



November 14, 2008

IUGS Secretariat  
Geological Survey of Norway  
N-7491 Trondheim  
NORWAY

Dear Sir or Madam:

Please find enclosed the International Association for Mathematical Geosciences Annual Report to IUGS for 2008. Notice that as of August 8, 2008, our official name has been changed from “International Association for Mathematical Geology” to “International Association for Mathematical Geosciences”.

A highlight of our 2008 activities was the organization of our Annual Meeting held on August 6<sup>th</sup> – 14<sup>th</sup>, 2008, in conjunction with the 33<sup>rd</sup> International Geological Congress in Oslo, Norway. The IAMG is now planning its 2009 Annual Meeting, which will be held at Stanford University in California, USA, on August 23<sup>rd</sup> – 28<sup>th</sup>, 2009.

We are requesting a grant of \$5,000 from the IUGS to support travel expenses of scientists to our 2009 Annual IAMG meeting. These funds would be used to assist scientists from developing countries and Eastern Europe to travel to IAMG 2009

I look forward to hearing from you and hope you will find our budget request worthy of your support.

Sincerely,

Daniel Tetzlaff  
Secretary General, IAMG

cc.: IAMG Council

# **International Union of Geological Sciences**

## **ANNUAL REPORT OF AFFILIATED ORGANIZATION:**

### **International Association for Mathematical Geosciences**

#### **2008**

The IAMG (International Association for Mathematical Geosciences) is a non-profit organization established August 22, 1968, during the 23<sup>rd</sup> International Congress in Prague. The mission of the IAMG is to promote, worldwide, the advancement of mathematics, statistics and informatics in the Geosciences. We maintain a website ([www.iamg.org](http://www.iamg.org)) and, twice annually, publish the IAMG Newsletter that also is on our website.

Although we are a relatively small organization with 630 members as of the end of October 2008, we publish three well-known international scientific journals: *Computers & Geosciences* with Elsevier as publisher, and *Mathematical Geosciences* and *Natural Resources Research* with Springer.

In August 2008, IAMG governance was taken over by a new Executive and Council. The new IAMG President is Dr. Vera Pawlowsky-Glahn, and the new Vice President is Dr. Qiuming Cheng (Dr. Cheng is currently Acting President due the President's temporary absence for health reasons).

The IAMG organizes an annual conference. This year's conference was held in Oslo, Norway, August 6<sup>th</sup> – 14<sup>th</sup>, 2008, in conjunction with the 33<sup>rd</sup> International Geological Congress (IGC). The IAMG contributed greatly to the program in all areas related to applications of mathematics in the geosciences. One of the topical symposia at the 33<sup>rd</sup> IGC was "Mathematical Geology" (Richard Sinding-Larsen and Frits Agterberg, coordinators). We also co-sponsored a session on "General Contributions to Geoscience Information" (Ian Jackson, John Broome, Udo Strauss, organizers). The proceedings of these sessions are part of the general proceedings of the Congress and have been published as a CD available from the Congress organizers (refer to [www.33igc.org](http://www.33igc.org) for more information). In addition to these sessions, during the 33<sup>rd</sup> IGC in Oslo, special lectures have been held by our next William Krumbein Medalist, (Qiuming Cheng) and the Georges Matheron Lecturer (Adrian Badeley).

Also during 2008, we were involved in the following events, among others:

- In February, then IAMG President Frits Agterberg and Treasurer Gina Ross participated in the Global Launch Event of the International Year of Planet Earth (IYPE) held in Paris. Several IAMG members are actively involved with IYPE.
- We co-sponsored the 3<sup>rd</sup> Compositional Data Analysis Workshop (CoDaWork'08) held in Girona, Spain, on May 27<sup>th</sup> through 30<sup>th</sup>.
- In April we accepted the invitation to become the 15<sup>th</sup> International Partner of the Year of Planet Earth.

In the past few years we have significantly expanded our Student Affairs program. In 2007, six student mathematical geoscience research grants of US \$2,000 each were

awarded as well as travel grants to students presenting papers or posters at IAMG2007. Additionally, we support five student chapters at universities in Canada, China, Germany, and the USA. We actively continued to pursue expansion of the student programs during 2008.

We maintain a system of awards and honors. During the past year, the following individuals have been distinguished with IAMG awards:

- Qiuming Cheng as the Krumbein Medal winner
- Vera Pavlovsky Glahn as the Griffiths Teaching Award Winner
- Adrian Baddeley as the 2008 Georges Matheron Lecturer
- Roussos Dimitrakopoulos as the 2009 IAMG Distinguished Lecturer.
- Ben Marchant and Murray Lark and Burc Arpat and Jef Caers as co-winners of the 2007 Mathematical Geosciences Best Paper Award.
- James Brown and Gerard Heuvelink as the winners of the 2007 Computers and Geosciences Best Paper Award
- Richard Reyment received the second IAMG Honorary Membership.

The IAMG is planning the following major meetings for the next four years:

- 2009: Stanford University, California, USA, IAMG Annual Meeting (Jef Caers, Conference Chair).
- 2010: Budapest, Hungary, IAMG Annual Meeting (Janos Geiger and and Jozsef Kovacs, chief organizers).
- 2011: Salzburg, Austria, IAMG Annual Meeting (Robert Marschallinger, chief organizer).
- 2012: Durban, South Africa, IAMG-sponsored Invited Paper Meeting during the 57<sup>th</sup> Session of the International Statistical Institute (Eric Grunsky, Organizer).

The conference theme for the 2009 Annual Meeting at Stanford is “Computational Methods for the Earth, Energy, and Environmental Sciences”. The proposed keynote speakers and the proposed subjects of their addresses include:

- Prof. Andre Journel, on recent advances in geostatistics
- Prof. Burton Richter, on computational challenges in the earth, energy, and environmental sciences
- Prof. Jerry Harris (Nobel Prize in Physics 1976), on the future of nuclear energy

Additionally, the IAMG Chayes Prize recipient, Vistelius Prize recipient, and Matheron Lecturer will deliver individual presentations. The scientific program for this conference is in active preparation.

Our emphasis on increasing membership and fostering new applications and collaborations will continue during the coming year. This effort has started to show results: over the past year, membership has increased, mainly because of a significant membership increase in China and a large number of new student members. There are currently about 200 IAMG student members including those in our six student chapters. Thus, student members constitute almost one third of our total membership. Last June, the Freiberg student chapter, immediately after their inauguration, organized a successful workshop followed by a short course given by Don Myers, our 2008 Distinguished Lecturer.

Scientific publication remains the primary function of IAMG and continues to account for much of our income. In addition to our three main journals mentioned above, we published two special issues of *Computers and Geosciences* in 2008, and three more are in preparation. We also publish a monograph series with Oxford University Press, including a new addition (the ninth in the series, recently submitted to the publisher). We also maintain a website ([www.iamg.org](http://www.iamg.org)) which includes details of our organization, events, membership, and publications, and we publish a quarterly newsletter to keep members and others informed about our activities.