

INTERNATIONAL ASSOCIATION FOR MATHEMATICAL GEOSCIENCES
Annual Report to the International Union of Geological Sciences for 2013

1. Overall objectives

The mission of the International Association for Mathematical Geosciences (IAMG) is to promote, worldwide, the advancement of mathematics, statistics and informatics in the geosciences. The main duty of the IAMG is to further method development and disseminate results of new research in its fields of interest with outreach within the geoscience, mathematics and geoinformatics communities. This includes sponsoring students and young scientists by means of research and travel grants.

2. Relate goals to overall IUGS scientific objectives

By means of its three scientific journals, the annual IAMG meeting and many other projects including travel by its Distinguished Lecturers, the IAMG aims to further the quantification of three-dimensional geoscientific mapping, numerical time scale development and geological process modelling. Its contributions to predictive geology are concerned with natural disasters as well as the delineation of mineral, hydrocarbon and water deposits in the crust of the Earth. The mathematical and geometrical estimates are accompanied by estimates of their uncertainty.

3. Structure and organization

The IAMG is governed by a Council consisting of its Executive Committee (President, Executive Vice President, Secretary General and Treasurer), two Vice Presidents, Past President, four Ordinary Council Members, special IGC Councilor, three Editors-in-Chief, and Newsletter/Website Editor. It has seven standing committees for Awards, Curriculum Quality, Lectures, Meetings, Outreach, Publications and Student Affairs, respectively, and various commissions for shorter term concerns.

4. Interaction with other International organizations and projects

The IAMG is Scientific International Partner of the Earth Science Matters Foundation (ESM). It maintains a joint booth with ESM and the International Lithosphere Program that in 2013 was exhibited at CAG24 in Addis Ababa, Ethiopia, EGU in Vienna, Austria, IAMG2013 in Madrid, Spain, and ICSDP in Potsdam, Germany. Additionally, the IAMG has a booth and co-organizes sessions at the AGU Fall Meeting in San Francisco, U.S.A. During 2013, IAMG was a co-sponsor of both the International Year of Statistics and the International Year of Mathematics of Planet Earth. The IAMG Executive Vice President is Communications Officer for the IUGS Initiative on Forensic Geosciences (IUGS-IFG).

5. Chief products

The IAMG publishes three scientific journals in partnership with Elsevier and Springer. Annually it publishes two newsletters and the proceedings of its annual meeting. It sponsors the publication of books including those in the IAMG Monograph Series in partnership with Oxford. Student and postdoctoral research is financially supported by

research and travel grants including the new Mathematical Geosciences, Computers & Geosciences and Natural Resources Research scholarships first granted to nine recipients in 2013.

6. Chief accomplishments in 2013 and plans for 2014

In 2013, 360 articles were published in IAMG journals: 52 in Mathematical Geosciences; 286 Computers & Geosciences; and 22 in Natural Resources Research. Additionally, these journals published various short notes, book reviews and other information such as laudations for IAMG Award winners. The 15th Annual IAMG Conference in Madrid Spain, 2-6 September 2013, had about 370 participants from over 40 countries; there were 4 plenary sessions, 27 technical sessions and 7 poster sessions. The IAMG2013 Proceedings were published in “Mathematics of Planet Earth” with 184 articles (as a book in the Springer Lecture Notes in Earth System Sciences). The IAMG co-sponsored a Compositional Data Analysis Workshop in Vorau, Austria, 3-7 June, 2013. Student and postdoctorate research was financially supported by \$ 33,500 US in research and travel grants in 2013. The IAMG had also co-sponsored the Short Course: “Spatial Statistical Tools in Data Processing and Analysis” in Bangalore, India, November 26-30, 2012. The IAMG Executive Vice President was involved in IUGS-IFG knowledge transfer events in Brasilia, Brazil, October 2-4, 2013, and Moscow, Russia, October 22, 2013.

Plans for 2014 include holding the 16th Annual IAMG Conference at Jawaharlal Nehru University, Delhi, India, 17-20 October, 2014. The IAMG is co-sponsoring the GEOMAP meeting in Olomouc, Czech Republic, 17-20 June, 2014; and organizing a Statistical Analysis of Compositional Data session at the Joint Statistical Meetings, Boston, U.S.A., 2-7 August, 2014.

7. Specify how any IUGS Allocation for 2013 was used

No IUGS Allocation for 2013 was requested.

8. Budget request with justification for 2014 (only applicable to low income affiliates)

No IUGS Allocation for 2014 is requested.

9. Does your website have a link to IUGS?

YES.