for the future which I hope to figure out soon. We are also thinking about reworking the website with different, easier to use software. If you have any suggestions or needs for the website let me know and send me a message at hsp.IAMG@inbox.com .

Harald S, Poelchau
Website Editor

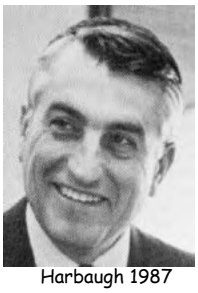
Member News

WHERE ARE THEY NOW?

As part of the preparation for the 40th anniversary of our Association in 2008, Dan Merriam had suggested this column to track the whereabouts and developments of members once in the limelight. He provided the first contribution, below. Anyone who has knowledge of what our elder colleagues have been doing is invited to send a short summary to the Editor.

All four IAMG members chronicled here were attendees at the organization meeting of the Association in Prague in August 1968 and thus charter members. All four have received the coveted Krumbein Medal.

John W. Harbaugh retired from teaching at Stanford University in 1999 but maintains an office at the university. Since that time, he has been active in developing different techniques for analyzing surface topography to interpret geological features. Much of his early work on carbonates and his computing accomplishments were in cooperation with his long and productive career working with the Kansas Geological Survey. He has been a prodigious producer of papers and books on quantitative aspects of the science. Although never an officer of IAMG, he has been involved in an advisory capacity with policy and direction of the Association; he received the Krumbein Medal in 1986. He is a railroad enthusiast and has an extensive model train setup. He and his wife Audrey enjoy traveling, especially sea cruises, and camping trips to local scenic areas. His address: harbaugh@pangea.stanford.edu


Harbaugh 1987

Richard B. McCammon was Treasurer of IAMG (1980-1984) and responsible for getting the Association's tax exempt status, was president (1989-1992), recipient of the Krumbein Medal in 1992, founder of Natural Resources Research (Nonrenewable Resources) in 1992, initiated the Griffiths teaching award, and under his leadership started the annual meetings. He retired from the U.S.Geological Survey in 1998 and moved to the West Coast where he and wife Helen enjoy year-round moderate weather. Dick now has ample time for his love of stamp collecting. Prior to joining the USGS, he taught at the University of North Dakota and University of Illinois at Chicago Circle and worked for Gulf Research and Development Company. With his colleagues at the USGS, he developed methods for quantitative resource estimation and mineral resource assessments. His address is: mccammon@olypen.com


McCammon ca.1990

Richard A. Reyment father of the IAMG, first secretary (1968-72), second president (1972-76), recipient of the Krumbein Medal (1979) and a special Commendation in 2002, lives in Uppsala, Sweden with his wife Eva. Richard is a native Australian born in Coburg, Victoria and educated in Melbourne, He retired in 1991 from Uppsala University, where he was Professor of Historical Geology and Paleontology at the Paleontological Institute. He is a fellow of the Royal Swedish Academy of Sciences (1964) and has been awarded the Swedish Order of North Star (1972). Richard is a prolific international scientist (some 350 publications) and author of numerous books (eleven) working in Australia, Africa, Europe, and North America; he now spends much of his time on biometry and quantitative genetics of living and fossil invertebrates. One of his interests is in language and he continues that interest analyzing dialects, origin of words, and the relation of languages. His address is: eva.reyment@telia.com


Reyment 2003

E.H.Timothy Whitten, a native of England, was president of the IAMG (1980-84), recipient of the Krumbein Medal (1988), and author of a text on the structural geology of folded rocks (1966). He was educated in London and was on the academic staff there for ten years. He retired as Provost and Vice President of Academic Affairs at Michigan Tech University after previously serving on the faculty of Northwestern University for 23 years and Chairman for nine. At Northwestern he was a colleague of Bill Krumbein, Larry Sloss, and Ed Dapples as part of a formidable, quantitative-oriented, internationally known group. He received many national and international honors during his active career and currently is the immediate past Commodore of the Royal Western Yacht Club of England. He still rejoices in the amities of his homeland on Lower Bonehill Farm where he lives with his wife, Cleo. His address is: ehtwhitten@ehtw.demon.co.uk.


Whitten 1981

Dan Merriam

News from Ottawa (Frits Agterberg):

Bradley Sim successfully defended his thesis; "Complex Systems and Multifractal Modeling in the Geosciences; Applications to Geochemical Surveys and Mineral Deposits" and was awarded the PhD degree at the University of Ottawa in January 2007. Thesis supervisor was **Frederik P. Agterberg** (University of Ottawa); Victor Mossotti (USGS Mineral Resource Team), Anthony Fowler (University of Ottawa), **Graeme Bonham-Carter** (GSC Mineral Resources Division) and Tim Patterson (Carleton University) were the examiners.

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News from Spain

Jaime Gómez-García and Josep Antoni Martín-Fernández report on the successful completion cum laude of the PhD of their student Javier Palarea-Albaladejo at the University of Murcia. The dissertation with the title "Analysis of Multivariate Missing Data. Parametric Approach to the Rounded Zeros Problem in Compositional Data" deals with the estimation of unknown parameters of a probabilistic model.

The study focuses on the multivariate case with continuous variables and an arbitrary pattern of missingness. The role of Markov Chain Monte Carlo (MCMC) methods is emphasized. In order to evaluate the performance of the different strategies under different hypotheses, a simulation experiment shows the convenience to employ likelihood-based parametric methods.

The work is ultimately oriented toward the analysis of compositional data. In particular, it focuses on a special class of incomplete data: rounded zeros. These zeros appear when values below a certain threshold of detection are lost. The sample space of compositional data, known as Simplex, has a specific geometry that prevents the direct application of techniques and measures supported in the Euclidean geometry of the real space. After an extended revision of the main properties of the previous replacement methods for rounded zeros, a *modified* EM algorithm is proposed which is coherent with the nature of the data and with the basic operations in the símplex. Finally, specific user-friendly software is developed to deal with rounded zeros in compositional data sets.

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Roussos Dimitrakopoulos, Editor of Mathematical Geology and Professor at McGill University, has been elected an Honorary Member of the Hungarian Academy of Sciences.

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Treasurer's Report 2005/2006

Cash Flow
1/1/2005 Through 12/31/2005

Category Description	1/1/2005-12/31/2005
INFLOWS	
Uncategorized	0.00
Bank Credit	2,588.73
Chase Bank Checking Account	19,707.37
Royalties	
Computers & Geosciences (Elsevier)	60,187.53
Mathematical Geology (Springer)	19,670.85
Monographs (Oxford)	741.30
TOTAL Royalties	80,599.68
TOTAL INFLOWS	**102,895.78**
OUTFLOWS	
Accounting Services	2,910.00
Affiliation Dues	87.24
Bank Charge	
Printing checks	19.95
Service charge	133.00
Wire transfer	313.00
TOTAL Bank Charge	465.95
Conference Support	
IAMG2005	6,000.00
IAMG2006	6,000.00
TOTAL Conference Support	12,000.00
Debit Card	
Executive dinning	688.23
Executive lodging	277.39
TOTAL Debit Card	965.62
Distinguished Lecturer	
Frits P. Agterberg	1,928.34
Lawrence J. Drew	5,188.84
TOTAL Distinguished Lecturer	7,117.18
E&M Management Expenses	8,366.21
E&M Management Fees	6,290.00
Gifts Given	50.00
Investment	30,000.00
Meeting Support (non-IAMG)	
Compositional Data Analysis Workshop	1,992.90
Inter. Conf. of Fluvial Sedimentology	1,351.50
TOTAL Meeting Support (non-IAMG)	3,344.40
Miscellaneous, Bus	
Misc	51.71
TOTAL Miscellaneous, Bus	51.71
News Letter	
Computer Software	1,025.73
TOTAL News Letter	1,025.73
Promotion & Booths	
Booth Travel Support	1,097.27
TOTAL Promotion & Booths	1,097.27
Student Award	
2004	5,000.00
2006	285.00
Journal Subscription-2004	235.00
TOTAL Student Award	5,520.00
Student Chapter	
Carbondale	2,895.60
TOTAL Student Chapter	2,895.60
Travel, Officers & Members	21,775.28
Treasurer Operating Expenses	149.46
Postage	57.91
TOTAL Treasurer Operating Expenses	207.37
Webmaster Expenses	876.83
TOTAL OUTFLOWS	**105,046.39**
OVERALL TOTAL	**-2,150.61**

Cash Flow
1/1/2006 Through 6/30/2006

Category Description	1/1/2006-6/30/2006
INFLOWS	
Chayes Fund Transfer to Checking	
Chayes Fund	6,000.00
TOTAL Chayes Fund Transfer to Checking	6,000.00
Royalties	
Computers & Geosciences (Elsevier)	60,750.86
Mathematical Geology (Springer)	17,213.09
Monographs (Oxford)	30.36
TOTAL Royalties	77,994.31
TOTAL INFLOWS	**83,994.31**
OUTFLOWS	
Accounting Services	665.00
Awards	
Chayes	6,000.00
TOTAL Awards	6,000.00
Bank Charge	103.00
Service charge	13.00
TOTAL Bank Charge	116.00
Conference Support	
MarineGeologicalConf 2006	2,500.00
TOTAL Conference Support	2,500.00
Debit Card	
Executive ground transportation	96.00
Executive dinning	413.45
Executive lodging	1,295.85
TOTAL Debit Card	1,805.30
Distinguished Lecturer	
Larry W. Lake	2,299.03
TOTAL Distinguished Lecturer	2,299.03
E&M Management Expenses	5,021.65
E&M Management Fees	3,525.00
Persee Consulting - Website	818.05
Promotion & Booths	
Booth Travel Support	2,300.33
TOTAL Promotion & Booths	2,300.33
Student Award	
2005	5,000.00
Journal Subscription-2005	42.00
TOTAL Student Award	5,042.00
Student Chapter	
Wuhan	1,000.00
TOTAL Student Chapter	1,000.00
Travel, Officers & Members	3,414.32
Treasurer Operating Expenses	77.57
Postage	9.65
TOTAL Treasurer Operating Expenses	87.22
Webmaster Expenses	378.05
TOTAL OUTFLOWS	**34,971.95**
OVERALL TOTAL	**49,022.36**

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOLOGY

STATEMENT OF ASSETS, LIABILITIES AND NET ASSETS - MODIFIED CASH BASIS
As of December 31, 2005 and 2004

ASSETS

	2005	2004 (Reviewed)
CURRENT ASSETS		
Cash and cash equivalents	$ 55,351	$ 113,337
INVESTMENTS	724,371	622,921
Total Assets	$ 779,722	$ 736,258

NET ASSETS

NET ASSETS		
Unrestricted		
Board - designated	$ 5,000	$ 5,000
Undesignated	774,722	731,258
Total Net Assets	$ 779,722	$ 736,258

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, 2005 and 2004

	2005	2004 (Reviewed)
REVENUES		
Membership and subscriptions	$ 49,279	$ 32,585
Royalties	80,600	87,679
Investment return	9,922	27,319
Other income	255	-
Total Revenues	140,056	127,583
EXPENSES		
Member and publication	27,201	34,388
Grants and awards	8,181	-
Conferences, meetings, and travel - net	48,201	25,657
Website and computer	1,903	643
Accounting	2,910	2,815
Contracted services	6,290	6,170
Investment expense	1,916	1,261
Total Expenses	96,602	70,939
CHANGES IN NET ASSETS	43,464	56,644
NET ASSETS, beginning	736,258	679,614
NET ASSETS, ending	$ 779,722	$ 736,258

NOTES TO FINANCIAL STATEMENTS
For the Years Ended December 31, 2005 and 2004

Note 1 - Summary of Significant Accounting Policies (Continued)

Income Taxes

The Association 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, 2005		December 31, 2004 (Reviewed)	
	Cost	Market	Cost	Market
Mutual Funds	$ 693,539	$ 724,371	$ 675,659	$ 622,921

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

	December 31, 2005	December 31, 2004 (Reviewed)
Interest income	$ 2,475	$ 458
Dividend income	29,431	18,635
OID income	-	4,860
Realized gain [losses]	[61,168]	184
Unrealized gains [losses]	39,184	3,182
Total investment return	$ 9,922	$ 27,319

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 $0 and $61,531 as of December 31, 2005 and 2004, respectively.

Note 4 - Reclassifications

Certain balances in the prior year financial statements have been reclassified for comparative purposes to conform to the presentation in the current year financial statement.

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.

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.

The Association has an internal designation of $5,000 that is to remain as a minimum reserve balance.

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.

Reports on Meetings

IAMG Exhibition at the 2006 AGU Fall Meeting in San Francisco

During the 2006 Fall Meeting of the American Geophysical Union, held traditionally in San Francisco (11-15 December 2006), an IAMG exhibition booth was organized, as in previous years — it has almost become a tradition, this being the 6th year! As a recognition of my continued support of the IAMG-AGU booth, I got a really good location in the exhibit hall, right next to the much more expensive booths where much traffic is expected (one moves up slowly with AGU — as a scholarly association, we can book a special-rate booth, and for such booths the AGU exhibition organization determines the location and hence the visibility of the exhibitors). With 14,000 attending the AGU meeting, there was no shortage of traffic at the booth, which I attribute to our fascinating journals, great membership opportunities and the plentiful candy and chocolates I always bring (you decide what matters most...). The Exhibition Hall is open Tuesday morning through Friday afternoon, with Monday for booth set-up. And as I entered our booth on Tuesday morning, there was a friendly young scientist walking straight to our booth and saying "I would quite like to join!" Well that certainly made for a delightful start of our exhibition week (and even before I put the chocolates out). People like to learn about IAMG, about membership, about our journals, others like to stop by to renew contacts, pay their annual dues or subscribe to the journals, come for the annual chat, some expect me to solve their geostatistical problems on the spot, and so the booth is the "IAMG home away from home" (at AGU). One scientist came by to say "I joined last year and I am so happy that I have found my community!"

Lots of thanks are due to Helmut Mayer (Universität Darmstadt, Germany, and U.S. Geological Survey) for help with transporting the booth materials and building the booth, and to Leo Maslov (Otero College, La Junta, Colorado) and Helmut for generously giving their time by being present at the booth and answering questions on behalf of IAMG.

The booth also functions as communication port for publishing editors and other exhibitors interested in working with IAMG. And there was the guy who said "the (word) geology" almost scared me away". This must be different at GSA, say, where the word "geophysics" may scare people away? It's all a question of perspective, as in the AGU world geology is a small discipline, while in the geology world geophysics is a subdiscipline - right ? Or is new terminology a phenomenon of time, of change?

There is certainly new terminology in areas with overlap in our field, as a new section of AGU is termed "Earth Science Informatics". This new section has taken off quite strongly, with nine special topics sessions, and more rapidly so than the section "Nonlinear Geophysics", that was founded a few years ago and also overlaps with geomathematics. I gave my own talk in one of the Earth Science Informatics sessions, and we had a student poster paper in another.

The new technologies in geoinformatics are rather impressive, in particular in remote sensing observations and in visualizations, but (AND!) mathematical solutions for Earth Science problems are more than ever needed to actually learn from the data collected with new technologies and hence to increase our understanding of the world in which we live.

Ute Herzfeld

Obituaries

Professor Adam S. Trembecki (Cracow) +

Prof. Dr. Ing. Adam Stefan Trembecki (born 29 October 1921) died in Cracow March 25, 2007. Originally engaged more in the mining industry, since 1961 working exclusively in academic circles in various universities in Poland; professor emeritus of the School of Mines and Metallurgy in Cracow, recently rector of the College of Management in Legnica (Poland).

His scientific activities were extremely large: economic geology, mining technology, economics of production processes, regional planning, application of mathematical methods in earth sciences, ecology. His book "Quality Management of the Mining Production - Stabilization of the Exploitation Process" (in Polish - ISBN 83-7164-244-X) published in 2004 includes references to his 210 scientific papers and books written or co-authored in the period 1951 - 2001. But this is not at all the final and complete bibliography.

In the symposium organized by the Cracow School of Mines and Metallurgy in 1991 to honour the 70th birthday of Professor Trembecki, Vaclav Nemec presented for the first time his ideas about necessity to develop a new field of geoethics. Professor Trembecki immediately joined these ideas and took part in the first special session dedicated to problems of geoethics in 1992 at the Mining Pribram Symposium where he later - with one exception only - took part in all sessions of the regular international section on geoethics until 2005. He always came with some new views, in many situations with some quantifying mathematically expressed aspects. He promoted geoethics also elsewhere in Poland as well as abroad. Recently he prepared a new paper for the 2007 Pribram session and - as reported by his daughter Justyna - it was his wish that this paper would be presented at this forum.

Therefore the last scientific presentation of Professor Trembecki will take place in October 2007 at Pribram.

Professor G. S. Gold (Moscow) +

Professor Grigorii Solomonovich Gold (born July 12, 1932) died March 19, 2007. A doctor of economic sciences, he was a highly qualified specialist in mineral resources economics who spent his professional career in various research institutes - finally in the All-Russia Institute of Mineral Economy and Subsoil Use (VIEMS) in Moscow as section chief working mostly on social economic problems of the mineral resources complex.

He became acquainted with Geoethics when several other colleagues from VIEMS headed by their Director Professor M. A. Komarov took part in the early international meeting about geoethics at Pribram (in 1994) and became one of its most active promoters. He presented his ideas at Pribram regularly (1996 - 2005) as well as at the International Geological Congresses in Beijing (1996) and in Rio de Janeiro (2000). In his Russian book "Mineral Resources: Social Challenge of the present Time" (ISBN 5-86655-015-6) he wrote a whole chapter about moral and geoethical problems. He was prepared to present his new ideas to this topic at the coming 2007 events both in Moscow and at Pribram. His activities for geoethics will not be forgotten.

Obituaries contributed by Vaclav Nemec

StudentAffairs

*The following **guidelines** are preliminary and were drafted by Helmut Schaeben and the Student Affairs Committee. They are open for discussion and comments. Please direct any communications to Helmut Schaeben - schaeben@geo.tu-freiberg.de*

International Association for Mathematical Geology Guidelines on how to set up and run a Student Chapter

Purpose:
A Student Chapter should be an active organization of IAMG student members to increase IAMG's visibility and to promote mathematical geology, geomathematics, and geoinformatics.

Guidelines for foundation of a new student chapter:
- Proposal submitted to chair of the IAMG Student Affairs Committee
  - Letter of intent briefly presenting:
    1) educational program
    2) faculty, staff, and students
    3) recent projects related to mathematical geology, geomathematics and geoinformatics (BSc, MSc, PhD theses)
  - Letter of support from the assigned faculty advisor (preferably an IAMG member)
- Student Affairs Committee passes the proposal on to the IAMG President with a recommendation to accept or reject based on evaluation of submitted proposal
- Executive makes the final decision to accept or reject the proposal

Policy Guidelines:
An IAMG Student Chapter should:
- elect officers (at minimum a President and a Treasurer),
- promote mathematical geology, geomathematics, and geoinformatics,
- establish a web site,
- provide notice of meeting agenda/program prior to meetings,
- actively recruit student members,
- ensure that members have paid dues to IAMG
- submit an annual report of activities to the IAMG Student Affairs Committee at least one month prior to the IAMG annual conference
- submit applications for funding with initial organization proposal or with subsequent annual reports
- maintain membership of at least 10 student members, documented in annual report

Duties of the Officers:
President: organizes and convenes meetings, authorizes expenditures, prepares annual report to IAMG
Treasurer: maintains chapter bank account (only the faculty advisor and treasurer should register their signature with the bank where account is open), writes checks for authorized expenditures, prepares grant applications
Secretary: assists other officers as directed by student chapter

Resources:
- IAMG provides Student Chapter grants with maximum of US $2,000 per year, per chapter, based on availability of funds in IAMG annual budget. Supported activities should be summarized in annual report to IAMG, but there are no accounting requirements.
- Funding of a student chapter will essentially be based on the evaluation by the student affairs committee of the organization proposal or annual report. Funding application should accompany either the proposal for a new student chapter or the annual report of existing student chapters, and should include:
  - statement that commitments have been met, approved by the assigned faculty advisor
  - need for financial support and rough budget plan
  - sketch of projects to be financed
  - chapter's bank name, mailing address, account number, SWIFT code, name on the account (to permit direct deposit), details of money transfer and tax related issues shall be clarified with IAMG's treasurer in mutual agreement
  - names of individuals who may sign checks on account (faculty advisor and treasurer)
- Exposure to professionals in the fields of mathematical geology, geomathematics, and geoinformatics
- IAMG encourages members of the Student Chapters to apply for IAMG research grants and travel grants.

It is not too early to apply for the **2007 Student Research Grants** using the new Guidelines detailed at www.iamg.org under "Student Affairs"
Deadline for applications will be **15 October 2007.**

International Association for Mathematical Geology Guidelines for Student/post-doc Research Grants Program

Purpose:
To provide financial support to students in graduate school or post-doctoral position for research in the fields of mathematical geology, geomathematics, and geoinformatics. Individual grants will be given in amounts up to US$ 2,000 per grant, with US$ 12,000 in total awards per year.

Application Guidelines:
- Application deadline is October 15 each year
- Applicant may be in any year of graduate school or in first post-doc position
- An individual may apply:
  1) once as pre-doctoral graduate student,
  2) once as PhD student,
  3) once as post-doc
- Initial requirements / evaluation criteria:
  1) project motivation,
  2) relation to state of the art,
  3) project objectives,
  4) references, who may only be contacted by the IAMG Student Affairs Committee for letters of endorsement or summaries of transcripts
  5) list of previous awards and honors
  6) preliminary plan of expenses, and
  7) personal need
- On-line application form available via IAMG's homepage. An application shall not exceed the size provided by the text boxes available on the web site.
- Additional requirements: Security sensitive information (e.g. student transcripts) only on request by the IAMG Student Affairs Committee
- Evaluation, selection, and notification of successful applicants by Dec 31 of the year,
- Grants distributed in January of the following year

Recipients' Commitments
- recipient will provide the IAMG Student Affairs Committee with a written report describing research results as well as pre/reprints of any resulting publications
- all publications related to the funded project will acknowledge IAMG financial support

International Association for Mathematical Geology Guidelines for Student Travel Grants Program

Purpose:
To provide assistance for IAMG student members to attend and make presentations at IAMG related conferences --
US$ 400 per grant for attendance and presentation at IAMG conference
US$ 300 for attendance and presentation at IAMG co-sponsored conference (these currently include AAPG and ISI)

Application Guidelines:
- on-line application form is available via IAMG's homepage
- apply any time before the conference and after notification of acceptance of contribution (poster or oral presentation, oral presentation encouraged, full paper publication in one of IAMG's journals encouraged, mentorship offered)
- An individual student member may apply:
  1) once as pre-doctoral graduate student,
  2) once as PhD student,
- Requirements / evaluation criteria:
  3) notification of acceptance for oral/poster presentation (no formal evaluation of abstract by the Student Affairs Committee)
  4) first come, first served, based on availability of funds in IAMG annual budget

Requirements of grant:
- proof of student status to be sent to IAMG Treasurer
- active participation in the conference
- actual presentation

Disbursement of funds:
- Grant will only be paid **after** travel has been completed.
- Applicant should submit the conference registration receipt

JOURNAL CONTENTS

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A Depletion Protocol for Non-Renewable Natural Resources: Australia as an Example, by Albert A. Bartlett

A Statistical Analysis of the Theoretical Yield of Ethanol from Corn Starch, by Tad W. Patzek

Estimated Sand and Gravel Resources of the South Merrimack, Hillsborough County, New Hampshire, 7.5-Minute Quadrangle, by David M. Sutphin, Lawrence J. Drew and Brian K. Fowler

Mineral-Potential Mapping for MVT Deposits with Limited Data Sets Using Landsat Data and Geological Evidence in the Borden Basin, Northern Baffin Island, Nunavut, Canada, by Bahram Daneshfar, André Desrochers and Paul Budkewitsch

Specific Storage Volumes: A Useful Tool for CO2 Storage Capacity Assessment, by Sean T. Brennan and Robert C. Burruss

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A First-Law Thermodynamic Analysis of the Corn-Ethanol Cycle, by Tad W. Patzek

Assessment of the Enhanced Geothermal System Resource Base of the United States, by David D. Blackwell, Petru T. Negraru and Maria C. Richards

Economic and Operational Assessment of the Arman Field in Kazakhstan, by Mark J. Kaiser and Anar Kubekpayeva

Net Energy Payback and CO2 Emissions from Three Midwestern Wind Farms: An Update, by Scott W. White

Prediction of Resource Volumes at Untested Locations Using Simple Local Prediction Models, by Emil D. Attanasi, Timothy C. Coburn and Philip A. Freeman

Quantitative Analysis of Scale of Aeromagnetic Data Raises Questions About Geologic-Map Scale, by Vesa Nykänen and Gary L. Raines

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The New Natural Resources Research, by Daniel F. Merriam

A New Lithostratigraphic Framework for the Cretaceous Colorado Group in the Cold Lake Heavy Oil Area, East-Central Alberta, Canada, by Qiang Tu, Claudia J. Schröder-Adams and Jim Craig

An Overview of the Geology of the Upper Devonian Grosmont Carbonate Bitumen Deposit, Northern Alberta, Canada, by B. E. Buschkuehle, Frances J. Hein and Matthias Grobe

Distinguishing Carbonate Reservoir Pore Facies with Nuclear Magnetic Resonance Measurements, by Coralie Genty, Jerry L. Jensen and Wayne M. Ahr

Multi-Level Slug Tests to Measure 3-D Hydraulic Conductivity Distributions, by H. C. Ross and C. D. McElwee

Stratigraphic Dip Analysis – A Novel Application for Detailed Geological Modeling of Point Bars, and Predicting Bitumen Grade, McMurray Formation, Muskeg River Mine, Northeast Alberta, by Milovan Fustic

Wellsite, Laboratory, and Mathematical Techniques for Determining Sorbed Gas Content of Coals and Gas Shales Utilizing Well Cuttings, by K. David Newell

Multi-level slug tests to measure 3-D hydraulic conductivity distributions, by H.C. Ross and C.D. McElwee.

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SPECIAL ISSUE ON SPATIAL MODELING IN GIS

Introduction to special issue on Spatial Modeling in GIS, by G.L. Raines and G. Bonham-Carter.

Spatial analysis techniques as successful mineral-potential mapping tools for orogenic gold deposits in the northern Fennoscandian Shield, Finland, by V. Nykanen and V.J. Ojala.

Development and implementation of a Bayesian-based aquifer vulnerability assessment in Florida, by J.D. Arthur, H.A.R. Wood, A.E. Baker, J.R., Cichon, and G.L. Raines.

The use of the weights-of-evidence modeling technique to estimate the vulnerability of groundwater to nitrate contamination, by M. Masetti, S. Poli, and S Sterlacchini.

Landslide representation strategies in susceptibility studies using weights-in-evidence modeling technique, by S. Poli and S. Sterlacchini

Probabilistic prediction models for aggregate quarry siting, by G.R. Robinson, Jr. and P.M. Larkins

Application of radial basis functional link networks to exploration for Proterozoic mineral deposits in central Iran, by P. Behnia.

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GIS-based slope stability analysis, Chuquicamata open pit copper mine, Chile, by E.P. Nelson, K.A. Connors, and C. Suarez S.

Porphyry-copper deposit tract definition - a global analysis comparing geologic map scales, by G.L. Raines, K.A. Connors, and L.B. Chorlton.

Assessment of exploration bias in data-driven predictive models and the estimation of undiscovered resources, by M.F. Coolbaugh, G.L. Raines, and R.E. Zehner.

Mathematical Geology

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Vera Pawlowsky-Glahn: 2006 William Christian Krumbein Medal of the International Association for Mathematical Geology — John Aitchison

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SRTM-based morphotectonic analysis of the Poços de Caldas Alkaline Massif, southeastern Brazil — Carlos Henrique Grohmann, Claudio Riccomini and Fernando Machado Alves

A data mining approach for heavy rainfall forecasting based on satellite image sequence analysis — Yubin Yang, Hui Lin, Zhongyang Guo and Jixi Jiang

Mirone: A multi-purpose tool for exploring grid data — J.F. Luis

Uncertain spatial data handling: Modeling, indexing and query — Rui Li, Bir Bhanu, Chinya Ravishankar, Michael Kurth and Jinfeng Ni

The mgd77 supplement to the generic mapping tools — Paul Wessel and Michael T. Chandler

Accuracy assessment of the available geoid models in Algeria — S.A. Benahmed Daho and J.D. Fairhead

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Historical seismometry database project: A comprehensive relational database for historical seismic records — Andrea Bono

Remote sensing and GIS technology in the Global Land Ice Measurements from Space (GLIMS) Project — Bruce Raup, Andreas Kääb, Jeffrey S. Kargel, Michael P. Bishop, Gordon Hamilton, Ella Lee, Frank Paul, Frank Rau, Deborah Soltesz, Siri Jodha Singh Khalsa, et al.

bh_tomo—a Matlab borehole georadar 2D tomography package — Bernard Giroux, Erwan Gloaguen and Michel Chouteau

M.H. Trauth, MATLAB Recipes for Earth Sciences, Springer, Berlin (2006) ISBN 3-540-27983-0 (237 p., plus CD-ROM, US$70 Hardbound). — Thomas A. Jones

C&G Volume 33, Issue 2 (2007)

Identifying patterns of correspondence between modeled flow directions and field evidence: An automated flow direction analysis — Yingkui Li, Jacob Napieralski, Jon Harbor and Alun Hubbard

Identification of transcrystalline microcracks observed in microscope images of a dolomite structure using image analysis methods based on linear structuring element processing — Boguslaw Obara

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The Data Uncertainty Engine (DUE): A software tool for assessing and simulating uncertain environmental variables — James D. Brown and Gerard B.M. Heuvelink

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Automatic content-based analysis of georeferenced image data: Detection of Beggiatoa mats in seafloor video mosaics from the Håkon Mosby Mud Volcano — K. Jerosch, A. Lüdtke, M. Schlüter and G.T. Ioannidis

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Adjoint-state method for diffusion equation in the finite-difference and finite-volume frameworks — R. Le Goc and J.-R. de Dreuzy

G. Brimhall and A. Vanegas, Software Review—GeoMapper, Digital Mapping Lab at the University of California Berkeley, Berkeley, California (2006) (US $3225). — Eric Peterson, Tom Heidrick and Eric Frost

Donald Cooke, Fun with GPS, ESRI Press, Redlands California, ISBN:1-58948-087-2, 2005 (136pp., US$19.95 paperbound). — Lincoln Foreman

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Effects of in-phase and out-of-phase sediment supply responses to tectonic movement on the sequence development in the late Tertiary Southern Ulleung Basin, East (Japan) Sea — Wonsuck Kim, Daekyo Cheong and Christopher G. St. C. Kendall

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George Christakos, Ricardo A. Olea, Marc L. Serre, Hwa-Lung Yu and Lin-Lin Wang, Interdisciplinary Public Health Reasoning and Epidemic Modelling: The Case of Black Death, Springer, New York, NY (2005) ISBN 3-540-25794-2 (319pp., price US$129 Hardcover). — Pierre Goovaerts

Erratum to "Geological symbol set for Manifold® Geographic Information System": [Computers & Geosciences 32(8), 1228–1233] — Mitchell G. Mihalynuk, Shannon M.S. Mallory and Brian Grant

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Automatic mapping of valley networks on Mars — I. Molloy and T.F. Stepinski

AHPSVER: A web-based system for hydrologic forecast verification — Anton Kruger, Shashank G. Khandelwal and Allen Bradley

SUSIE: A program for inverse strain estimation from magnetic susceptibility — J. Jelek and F. Hrouda

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GIS application in mineral resource analysis—A case study of offshore marine placer gold at Nome, Alaska — Wei Zhou, Gang Chen, Hui Li, Huayang Luo and Scott L. Huang

DES-code: A metacode to aid calculation of the chemical potential of aqueous solutions at elevated temperatures and pressures — Katy Evans and Roger Powell

Numerical modelling of fault activities — Hilmar Bungum

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Automated maintenance of geophysical software from distributed web repositories — Glenn Chubak and Igor Morozov

Dale. Peter, Introduction to Mathematical Techniques Used in GIS, CRC Press, Boca Raton, FL, USA (2005) ISBN 0-415-33414-4 (224 pp., USD82.95, CDN 106.50, € 74.50, Hardbound). Worboys. Michael and Duckham. Matt, GIS: A Computing Perspective (second ed), CRC Press, Boca Raton, FL, USA (2004) ISBN 0-415-28375-2 (426 pp., USD82.95, CDN 106.50, € 74.50, Hardbound). — Oliver Sonnentag

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Upcoming Meetings

IUGG (24th General Assembly), Perugia, Italy, **2–13 July 2007**. E-mail: Secretary@IUGG2007Perugia.it, Web Site: http://www.iugg2007perugia.it/

The International Symposium on River Sedimentation (ISRS), Moscow State University. Moscow, Russia, **1 - 4 August 2007**. Phone 7 (495) 9395044, fax: 7 (495) 9395044, email: Leonora Zlotin secr10isrs@yandex.ru. http://isrs10.hydro-msu.ru/en/

2007 JOINT STATISTICAL MEETINGS, Salt Lake City, Utah, **29 July - 2 August 2007**. http://www.amstat.org/meetings/

ISI International Statistical Institute, 56th 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, Lisboa, Portugal, **22 - 29 August 2007**. ISI Permanent Office, 428 Prinses Beatrixlaan, P.O. Box 950, 2270 AZ Voorburg, The Netherlands, Phone: +31–70–3375737, Fax: +31–70–3860025, E-mail: isi @cbs.nl, http://www.isi2007.com.pt/

Cyberinfrastructure Summer Institute for Geoscientists, San Diego Supercomputer Center, University of California, San Diego, La Jolla, CA, **13-17 August 2007**. Margaret Smeekens, GEON, SDSC, UCSD, 9500 Gilman Dr, MC 0505, La Jolla, CA 92093, Phone: 858.534.5070, FAX: 858.534.5113, EMail: margaret@sdsc.edu, Web: http://www.geongrid.org/CSIG07/)

Petroleum Geostatistics 2007, Cascais, Portugal, **10 - 14 September 2007**. Telephone: +351 214825900, Fax: +351 214825977, http://www.eage.nl/events/index.php?evp=313&ActiveMenu=2&Opendivs=s2

IAMG 2007 Beijing, China, **26-31 August 2007**. Zhao Pengda, China University of Geosciences, Wuhan, & Qiuming Cheng, York University, Toronto, Canada, E-mail: qiuming@yorku.ca. qiuming@cug.edu.cn, Website: www.iamg2007.org.

GEOMODEL-2007, Gelendzhik, Russia, **16-21 September 2007**. http://eage.ru/en/conferences/detail.php?id=19

3rd International Symposium Fan Noise. Cetium, CETIAT. Lyon, France, **17 - 19 September 2007**. email: info@fannoise2007.org. http://www.fannoise2007.org/

Society of Exploration Geophysicists SEG (77th Annual Meeting and International Exposition), San Antonio, Texas, USA, **23–28 September 2007**. PO Box 702740, Tulsa, OK 74170-2740, USA, Phone: +1 918 497 5500; Fax 918-497-5557; E-mail: meetings@seg.org; Website: meeting.seg.org

MINING PRIBRAM SYMPOSIUM including a section on GEOETHICS, Pribram, Czech Republic, **15-19 October 2007**. The Mining Pribram Symposium, P.O. Box 41, 261 92 Pribram, Czech Republic, fax (++420) 318623169, E-mail: lidmila.nemcova@quick.cz or marcinikova@diamo.cz

Earth Sciences for Society: Beginning of the International Year of Planet Earth, Denver, Colorado, **28-31 Oct 2007**. Geological Society of America. Melissa Cummiskey, 3300 Penrose Place, Boulder, CO 80301, Phone: 303-357-1058, FAX: 303-357-1072, EMail: mcummiskey@geosociety.org, Web: http://www.geosociety.org/meetings/2007

SPE Annual Technical Conference and Exhibition, Anaheim, California USA, **11 - 14 Nov 2007.** www.spe.org/atce/2006/index.html

American Geophysical Union (Fall Meeting), San Francisco, California, **10–14 December 2007**. E. Terry, AGU Meetings Department, 2000 Florida Avenue, NW, Washington, DC 20009 USAPhone: +1 202 777 7335; Fax: +1 202 328 0566; E-mail: meetinginfo@agu.org; Website: http://www.agu.org/meetings

AAPG Annual Meeting, San Antonio, Texas, **20–23 April 2008**. AAPG Convention Department, PO BOX 979 Tulsa, OK 74101-0979, phone +1 888 945 2274 ext. 617 or +1 918 560 2617; http://www.aapg.org/sanantonio/

2008 JOINT STATISTICAL MEETINGS, Denver, Colorado, **3-7 August 2008**. Carmen Batanero, Phone: 34 958243950 Fax: 34 958 246359, Email: batanero@ugr.es, www.ugr.es/~icmi/iase_study/

ICG 33rd International Geological Congress, Oslo, Norway, **5-14 August 2008.** Congress Conference AS, Thomas Heftyesgt. 2, P O Box 2694 Solli, No 0204 Oslo, Phone: +47-2256 1930, Fax: +47-2256 0541, www.33igc.org. Includes IAMG sponsored sessions and IAMG General Assembly.

Geological Society of America (Annual Meeting), Chicago, Illinois, **26–30 October 2008**. GSA Meetings Dept., P.O. Box 9140, Boulder, CO 80301-9140, USA, Phone: +1 303 447 2020; Fax: +1 303 447 1133; E-mail: meetings@geosociety.org; www.geosociety.org/meetings/index.htm

Eighth International Geostatistics Congress - GEOSTATS 2008, Santiago, Chile, **1-5 December 2008**. Department of Mining Engineering, University of Chile. Amada Plaza, Paseo Bulnes 197. Piso 6, Phone: (56-2) 652 1521 FAX: (56-2) 652 1570, EMail: info@geostats2008.com, Web: http://www.geostats2008.com

American Geophysical Union (Fall Meeting), San Francisco, California, USA. E. Terry, AGU Meetings Department, 2000 Florida Avenue, NW, Washington, DC 20009 USA, **15–19 December 2008**. Phone: +1 202 777 7335; Fax: +1 202 328 0566; E-mail: meetinginfo@agu.org; Website: http://www.agu.org/meetings

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IAMG'09 in Stanford

After the IGC in Oslo, the IAMG's next Annual Conference will take place in Stanford (California). This is going to be the first IAMG conference ever in the USA! Jef Caers of Stanford University will be Chairman and Oy Leuangthong from the University of Alberta, Canada, Vice-Chair.

The proposed date is August 16-21, 2009 and the title of the conference "Computational methods for the Earth, Energy and Environmental Sciences."

Modern mathematical and quantitative methods in the Earth Sciences require an increasingly strong computational component. The Earth

and Environmental sciences are rich in computational research and applications. Past IAMG conferences have mainly focussed on methodologies or case studies, less so on the computational aspects. The increased computational complexity of our problems has forced computer scientists, both hardware and software, to come together with the Earth & Environmental Sciences community to tackle new computational challenges. For example, Stanford University has started, in collaboration with Sun Microsystems Inc., a new center for interdisciplinary research effort designed to tackle critical questions about Earth processes, natural & energy resources and the environment. Ideally, this will foster an integration of Earth science with computer science, each driving development of the other. The computational capacity and the availability of large volumes of data from a variety of data sources offer new challenges in modeling various components of the Earth, whether this concerns the modeling of an aquifer or the process-simulation of a large sedimentary basin as well as the human activities that interact with these Earth processes.

Another keyword in the conference title, less common to IAMG conferences, is Energy. The supply of sustainable energy will be the most important challenge ahead for our society in this century. In some form or another we believe that IAMG needs to and can make an important contribution in the measuring, modelling and assessment of non-hydrocarbon based or non-conventional subsurface energy resources. We would like to showcase with a special session the various modelling and computational aspects this requires.

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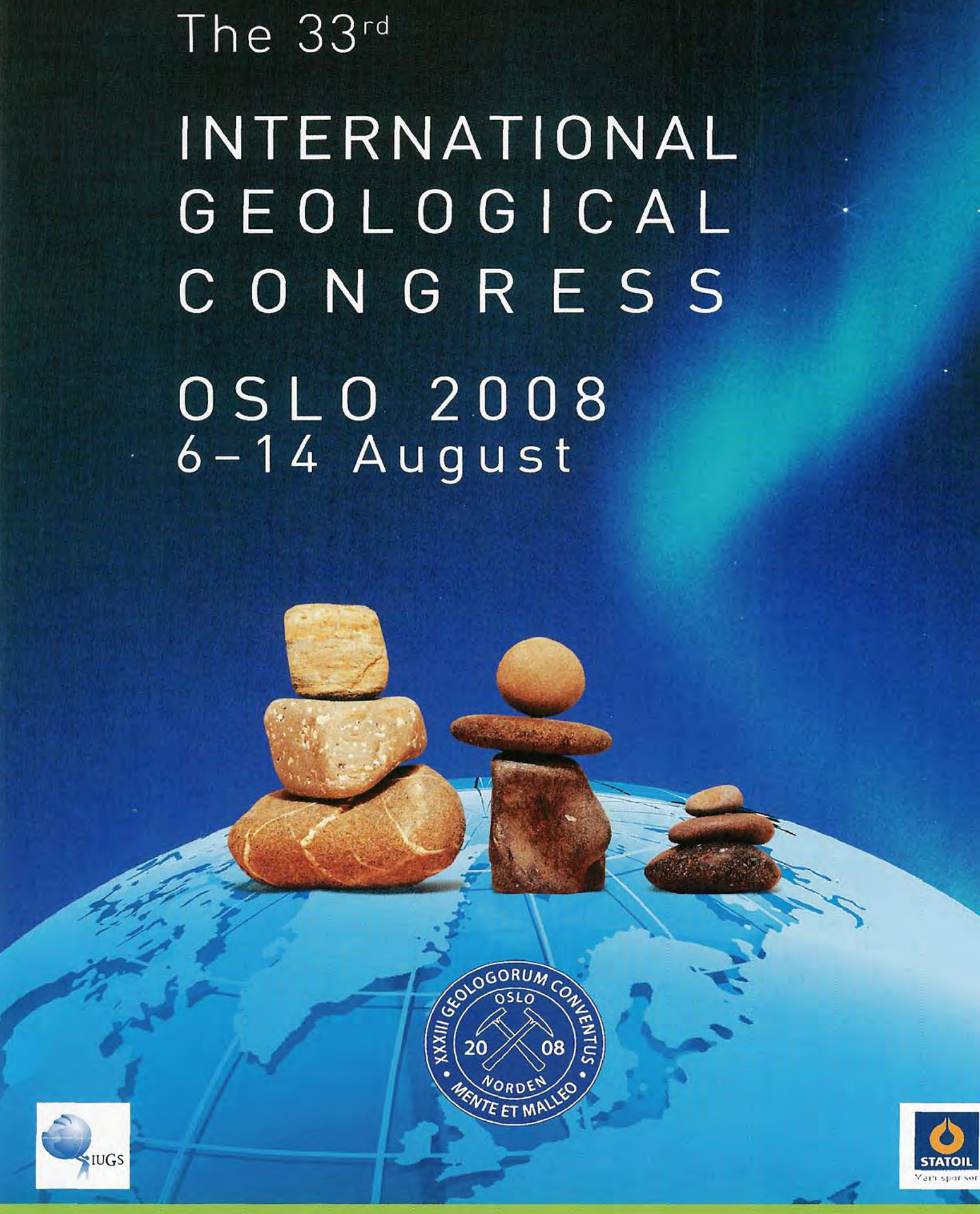

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