

IAMG Newsletter

No. 79 December 2009

Official Newsletter of the International Association for Mathematical Geosciences

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2010 IAMG AWARDS

PLEASE RESPOND !!!

The Association invites nominations for the following awards:

John Cedric Griffiths Teaching Award

The John Cedric Griffiths Teaching Award shall be presented to honor outstanding teaching, with preference for teaching that involves application of mathematics or informatics to the Earth's nonrenewable natural resources or to sedimentary geology. Age or academic status are not conditions for the award. (IAMG By-Law 14)

William Christian Krumbein Medal

The William Christian Krumbein Medal is the highest award given by the Association and the recipient shall be so honored and acknowledged. The Krumbein Medal is awarded to senior scientists for career achievement, which includes (a) distinction in application of mathematics or informatics in the earth sciences, (b) service to the IAMG, and (c) support to professions involved in the earth sciences. There is no stipulated preference for fields of application within the earth sciences. (IAMG By-Law 12)

Membership in IAMG is not a requirement for nomination. For further information on both awards, please visit <http://iamg.org>

The deadline for nominations is **31st January 2010** - but please don't wait until the last minute !

Please send nominations and supporting documents to:

Jeff Caers - Chairman, IAMG Awards Committee

Stanford University - Dept. of Energy Resources Engineering
Green Earth Sciences Bldg.
Stanford, CA 94305-2220 - USA

E-mail: jcaers@stanford.edu

Awards! For a relatively small scientific, professional organization IAMG has an astonishing number of awards and honors to recognize deserving colleagues. Four major awards are named for famous mathematical geologists who were founders or major contributors to the growth of the IAMG. There is the honor of being selected Distinguished Lecturer. Two best paper awards are given every year by the journals *Mathematical Geosciences* and *Computers & Geosciences*. Two persons have been elected Honorary Members, and we also have a Certificate of Appreciation for people who have done more than expected for the IAMG but are not mathematical geologists.



There are many members of IAMG who have contributed to the Association and helped to run it, and may have received at least one of these awards. There tends to be a core group of active members which changes slowly over time: some of those active now have been active since the founding of the Association in 1968; others have been active for a while and then faded away never to be heard of again. Dan Merriam has written several articles in the Newsletter about the fathers of IAMG, and in this issue he describes three of the "giants" (see: On the shoulders...). IAMG is a small organization with membership between 500 and 600, and it is often difficult to find candidates for the many awards that can be given by the Association. On the front page of this Newsletter you are used to seeing a call for nomination for various awards - see on the left. And sometimes it's almost impossible to find a candidate at the right time for the right award. So, for instance the Chayes Award was not given this year because there were no appropriate candidates (while also conserving funds during this recession). Originally the Krumbein and Vistelius awards were given every year; then in 1996-97 two new awards (Griffiths and Chayes) were added, and from then on these were given in alternate odd and even years (every two years). We have also extended the time for the Distinguished Lecturer from one year to two years, which was appreciated by the lecturer. It decreases the burden of the various committees to find the appropriate candidates if they don't have to come up with one every year. Similarly, for the Journal awards it is often difficult work to pick out the best paper from a large number of papers each year, especially in *Computers & Geosciences*. A debate is going on right now how best to choose the best paper. But the bottom line is that you, the members of IAMG should become more involved in making suggestions for candidates for the four main awards, for potential distinguished lecturers and for best papers both in *Mathematical Geosciences* and *Computers & Geosciences*. The person next door in your office might deserve an award - let us know about him. Please contribute by thinking actively how to help and by giving us your opinion.

Harald S. Poelchau

The mission of the IAMG is to promote, worldwide, the advancement of mathematics, statistics and informatics in the Geosciences

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PRESIDENT'S FORUM

Despite the worldwide financial crisis, 2009 has been a good year for IAMG. We have not taken many new initiatives, but we have accomplished our plans successfully. We had our annual meeting in Stanford, organised by Jef Caers and his team, which was a big success, very well organised, with many excellent contributions. Among them, I would like to mention in particular the one by Guillaume Caumon, our 2009 Vistelius awardee. Sadly, Jean-Laurent Mallet could not attend to deliver this years Matheron Lecture, but I hope to see him at the next IAMG meetings and wish him all the best. We have published our newsletter twice, as usual, thanks to the excellent work of our newsletter editor, Harald Poelchau. Our journals are going very well, which is not a surprise given the personal dedication of the editors, Roussos Dimitrakopoulos for Mathematical Geosciences, Eric Grunsky for Computers & Geosciences, and Jerry Jensen for Natural Resources Research who has passed his editor's post on to Keith R. Long. Up to now, we have managed well to get through the financial crisis; our treasurer, Gina Ross, has managed to get the tax-exempt status not only in the US, but also in Germany, which was necessary due to the fact that our contract with Springer is subject to German taxation laws, so that we didn't have to pay any taxes for 2009. We owe also appreciation to Springer for that, because there was the risk that we had to pay taxes for 2009. The Council has approved the first section, namely the Chinese section, a description of which you will find in a separate note. I wish them a big success!

During the IAMG meeting in Stanford we had a Council meeting moderated by Secretary General, Daniel Tetzlaff. You will find the minutes of the meeting on the website of our Association – iamg.org. There were 15 motions, of which 13 were approved. I would like to call attention to our new Awards Committee Chair, Jef Caers, whom I wish a big success in the future; to our new Curriculum Quality Committee, Chaired by Maria-Theresia Schafmeister; and our new Meetings Committee, chaired by past president Ricardo Olea. Certainly you will soon hear from them, so I leave the topic for them to explain the purpose of these committees. But you should look at our website, where you can find a link to the website of IAMG 2010, our next meeting, which will take place in Budapest. Plans for the other meetings, scheduled for 2011 in Salzburg (Austria) and 2012 in Brisbane (Australia), are also running fine. Keep an eye on them!

Some words on our Student Chapters: there are already eight! You can find them on our website, under "Student Affairs". Every chapter has a link to their own webpage. I invite you to have a look – the more comments and interest, the more active they will be!

Other issues of interest approved at the Council meeting in Stanford are:

(a) The appointment of a 'Members Advocate' to resolve and record member-vs.-office issues. The reason for this was that over the course of several months there have been informal reports of members being dissatisfied with the performance of the IAMG office managed by Events and Management, Inc. In order to ascertain the need for further action, it is necessary to validate and evaluate these claims. A "Members Advocate" listed in the website should have a twofold effect: (1) He/she could address and solve some of the issues by being more familiar with the office staff, and (2) He/she would record the issues to make it possible to evaluate whether they constitute normal business, ineffective management, or breach of contract based on evidence beyond hearsay.

(b) The decision to perform a survey of similar societies and their investments for comparison to our own financial strategy under the auspices of the Council. The rationale behind that proposal was that there are often allegations that the IAMG is spending either too much or too little money and that the long-term spending strategy should be changed. One useful piece of information in such decisions is a comparison with other "similar" societies. However, details are hard to obtain from other societies. Investments and strategies are not freely provided by many societies to the outside world. This "survey" is understood to mean the collection of information readily available on the Internet, such as membership numbers, total assets, annual gross income, and annual expenditures (if available), from at least 3 professional societies, so that at least basic information on "per capita" figures can be obtained. If you can help in that, please send the information either to our Secretary General, Dan Tetzlaff, or to myself.

Concerning the membership dues for 2010, the Council has also approved a change, which is commented in a separate notice. Have a look at it!

Finally, I would like to use this forum to call for your participation in nominating candidates for our awards. In Budapest we will award the William Christian Krumbein Medal, the John Cedric Griffiths Teaching Award. In addition, the George Matheron Lecturer will be selected to give a presentation. I am convinced there are excellent candidates both in and outside the IAMG. But we need nominations.

My best wishes to all of you for a pleasant and successful year 2010!

Vera Pawlowsky Glahn

Association Business

New Membership Dues

When the present system of dues was initiated, back in 2001, separating journal subscriptions from membership, the Council decided to fix the dues based on the following rationale:

the office costs \$6000 per year, we had a mean of 600 members, if every member paid \$10 we'd cover the costs. At present the office costs \$15,000, which would mean \$25 per member if we still assume 600 members. Nevertheless, since 2001 the dues have not been changed, given that we got quite good benefits from our investments and the Council considered that members should benefit from it. At the present moment we have cash difficulties due to the world-wide financial crisis. We still have a lot of shares, but they have lost a large percentage of their value. To avoid realising that loss, we try not to sell the shares, and the Council has approved to increase the dues, with the aim that the membership dues pay for more of the actual costs of the office. We have to take into account that the cost of the office is a fixed price to which we have to add other things, like stamps and other material. These will still be paid from royalties and other income we have. Thus, the final decision has been to increase the dues by 20%, effective 2010, as follows:

Ordinary member – 1 year, from US\$ 10.00 to US\$ 12.00
 Ordinary member – 4 years, from US\$ 40.00 to US\$ 48.00
 Ordinary member – Lifetime, from US\$ 120.00 to US\$ 144.00
 Student member – 1 year, from US\$ 5.00 to US\$ 6.00.

Prices of subscriptions to journals, monographs, CDs, or institutional subscriptions for 2010 are revised according to decisions made by the editorial houses. Only Elsevier has modified them, which means that Computers & Geosciences has seen some changes, but only small ones. Soon you will receive the invitation to renew your membership. Have a look at it!

◁

Distinguished Lecturer's Update Report

1. "High-order Geostatistics: Simulating complex, non-Gaussian geological and environmental phenomena". IAMG 09, Stanford University, Stanford, Ca, USA.

September 2009:

2. "Mining Geostatistics Revisited: From ore supply to market demand while harnessing uncertainty", Keynote, Energy and Resources 2009 Conference, Goslar, Germany.

and

3. "Stochastic resource modelling and mine planning optimization." 2-day short course, TU Clausthal, Clausthal-Zellerfeld, Germany.

October 2009:

4. "Stochastic Mine Planning Optimization: New concepts, applications and value in an ever uncertain market." Keynote, APCOM 2009, Vancouver, Canada

5. Remote Lecture: "Geostatistics: From basics to high-order models", Universitat Politècnica de Catalunya, Barcelona, Spain.

The short course had only 10 people, but the lectures were well attended all around, about the size of the IAMG meeting (Goslar was around 200).

NEED TO promote more and do more (particularly remotely that is both good and easy).

Plans: I expect to visit the Universities of Florida, Kentucky, Alberta, Freiburg; some talk in Santiago (June 2010), IAMG 2010 in Budapest, Australia (November 2010). Trying hard, but no success yet in Brazil and South Africa.

Roussos Dimitrakopoulos

Please contact Roussos (roussos.dimitrakopoulos@mcgill.ca) to request a lecture either remotely or a visit during 2010.

New: Curriculum Quality Committee

IAMG has established the Curriculum Qualification Committee (CQC) to develop detailed criteria for accreditation of university graduate curricula which focus on Mathematical Geosciences (as defined by the IAMG journal Mathematical Geosciences).

Worldwide, universities teach Mathematical Geosciences as necessary part of the geoscientific curriculum. It is planned that universities can apply for an IAMG accreditation certificate in order to ensure the quality and equal standard of the different courses. A list of accredited institutions and information on their specific curricula will be published on the IAMG web site. This information will facilitate the comparison of content and depth of the various curricula, thus supporting the continuing development of programs in Mathematical Geosciences at universities. Students will profit as well when choosing a suitable university. This will further enhance their national and international mobility.

Members of IAMG are requested to support the committee's work by sending information on existing curricula in Mathematical Geosciences which might serve as a basis for the development of criteria, their breadth, contents, and quality.

Maria-Th. Schafmeister
 Chair of CQC

schaf@uni-greifswald.de

New: Meetings Committee

In a memorandum of October 15, 2009 Secretary General Tetzlaff announced approval by Council of President Pawlowsky-Glahn's idea of establishing a Meetings Committee. In starting this new group, Council wants to centralize the coordination and oversight of scientific meetings, both those organized by IAMG and the ones held by others in which the Association has the limited responsibility of organizing a few sessions. The new committee will coordinate and oversee activities rather than assume responsibility for their organization. The beginning of the Meetings Committee does not imply any change in the constitution or duties of the groups responsible for organizing the meetings. For more details on the duties of the committee, please visit the Guidelines sections at www.iamg.org.

The committee members are:

Ricardo A. Olea, USGS (USA, olea@usgs.gov), chairman
Jaime Gómez-Hernández, U. Politécnica de Valencia (Spain)
Simon Cox, CSIRO Exploration and Mining (Australia)
Qiuming Cheng, York U. (Canada) & China U. of Geosciences, ex officio

Note that the four members represent four different continents. Simon Cox and Qiuming Cheng are members in their own right, Simon as IGC Councilor and Qiuming as Vice-President in charge of organizing sessions at the ISI biennial congresses.

If you have some issues about meetings, now you have a place where to direct your concerns.

Member News



On September 5th Danie Krige celebrated his 90th birthday in Johannesburg. (Pictures sent by Jenny Mohamed who was in charge of ceremonies at the Banquet).

Danie is a founding member of IAMG (August 1968 in Prague), and member of the first and the 1996-2000 IAMG Council.



For this occasion, Roussos Dimitrakopoulos has planned a special issue for Volume 42 of Mathematical Geosciences to honour Danie Krige and his work.

Council Meeting at Stanford

MINUTES OF IAMG 2009 COUNCIL MEETING

(condensed by Editor - see full text and separate reports on website iamg.org)

Voting members present were: Vera Pawlowsky-Glahn (President), Qiuming Cheng (Executive Vice President), Jorgina Ross (Treasurer), Daniel Tetzlaff (Secretary General), Frits Agterberg (past President), Jef Caers (Council member), Christien Thiart (Council member)

Non-voting Council members: Eric Grunsky (editor, Computers & Geosciences), Harald Poelchau (editor, Newsletter and Website)

Others present: June Hill (CSIRO, Australia, representing Council member Simon Cox with voice and no vote), Helmut Schaebe (Chair, Student Affairs Committee), Sean McKenna (Chair, Distinguished Lecturer Committee), Graeme Bonham-Carter (Archivist)

President Vera Pawlowsky-Glahn welcomed attendees, gave an introduction, and delegated the task to moderate the meeting to Secretary General Daniel Tetzlaff.

President Vera Pawlowsky-Glahn presented the highlights of the President's report. The President called attention to the fact that the budget is now done on a calendar-year basis (January to December) so that it will comprise the same time period as the financial statements, permitting a better comparison between plans and accomplishments. She also addressed the issue of reconciling the new Statutes and Bylaws approved by the General Assembly of 2008 with the fact that the 2008 General election was conducted under the old guidelines, and the positions elected do not coincide exactly with the positions specified in the new guidelines. To this effect, President Vera Pawlowsky-Glahn resolved:

1. By virtue of article 10 of the Statutes, which entitles the President to appoint the Secretary General, to appoint Daniel Tetzlaff (previously elected Secretary General) as (now appointed) Secretary General.

2. By virtue of article 10 of the Statutes which entitles the President to select a Vice President to be the Executive Vice President, to select Qiuming Cheng as Executive Vice President.

3. As no other Vice Presidents have been elected in 2008, to delegate the tasks that would have been assigned to the other two Vice Presidents to other Council members as need dictates.

Vice President Qiuming Cheng presented the highlights of the Vice President's report, including the successful creation of a new IAMG Section in China.

Secretary General Daniel Tetzlaff presented the highlights of the Secretary General's report. Aside from routine issues, the Secretary General pointed out the possible need for calling a General Assembly in 2010.

Treasurer Jorgina Ross presented the highlights of the Treasurer's report and budget (see also p. 13 in this Newsletter).

Highlights of the following reports were also presented as follows:

Student Affairs Committee report, by Chair Helmut Schaebe

Awards Committee report, by Committee member Jef Caers

Distinguished Lecturer committee report, by Chair Sean McKenna

Matheron Lecturer Committee report, by Chair Qiuming Cheng

Computers and Geosciences report, by Editor Eric Grunsky

Newsletter and Website report, by Editor Harald Poelchau

Regarding the Monograph Series, it was brought to the attention of the Council that Oxford University Press intends to expand the series, including future monographs containing contributions of multiple authors.

Archivist report, by Archivist Graeme Bonham-Carter, who also pointed out the need for the Council to make decisions regarding the life cycle of archived documents.

The meeting then proceeded with new business. The following motions were presented:

1. "Ratification of Committee chairs and members per list", presented by Daniel Tetzlaff. This motion was APPROVED.

2. "The name of the Studies Committee shall be changed to Education Committee", presented by Daniel Tetzlaff on behalf of Helmut Schaebe. This motion was REJECTED. Comments: The Council agreed that the name of the committee called "Studies Committee" in Bylaw 22 does not reflect its purpose, prompting the need for a new name. While the name cannot be changed by the Council

in the Bylaws, a new name can be used, possibly with the clarification "called Studies Committee in the Bylaws" until and if a General Assembly amends the Bylaws accordingly.

3. "The name of the Studies Committee shall be changed to Education Accreditation Committee", presented by Christien Thiart. The motion was REJECTED.

4. "The name of the Studies Committee shall be decided by the Committee's newly appointed Chair", presented by Jef Caers. This motion was APPROVED.

5. "The official name of the committee handling student travel, chapters, and research is 'Student Affairs Committee', as opposed to 'Student Grants Committee'", presented by the Executive Committee. The name Student Affairs Committee was APPROVED. Comments: The name of this committee is ambiguous in the Bylaws (Bylaw 21 refers to it as "Student Grants Committee" and then as "Student Affairs Committee"). To avoid confusion, the Council agreed to use a single name, "Student Affairs Committee".

6. "The Student Affairs Guidelines shall be amended to allow student travel expenses to non-IAMG conferences sponsored by the IAMG", presented by the Executive Committee. This motion was APPROVED.

7. "The name of the Association in the IAMG Conference Guidelines shall be changed to International Association for Mathematical Geosciences", presented by the Executive Committee. This motion was APPROVED.

8. "The President shall nominate a committee to advertise, evaluate, and follow up on IAMG Conference Proposals", presented by the Executive Committee. This motion was APPROVED. Comments: This motion responds to the need to provide better support and contact with IAMG Conference organizers on the IAMG side. While the entire Council is responsible for

this contact and support, the narrowing down of these responsibilities to a smaller appointed committee should make it more effective.

9. "The Council shall call for an extraordinary General Assembly in 2010", presented by the Executive. The motion was APPROVED. Comments: There is a need for minor amendments to Statutes and Bylaws.

10. "The President shall appoint a 'Members Advocate' to resolve and record member-vs.-office issues", presented by the Executive. This motion was APPROVED. Comments: Over the course of several months there have been informal reports of members being dissatisfied with the performance of the IAMG office managed by Events and Management, Inc. In order to ascertain the need for further action, it is necessary to validate and evaluate these claims.

11. "The Council shall perform a survey of similar societies and their investments for comparison to our own financial strategy", presented by Daniel Tetzlaff on behalf of Council member Simon Cox. The motion was APPROVED. Comments: There are often allegations that the IAMG is spending either too much or too little money and that the long-term spending strategy should be changed. One useful piece of information in such decisions is a comparison with other "similar" societies. This "survey" is understood to mean the collection of information readily available on the Internet, such as membership numbers, total assets, annual gross income, and annual expenditures (if available), from at least 3 professional societies, so that at least basic information on "per capita" figures can be obtained.

12. "The Council shall support the IGC initiative of a Geoscience Information Supersession at the IGC in 2012", presented by Daniel Tetzlaff on behalf of Council member Simon Cox. This motion was APPROVED.

13. "The President shall appoint a commission to answer the questions raised in the Archivist's report", presented by the Executive Committee. This motion was APPROVED. Comments: The Archivist's report raises several important questions regarding the handling, classification, and eventual disposal of a large amount of written material.

14. "The Council empowers the President to take the necessary steps to review the status of the IAMG with the State", presented by the Executive Committee. This motion was APPROVED. Comments: This motion allows the President the necessary flexibility to review and answer questions regarding the need to update our registration and filing of reports with the State.

15. "The IAMG Newsletter shall be printed on paper again as of the last issue of 2009", presented by Daniel Tetzlaff on behalf of Newsletter and Website Editor Harald Poelchau. This motion was APPROVED.



IAMG 2009 Council Meeting: Gina Ross, Qiuming Cheng, June Hill, Jef Caers, Christien Thiart, Graeme Bonham-Carter, Vera Pawlowsky, Frits Agterberg, Dan Tetzlaff, Eric Grunsky, Helmut Schaebe

Daniel M. Tetzlaff

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New Chinese Section of IAMG

A proposal to set up a Topical Section of IAMG for Chinese Members, presented by IAMG Vice president Dr. **Qiuming Cheng**, was approved by the IAMG Council on June 19, 2009. Therefore, the Section is now officially recognized as an IAMG Section under the Bylaws (section III, 8-10). Dr. **Yongzhang Zhou** has been elected Chair of the Section. Per the Section's guidelines outlined in the proposal, Dr. **Qiuming Cheng** has been appointed by the president as Co-chair. The section has about 50 registered members from China.

The idea of forming a Topical Section of the IAMG for Chinese members was proposed by a group of about 20 Chinese IAMG members during the 12th Annual IAMG Conference held in Beijing two years ago (2007), and a formal proposal was prepared over the past two years and was presented to the IAMG Council last summer. The aims of the Chinese Topical Section of the IAMG are: to facilitate contributions by Chinese members to the IAMG, to promote IAMG activities in China, to advance mathematical geosciences research and education in China, and to promote cooperation in mathematical geosciences between China and other countries. The group has elected its executive consisting of four members and a council of 22 members. IAMG student chapters are also an important part of the group.

The main activities suggested for the Section include: Organize mathematical geosciences related workshops and conferences in China; promote IAMG activities including Distinguished Lecturer tours in China; introduce Chinese activities of mathematical geosciences in China to the IAMG; promote membership of IAMG in China, and promote the journals of the IAMG in China.

Main activities of the group conducted so far include organization of the first Chinese annual conference on "Mathematical Geosciences and Geoinformatics" June 26-29 in Guangzhou; a team of 25 members attended the IAMG Annual Conference August 23-28, in Stanford; organized a session in the first World Congress of Young Earth Scientists October 25-27, Beijing, and a session of the China Society of Geology Annual Conference October 23-25, Beijing.

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Conference Reports

Mathematical Geosciences and Geoinformatics

The first national conference of Mathematical Geosciences was organized by the IAMG-China Section in conjunction with the Mathematical Geology and Geoinformatics Society of China. This is the second major event of the MG community in China for the past five years, after the IAMG annual conference held in Beijing in 2007. The conference theme was Development of MG for Resources, Environment and Hazards. Dr. Zhao Pengda, former CUG president, was invited as the Academy Committee Chair, and he delivered a keynote lecture on the Progress of Mathematical Geosciences in China. Dr. Qiuming Cheng as the Conference Chair and Dr. Yongzhang Zhou, the Secretary General, jointly organized the event. About 200 people attended the conference, among them IAMG past-president Dr. Frits Agterberg from



Canada, Dr. Koike from Japan, Wang Shichen from China, Guocheng Pan from US and a few others from China who delivered keynote presentations at the conference. The enthusiasm for Mathematical Geosciences in China is reflected by the attendance especially of young people. During the conference a council meeting was held for IAMG-China. The host and location for next year's conference was discussed.

It is worth mentioning the special session and forum for students sponsored

by both IAMG Student Chapters at China University of Geosciences and at Sun Yat-sen University during this conference. Frits Agterberg, Pengda Zhao, Qiuming Cheng, Di Zhou, Yongzhang Zhou, et al. attended the session and were reviewers for selecting the best student papers presented in the conference. 22 student papers were orally presented in the session and they were generally well received.

Zhijun Chen, Secretary General of IAMG-CN

Challenges and Opportunities of Mathematical Geosciences for Young Earth Scientists

The first World Young Earth Scientists (YES) Congress was successfully held in China University of Geosciences, Beijing, China, October 25-28, 2009. The theme of this conference was "young earth scientists to serve the community". This conference was jointly supported by International Year of Planet Earth (IYPE), International Union of Geological Sciences (IUGS) and other Universities. About 300 young geoscientists from more than 60 countries



attended this conference, and 526 abstracts are published in a special issue in Earth Science Frontiers. This conference included 14 special topic academic seminars and 8 roundtable symposium sessions on the new research and new development of groundwater, climate, energy and mineral resources, deep earth, and digital earth. The vice president of IAMG, Dr. Qiuming Cheng, was invited to deliver a keynote lecture at the session of Digital Earth Engineering

on "Challenges and Opportunities of Mathematical Geosciences for Young Earth Scientists". His presentation was well received, and he introduced a number of success stories of IAMG such as mineral resources and energy quantitative assessment, geostatistics and simulation, multivariate analysis and compositional data analysis, uncertainty analysis of geological time scale, quantitative stratigraphy, non-linear theory and geocomplexity theory, and sedimentary processes modeling etc. which have impressed the audiences. The next YES Congress will be held in conjunction with the 34th IGC in Brisbane.

Renguang Zuo

*Co-convenor of Digital Earth Engineering Session of YES
China University of Geosciences*

Geocomplexity: a growing area of MG

The two-day workshop on Geocomplexity held at York University (May 28, 29) followed the session of the AGU-CGU joint conference in Toronto (May 27) focused on novel approaches to understanding geosystems, particularly systems whose complexity extends over large ranges of scales in space and or time. Themes included a) the interactions of clouds, radiation, and atmospheric and climate dynamics, b) the hydrological cycle, c) the distribution of minerals, the internal structure of the earth, seismic and volcanic systems, d) remote sensing of geosystems, e) space plasmas and self-organized critical systems. There were 30 oral presentations including 13 special plenary talks. There were 53 participants from various fields of non-linear geosciences. Frits Agterberg and Qiuming Cheng (who is co-organizer of the workshop) attended the workshop and delivered lectures on non-linear theory and applications in geochemical data analysis and mineral resources assessments. In addition, there was a round table discussion on "The Future of Geocomplexity". An introductory paper has been prepared on the basis of the discussion for EOS. It highlights



some of the success stories of nonlinear theory. Nonlinear theory, fractal /multifractals, chaos system, and neural networks etc. have become a new area of nonlinear mathematical geosciences which are reflected in the sessions of recent annual conferences and journal papers.



Xitao Xin (York University)

On the Shoulders

If I have seen further it is by standing on the shoulders of giants...

Isaac Newton, 1675

As noted by Sir Isaac Newton almost a half millennium ago, we must not forget that we are where we are because of those who precede us. Mathematical or quantitative geology is relatively new in comparison to the subject as a whole, so who were some of the founders?

Those who immediately come to mind are Andrei B. Vistelius, William C. Krumbein, and John C. Griffiths, three giants of the later part of the 20th Century.

Andrei Borisovich Vistelius (1915-1995) was a dominant figure in the development of mathematical geology, although his influence was little recognized, and he was virtually unknown to the geological community in the West, prior to the IGC in Prague in 1968 (Merriam, 2001). His work eventually was translated and disseminated in the West, especially "*Studies in Mathematical Geology*" published in 1967 by Consultants Bureau in New York. He was a proponent of applying stochastic methods to solving geological problems. His influence on Richard Reymont lead to the founding of the IAMG where Vistelius was elected the first President (Merriam, 1978).

The "*Father of Computer Geology*" is a moniker attached to **Bill Krumbein** (1902-1979), a leader and pioneer in the application of quantitative methods in geology (Merriam, 2004). He was a roommate of M. King Hubbert at the University of Chicago where he honed his

Geologists" for his contributions to the IAMG. His book, *Scientific Method in Analysis of Sediments* in 1967, was one of the first texts on the subject.

Of the four prizes IAMG awards to honor outstanding contributions, three are named after these three founding fathers. Two of these geogiants received IAMG's most coveted and highest prize, the Krumbein Medal - Griffiths, the first Krumbein Medalist in 1976, and Vistelius the second in 1980. The John Cedric Griffiths Teaching Award is presented to honor outstanding teaching, especially for teaching that involves application of mathematics or informatics to the Earth's nonrenewable natural resources or to sedimentary geology. The Andrei Borisovich Vistelius Research Award is given to a young scientist for promising contributions in research in the application of mathematics or informatics in any field of the earth sciences.

These three had a profound influence on the development of geomathematics and the application of statistical methods in geology. A good example is the first computer program for geologists that was published in SOAP (Simple Object Access Protocol) by Bill Krumbein and Larry Sloss in 1956. The work of Vistelius, Krumbein, and Griffiths was ahead of the full development of quantitative geology as we know it today. The Information Age is upon us and partly because of their contributions.

Acknowledgment: I want to thank James Merriam for preparing the illustration.



(from left to right) Andrew Vistelius in Edinburgh, Bill Krumbein in Kansas, John Griffiths in southeastern Kansas (pictures by the author)

expertise in mathematics and statistics. Although his background was in business administration, he readily adapted to geology under the influence of Paul MacClintock at Chicago where he obtained his PhD. At Northwestern University he worked extensively with Larry Sloss and Ed Dapples on sediments. It was his book, *An Introduction to Statistical Models*, with statistician Frank Graybill in 1965 that put him in the forefront of that subject. Because of his influence and contributions he was 'elected' the "first past-President" of the IAMG.

The other giant of the period was **John Cedric Griffiths** (1912-1992) the Welsh sedimentologist and geomathematician. Educated in Wales and England he had two PhDs - one from the University of Wales and another from the University of London (Merriam, 1993). He worked in Trinidad until he joined Penn State University where he spent the rest of his productive career. He earned the title of "*Dean of Mathematical*

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Dan Merriam, IAMG Historian



G. Bonham-Carter & John Harbaugh



Peter Frykmann



Syvitzky, Schuenemeyer, Qiuning, John Wrafter

IAMG 2009 at Stanford



Vasili Demyanov



Stanford Univ. tower



Harbaugh, Griffiths, Syvitzky, Ron Boyd



Frances G. Arrillaga Alumni Center



Griffiths



Harff & Griffiths



Chairman Jef Caers



Graeme, Chelsey, Codien



Grunsky, Pawlowsky & Egozcue



Dimitrakopoulos, Agterberg, Caumon



The Conference Banquet



The five tie wearers at the banquet: Collins, Bonham-Carter, Caers, Myers, Poelchau



Dave Sutphen, Larry Drew, Ricardo Olea



Harff



Keynote Speaker
Goovaerts



Student Paper winner Mehrdad Honarkhah



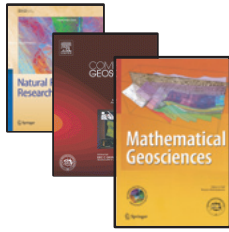
Vistelius Award to Guillaume Caumon



Student poster winner Zhun Renguang with Vera Pawlowsky & Helmut Schaeben



IAMG Journal Report



Natural Resources Research

NRR has a new editor, yours truly, Keith Long, a research economic geologist and mineral economist at the U.S. Geological Survey.

NRR continues to receive about three manuscripts a month. Currently, we have five articles for the December issue. NRR publishes papers on a very wide range of topics, from issues relating to biofuels to

mineral potential mapping, from oil and gas resource assessment to hyperspectral imaging, to name a few. What ties everything together is the application of quantitative methods to model, analyze, and predict natural resources.

I am actively promoting the journal within the U.S. Geological Survey as a logical place to publish results of interdisciplinary research and resource assessments. This is a new direction at the Survey, and there is much worry whether traditional, narrowly specialized scientific journals would publish such work. If your research is going in a similar direction, or you would like to reach a broader audience than your narrow specialty, please consider NRR.

In the next few months I will be looking at expanding the editorial board to ensure that all the various specialties that appear in the journal are covered. If this is something that interest you, or if you have someone to recommend, please let me know!

Keith R. Long
klong@usgs.gov

Mathematical Geosciences — Best Paper Award 2008

As our readers have come to expect, many excellent papers are published by Mathematical Geosciences each year. Chosen by the Editorial Board and Senior Editors, in a “neck – to – neck” competition with several outstanding manuscripts, the winner of the 2008 Best Paper Award is:

“Kernel Principal Component Analysis for Efficient, Differentiable Parameterization of Multipoint Geostatistics” by Pallav Sarma, Louis J. Durlofsky and Khalid Aziz in Volume 40(1): 3-32

Pallav Sarma currently works for Chevron Energy Technology Company as a research scientist in the Reservoir Simulation Research team, where he has been since 2006. Pallav holds a PhD degree in Petroleum Engineering with a minor in Management Science and Engineering from Stanford University, and a Bachelor's degree from Indian School of Mines in Petroleum Engineering. Before coming to Stanford, he worked briefly for Schlumberger as a reservoir engineer. His research interests include reservoir simulation, optimization, optimal control theory, statistical pattern recognition, artificial intelligence, probability theory, stochastic processes, geostatistics, etc. He has received several scholarships and awards, including the Dantzig award given by INFORMS, Miller and Ramey Fellowships at Stanford, an SPE scholarship, and a SIAM award for excellence in research.



Louis J. Durlofsky is Professor and Chairman of the Department of Energy Resources Engineering at Stanford University, where he has been since 1998. He was previously affiliated with Chevron Energy Technology Company in San Ramon, California. Durlofsky holds a BS degree from Penn State University and Master's and PhD degrees from the Massachusetts Institute of Technology, all in Chemical Engineering.



His research interests include the upscaling of detailed geological models for flow simulation, production optimization, history matching, modeling of advanced wells, flow in fractured systems, geological carbon sequestration, and general reservoir simulation. Durlofsky co-directs the Stanford University Industrial Affiliates Programs on Reservoir Simulation (SUPRI-B) and Advanced Wells (SUPRI-HW) and is also active in the Stanford Smart Fields Consortium.

Khalid Aziz is the Otto N. Miller Professor Emeritus of Earth Sciences at Stanford University. He has also served at Stanford as Chairman of the Department of Petroleum Engineering and as Associate Dean for Research in the School of Earth Sciences. Before coming to Stanford in 1982, he was a Professor of Chemical and Petroleum Engineering at the University of Calgary. Aziz received his engineering education at the University of Michigan (BS in Mechanical Engineering in 1955), University of Alberta (BSc and MSc degrees in 1958 and 1961, both in Petroleum Engineering) and at Rice University (PhD



in Chemical Engineering in 1965). He has received many national and international awards including the highest award given by the Society of Petroleum Engineers. He is a member of the National Academy of Engineering of the United States and of similar organizations in Europe and Russia. Last year, he was awarded an honorary doctor of laws degree from the University of Calgary. His main research interests are in computer modeling and optimization of hydrocarbon production systems.

Best Paper Awards are a major recognition of the effort of the authors of the related manuscript to reach excellence. Our congratulations to the 2008 winners and a most sincere thanks for their efforts and contribution to Mathematical Geosciences and the profession.

The Editor-in-Chief

Mathematical Geosciences' new Editorial Board members and their areas of responsibilities:

Geologic CO₂ sequestration - Prof. Sally Benson, Stanford University

Remote sensing and spatial analysis - Environment and resources - Prof Peter M. Atkinson, University of Southampton, UK

Link to Computer & Geosciences - Dr. Eric Grunsky, Geological Survey of Canada

Computational / Mathematical Geochemistry - Prof Antonella Buccianti, Università degli Studi di Firenze, Italy

Dr Pierre Goovaerts (Ann Arbor, MI) is new Associate Editor for Environmental Science and Engineering, Spatial Medical Geography

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Isoline retrieval: An optimal sounding method for validation of advected contours — Peter Mills

Objective selection of suitable unit cell size in data-driven modeling of mineral prospectivity — Emmanuel John M. Carranza

Change-of-support models and computer programs for direct block-support simulation — Xavier Emery

AMTCLAB: A MATLAB®-based program for traveltime analysis and velocity tuning in 2D elliptical anisotropic media — J.L. Fernández Martínez, L.M. Pedruelo González, E. García Gonzalo

Pumping test interpretation by combination of Latin hypercube parameter sampling and analytical models — Marc Van Camp, Kristine Walraevens

Automatic generation of hypsometric layers for small-scale maps — Anna M. Leonowicz, Bernhard Jenny, Lorenz Hurni

TEXTNN—A MATLAB program for textural classification using neural networks — Emilson Pereira Leite, Carlos Roberto de Souza Filho

Quantification of crustal geotherms along with their error bounds for seismically active regions of India: A Matlab toolbox — Kirti Srivastava, Likhita Narain, Swaroopa Rani, V.P. Dimri

Lacunarity analysis of raster datasets and 1D, 2D, and 3D point patterns — Pinliang Dong

Modelling and compact inversion of magnetic data: A Matlab code — S. Stocco, A. Godio, L. Sambuelli

Soil-Web: An online soil survey for California, Arizona, and Nevada — D.E. Beaudette, A.T. O'Geen

A LabVIEW environment to compensate temperature-driven fluctuations in the signal from continuously running spring gravimeters — Bruno Andò, Daniele Carbone

Interactive Matlab software for the analysis of seismic volcanic signals — Philippe Lesage

SteamTables: An approach of multiple variable sets — Mahendra P. Verma

SedLog: A shareware program for drawing graphic logs and log data manipulation — Dimitrios Zervas, Gary J. Nichols, Robert Hall, Helen R. Smyth, Charlotta L. thje, Fionn Murtagh

An R script for visualising and analysing fluorescence excitation–emission matrices (EEMs) — Dan J. Lapworth, David G. Kinniburgh

Comparison of roving-window and search-window techniques for characterising landscape morphometry — Carlos H. Grohmann, Claudio Riccomini

Elastic field in 3D due to a spheroidal inclusion—MATLAB™ code for Eshelby's solution — David Healy

C&G Volume 35, Issue 11, November 2009

Progressive Transmission of Spatial Datasets in the Web Environment — Edited by Bisheng Yang and Robert Weibel

Editorial: Some thoughts on progressive transmission of spatial datasets in the web environment — Bisheng Yang, Robert Weibel

A vocabulary for a multiscale process description for fast transmission and continuous visualization of spatial data — Monika Sester, Claus Brenner

Variable-scale representation of road networks on small mobile devices — Qingquan Li

Constrained set-up of the tGAP structure for progressive vector data transfer — Jan-Henrik Haunert, Arta Dilo, Peter van Oosterom

A quantitative scale-setting approach for building multi-scale spatial databases — Changxiu Cheng, Feng Lu, Jun Cai

A dynamic data model for mobile GIS — Wenzhong Shi, Kawai Kwan, Geoffrey Shea, Jiannong Cao

Interpolating datasets with trends: A modified median polish approach — Joao Felipe Costa

Analyses of self-potential anomalies by conventional and extended Euler deconvolution techniques — B.N.P. Agarwal, Shalivahan Srivastava

Efficient software–hardware 3D heat equation solver with applications on the non-destructive evaluation of minefields — F. Pardo, P. López, D. Cabello, M. Balsi

INV-WATFLX, a code for simultaneous estimation of soil properties and planar vector water flux from fully or partly functioning needles of a pentanneedle heat-pulse probe — Changbing Yang, Scott B. Jones

Wavelet-based detection of clods on a soil surface — E. Vannier, V. Ciarletti, F. Darboux

Using artificial neural networks to invert 2D DC resistivity imaging data for high resistivity contrast regions: A MATLAB application — Ahmad Neyamadpour, Samsudin Taib, W.A.T. Wan Abdullah

Simulation of magmatic and metamorphic fluid production coupled with deformation, fluid flow and heat transport — Heather A. Sheldon

Book Review

Neteler, M., Mitasova, H., 2008. Open Source GIS A GRASS GIS Approach, 3rd ed. Springer, NY, USA, ISBN 978-0-387-35767-6, 406pp., USD 99.00, CDN 128.95, EUR 81.95, Hardbound. — Oliver Sonnentag

C&G Volume 35, Issue 12, December 2009

SimpleGrid toolkit: Enabling geosciences gateways to cyberinfrastructure — Shaowen Wang, Yan Liu, Nancy Wilkins-Diehr, Stuart Martin

WALDIM: A code for the dimensionality analysis of magnetotelluric data using the rotational invariants of the magnetotelluric tensor — A. Martí, P. Queralt, J. Ledo

Coregistration of Mars Orbiter Laser Altimeter (MOLA) topography with high-resolution Mars images — Kelly J. Kolb, Chris H. Okubo

Petrophysical data prediction from seismic attributes using committee fuzzy inference system — Ali Kadkhodaie-Ilkhchi, M. Reza Rezaee, Hossain Rahimpour-Bonab, Ali Chehrizi

Applying SRTM digital elevation model to unravel Quaternary drainage in forested areas of Northeastern Amazonia — Luiz Rogério Mantelli, Dilce de Fátima Rossetti, Paulo Gurgel Albuquerque, Márcio de Morisson Valeriano

Application of a radial basis function artificial neural network to seismic data inversion — Kamel Baddari, Tahar Aïfa, Nouredine Djarfour, Jalal Ferahtia

Software for slip-tendency analysis in 3D: A plug-in for Coulomb — M.C. Neves, L.T. Paiva, J. Luis

Accelerating geoscience and engineering system simulations on graphics hardware — Stuart D.C. Walsh, Martin O. Saar, Peter Bailey, David J. Lilja

A modified reconstruction algorithm for Fresnel volume tomography — Jianzhong Zhang

Response to: "A modified reconstruction algorithm for Fresnel volume tomography" by J. Zhang (Letter to the Editor) — G. Grandjean



Natural Resources Research Volume 18, Number 3 (September 2009)

Evaluation of Procedures for Prediction of Unconventional Gas in the Presence of Geologic Trends — Emil D. Attanasi and Timothy C. Coburn

Potential for Coal-to-Liquids Conversion in the U.S.-Resource Base — Gregory D. Croft and Tad W. Patzek

Potential for Coal-to-Liquids Conversion in the United States—Fischer–Tropsch Synthesis — Tad W. Patzek and Gregory D. Croft

Combustion Kinetics of Athabasca Bitumen from 1D Combustion Tube Experiments — Xiaomeng Yang and Ian D. Gates

Design of Hybrid Steam-In Situ Combustion Bitumen Recovery Processes — Xiaomeng Yang and Ian D. Gates

Statistical Multivariate Analysis in the Assessment of River Water Quality in the Vicinity of KRS Dam, Karnataka, India — Siamak Gholami and S. Srikantaswamy



Treasurer's Report

for more details see the Minutes of the Council Meeting at Stanford
<http://iamg.org/images/File/documents/oldftp/Minutes/Council%20Meetings/CM2009.pdf>

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOSCIENCES

STATEMENTS OF REVENUES COLLECTED, EXPENSES PAID AND CHANGES IN NET ASSETS - MODIFIED CASH BASIS For the Years Ended December 31, 2008 and 2007

	2008	2007
REVENUES		
Membership and subscriptions	\$ 23,189	\$ 25,998
Royalties	103,079	75,250
Total Revenues	126,268	101,248
EXPENSES		
Member and publication	49,325	38,306
Grants and awards	16,766	29,225
Conferences, meetings, and travel - net	39,779	31,547
Website and computer	7,641	2,483
Legal and accounting	3,785	32,574
Contracted services	14,500	9,000
Donations	10,000	-
Other expense	2,515	2,232
Total Expenses	144,311	145,367
Income [loss] from activities	[18,043]	[44,119]
OTHER INCOME [EXPENSE]		
Investment return	[175,685]	36,519
Other income	2,670	1,477
	[173,015]	37,996
CHANGES IN NET ASSETS	[191,058]	[6,123]
NET ASSETS, beginning	863,523	869,646
NET ASSETS, ending	\$ 672,465	\$ 863,523

Budget August to December, 2009

Income

Usbank Checking Account-cash available	68,360.00
Remaining MatGeo (expected by the end	3,054.00
Chase bank checking account - cash	10,500.00
Franklin Templeton Income Fund (general	22,000
Total expenses	103,914.00

Expenses

Awards:

Vestelius Medal - travel	3,000.00
Matheron Lecturer - travel	3,000.00
Student Research and travel Grants	6,000.00
Student Chapters	8,000.00

Conference Support:

IAMG Annual Conference-Seed Money	5,000.00
ISI - Durban, South Africa	4,000.00
	5,000.00

Distinguished Lecturer

Support to other Organizations:

Contract Labor (E&M operating expense)	6,500.00
Contract Labor (E&M Fees)	7,500.00
Website Redesigned	1,500.00
Inter Spot	2,200.00
Accounting Services	4,000.00
Broker fees & Bank charges	3,500.00
Credit Cards fees	2,000.00
AGU-booth	2,000.00
Travel, Officers & Members	27,000.00
Archivist	7,000.00
Miscellaneous	6,714.00
Total expenses	103,914.00
Net Income (-) Deficit	0.00

Budget - 2010

INCOME

Membership dues	7,000.00
Journal subscriptions	22,000.00
Donations	1
Royalties:	
Mathematical Geosciences	19,000.00
Computers & Geosciences	68,000.00
Natural Resources Research	1,800.00
Monographs	500.00
CD orders:	
Computers & Geosciences Silver CD	300
Money Market Accounts:	
Franklin Templeton Income Fund (gral funds)	24,000
Total Income	142,601.00
Expenses	
Publishers	25,000.00
Awards:	10,000.00
Krumbein Medal	
Griffiths Teaching Award	
Matheron Lecturer	
Student Research and Travel Grants	6,000.00
Student Chapter Support	8,000.00
IAMG Conference Support:	
Annual Conference-Seed Money (Austria)	5,000.00
Distinguished Lecturer	5,000.00
Contract Labor (E&M operating expense)	7,000.00
Contract Labor (E&M Fees)	15,000.00
Inter Spot	2,500.00
Accounting Services	5,000.00
Broker fees & Bank charges	3,500.00
Credit Cards fees	2,000.00
AGU-booth	2,000.00
Travel, Officers & Members	30,000.00
Archivist	7,000.00
Miscellaneous	9,601.00
Total expenses	142,601.00
NET Income (-) Deficit	0.00

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOSCIENCES
Treasurer's Review Report 2009

Assets:

US Bank Bancorp Investments:

General funds	\$ 632,470.90	(June 30, 2009)
Chayes funds	\$ 69,933.07	(June 30, 2009)
US Bank checking account	\$ 76,107.64	(June 30, 2009)
Chase (Rochester checking account)	\$ 7,277.63	(June 30, 2009)
TOTAL	\$ 785,789.24	(June 30, 2009)

Five year net assets history:

December 31, 2004	\$736,258
December 31, 2005	\$779,722
December 31, 2006	\$869,646
December 31, 2007	\$863,523
December 31, 2008	\$672,465

Royalties from non-member (institutional) subscriptions to the journals:

Year	C&G	MG	NRR	Total
2004	\$60,187	\$19,670	\$0	\$ 79,857
2005	\$60,750	\$17,213	\$0	\$ 77,963
2006	\$62,192	\$12,639	\$2,156	\$ 76,987
2007	\$74,024	\$27,858	\$1,387	\$103,269
2008	\$68,360	\$16,225	\$1,822	\$ 86,407

Membership and member subscriptions to the journals:

Year	Members	C&G*	MG	NRR
2004	456	165	259	50
2005	512	158	240	46
2006	518	140	215	46
2007	575	119	171	37
2008	630	111	167	35

*regular, student, and electronic combined



Upcoming Meetings

IQ Earth Forum QUANTITATIVE SUBSURFACE INTEGRATION, Charleston, SC, USA, **25–28 Jan. 2010**. Contact: Cassidy Grusi, cgrusi@seg.org, URL: <http://www.seg.org/iqearth>

International Symposium on MATHEMATICAL METHODS APPLIED TO THE SCIENCES. San Jose, Costa Rica, **16 - 19 February 2010**. Website: <http://www.cimpa.ucr.ac.cr/simmac.html>

Short Course on GEOSTATISTICAL ANALYSIS OF ENVIRONMENTAL DATA, University of Florida, Gainesville, **8-12 March 2010**. <http://conference.ifas.ufl.edu/soils/geostats/index.html>

20th Annual AEHS Meeting & International Conference on Soils, Sediments, Water and Energy. The Association for Environmental Health and Sciences (AEHS). San Diego, CA, USA, **15 - 18 March 2010**. Phone 413-549-5170, fax: 413-549-0579, <http://www.aehs.com/conferences/westcoast/>

6th IMA MODELLING PERMEABLE ROCKS Conference, University of Edinburgh, United Kingdom, **29 Mar-01 Apr 2010**. Institute of Mathematics and its Applications. Pamela Bye, Phone: +44 1702 354020 Email: pam.bye@ima.org.uk http://www.ima.org.uk/Conferences/modelling_permeable_rocks.html

European Association of Geoscientists and Engineers (EAGE), Saint Petersburg 2010, Saint Petersburg, Russia, **5–8 April 2010**. Contact: spb2010@eage.org, URL: <http://www.eage.org/events/index.php?evp=2812>

AAPG Annual Convention and Exhibition, New Orleans, LA, USA. **11-14 April 2010**. Email: convene@aapg.org, <http://www.aapg.org/neworleans/>
INTERPRAEVENT 2010 International Symposium in Pacific Rim. Taipei, Taiwan, **26-30 April 2010**. Natural Disasters Mitigation Including Floods, Storms, Debris flows, Mass movements and Earthquakes etc. <http://interpaevent2010.nchu.edu.tw/>

Link Analysis in ADVERSARIAL DATA MINING, Columbus, Ohio, USA, **1 May 2010**. Workshops & Seminars, <http://date.cecsresearch.org/workshop.htm>

GEOCANADA Convention, BMO Centre & ERCB Core Research Centre, Calgary, Alberta, Canada, **10-14 May 2010**. CSPG, CSEG, CWLS, GAC, MAC, IAH-CNC, CFES, CCPG. Shauna Carson, 600, 640 8th Ave SW, Phone: 403-264-5610, Fax: 403-264-5898, Email: scarson@geoconvention.org, Web: <http://www.GeoCanada2010.ca>

RESERVOIR SIMULATION–Beyond Tomorrow, Phuket, Thailand, **10-14 May 2010**. <http://www.spe.org/events/10fsap/>

GEOINFORMATICS 2010 Kiev, IXth International Conference “Geoinformatics: theoretical and applied aspects”, Kiev, Ukraine, **11 - 14 May 2010**. <http://www.eage.org/events/index.php?evp=3061>

First Congress of the Latinoamerican Geostatistical Association (ICALG'2010), Pinar del Río, Cuba, **1-4 June, 2010**. web side <http://www.algunida.com>

GOLDSCHMIDT2010, Knoxville Convention Center, Knoxville, TN, USA, **13-18 June 2010**. Geochemical Society, European Association for Geochemistry, Mineralogical Society of America, Geochemical Society of Japan. Email: helpdesk@goldschmidt2010.org, Web: <http://www.goldschmidt2010.org>

European Association of Geoscientists and Engineers (EAGE), Barcelona, Spain, **14-17 June 2010**. <http://www.eage.org>, eage@eage.org

10th Anniversary International Multidisciplinary Scientific GeoConference (SGEM 2010), Flamingo Grand Congress Centre of Albena Spa & Resort Complex, Bulgaria, **20-25 June 2010**. E-mail: sgem@sgem.org; <http://www.sgem.org/>

JOINT STATISTICAL MEETINGS, American Statistical Association, Vancouver, British Columbia, Canada, **31 July - 5 August 2010**. Phone (888) 231-3473, <http://www.amstat.org/meetings/jsm/2010/index.cfm>

IAMG 2010, Eötvös Lóránd University, Budapest, Hungary, **29 August - 2 September 2010**. <http://www.iamg2010-budapest.hu/>

The 11th Congress of the International Association for Engineering Geology and the Environment. (IAEG2010), SkyCity Convention Centre, Auckland, New Zealand, **5-10 Sep 2010**. IAEG. Phone: +64 9 360 1240, Fax: +64 9 360 1242, Email: iaeg2010@tcc.co.nz, Web: <http://www.iaeg2010.com>

SPE Annual Technical Conference and Exhibition, Florence, Italy, **19 - 22 Sep 2010**.

SEG 2010 Conference, Keystone, Colorado, **2-5 Oct 2010**. Society of Economic Geologists, 7811 Shaffer Parkway, Littleton, CO 80127-3732, Phone: 720.981.7882, ext. 210, FAX: 720.981.7874, Email: seg@segweb.org, www.seg2010.org

SEG International Exposition and 80th Annual Meeting, Denver, Colorado, U.S.A., **17–22 October 2010**. Contact: SEG Meetings Department meetings@seg.org

Geological Society of America (GSA), Denver, CO, USA, **31 October - 3 November 2010**. www.geosociety.org/meetings/2010/

AAPG, Annual Convention & Exhibition, Houston, USA, **10 - 13 April 2011**.

2011 JOINT STATISTICAL MEETINGS, Miami Beach, Florida, USA, **30 July - 04 August 2011**. ASA Meetings, Phone: (888) 231-3473, Fax: 703-684-8069, Email: meetings@amstat.org



Budapest in 2010

Budapest - the “Pearl of the Danube” - is a stunningly beautiful place. Geography, history and human creativity have all contributed to create a city that charms, amazes and fascinates. Budapest is full of diversity, and so is its history. The conference is planned to be held in the Congress Center of the Eötvös Lóránd University (ELTE) which has a more than 370 years old tradition.

The theme of the conference embraces the challenges and uncertainties of the supply of sustainable energy and natural resources. This question is being debated in many international organizations and is one of the most popular topics for many scientific or political forecasts. We believe that in this way IAMG can make an important contribution to the measuring, modeling and assessment of conventional and non-conventional subsurface energy and natural resources.



Janos Geiger,
Chair of local organising committee
University of Szeged, Hungary

For all information about IAMG2010 see the Conference Website: <http://www.iamg2010-budapest.hu/>

Important dates and deadlines

Abstract submission	15 March 2010
Author notification	15 April 2010
Early registration	1 June 2010
Regular registration	between 1 June – 15 August 2010
Late registration	after 15 August 2010
Cancellation deadline	25 July 2010



View of the conference venue on the banks of the Danube



INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOSCIENCES YEAR 2010 MEMBERSHIP APPLICATION

Name _____ ☐ Dr. ☐ Prof. ☐ Mr. ☐ Ms.
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☐ Check this box to exclude your name from the IAMG web site electronic directory.

IAMG DUES (for membership benefits, see the IAMG web page at www.iamg.org)

<input type="checkbox"/> Ordinary member – 1 year	US\$ 12.00
<input type="checkbox"/> Ordinary member – 4 years	US\$ 48.00
<input type="checkbox"/> Ordinary member – Lifetime	US\$ 144.00
<input type="checkbox"/> Student member (proof of enrollment required)	US\$ 6.00
<input type="checkbox"/> Institutional member (includes library subscriptions to all 3 journals, etc)	US\$ 3,500.00

OPTIONAL: Discounted rates on our journals

<input type="checkbox"/> Mathematical Geosciences (print and electronic versions), regular	US\$ 45.00
<input type="checkbox"/> Mathematical Geosciences (print and electronic versions), student (proof of enrollment required)	US\$ 22.50
<input type="checkbox"/> Computers & Geosciences, regular	US\$ 96.00
<input type="checkbox"/> Computers & Geosciences, student (proof of enrollment required)	US\$ 48.00
<input type="checkbox"/> Computers & Geosciences, electronic subscription, regular or student	US\$ 47.00
<input type="checkbox"/> Natural Resources Research	US\$ 55.00

OPTIONAL: IAMG Monograph Series

<input type="checkbox"/> #5: "Computers in Geology: 25 Years of Progress" edited by J.C. Davis and U.C. Herzfeld	US\$ 127.50
<input type="checkbox"/> #6: "Modern Spatiotemporal Geostatistics" by George Christakos	US\$ 82.50
<input type="checkbox"/> #7: "Geostatistical Analysis of Compositional Data" by V. Pawłowsky-Glahn and R.A. Olea	US\$ 82.50
<input type="checkbox"/> #8: "Statistical Methods for Estimating Petroleum Resources" by P. J. Lee	US\$ 93.75

OPTIONAL: CD's

<input type="checkbox"/> Computers & Geosciences Silver CD: 25 years of computer code	US\$ 25.00
<input type="checkbox"/> Proceedings IAMG'2001 in Cancun	US\$ 10.00
<input type="checkbox"/> Proceedings IAMG'2002 in Berlin	US\$ 10.00
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学信息与新理论、新技术和新方法分会

China Geology Society Annual Conference

China Geology Society had its 2009 Conference on "Geology Serves on Societal and Economic Development" in Beijing October 23-25, 2009. There were 1100 participants from China and presentations included keynote lectures on the first day, followed by two days of 14 parallel sessions. The sessions covered mineral energy resources, earth dynamics, environmental geology, geo-hazards, geological engineering, geoinformatics and geological education. Mineral resources were one of the main themes of the conference. Qiuming Cheng was invited and delivered a keynote lecture on the first day: "Singularity Theory and Methods for Prediction of Mineral Resources and Hazards Events". During his presentation he introduced the new name of IAMG and new progress of MG. The presentation was well received. There was a session on "New theories, methods, and technology" by the China Mathematical Geology and Geoinformatics during the conference. It attracted about 50 people from China. There were several papers presented at the conference. Professor Xia Qingling from CUG presented a paper co-authored with Professor Zhao Pengda on "Progress of Chinese MG", Qiuming Cheng presented a paper on positive feedback cascade processes and singularity, and Professor Wu Chonglong from CUG presented Considerations of Database and 3D GIS. Four student papers presented at the session were selected as best student papers, Professor Zhao Ping and Chen Jianping chaired the session. - Chen Jianping

