

A Report on the 14th General Assembly of the International Mathematical Union

Donald G. Saari
Chair, US Delegation

This is a report concerning the 14th General Assembly of the International Mathematical Union (IMU) that was held on August 17, 18, 2002, in Shanghai, China. As a brief outline, this report contains

1. a listing of the American delegation and how they were selected,
2. a brief outline of the activities of the IMU over the past four years; this includes two new major international prizes in mathematics
3. an outline of the legislation including a dues increase and the selection of the location for the 2006 ICM and General Assembly,
4. a description of the major resolutions which were passed,
5. and the newly elected officers and members of the Executive Council.

1. American Delegation.

The American delegation consisted of

Donald Saari, Chair

Dept. of Math, University of California at Irvine, Irvine, CA 92697

Salah Baouendi,

Dept. of Math, University of California at San Diego, San Diego, CA

Jennifer Chayes,

Microsoft Co., Seattle, Wash.

David Eisenbud,

Director, MSRI, University of California, Berkeley, Berkeley, CA.

Yum-Tong Siu,

Dept. of Math., Harvard University, Cambridge, Mass.

Delegate selection. The US National Committee of Mathematics (US NCM) has the responsibility to select the US delegation for the General Assembly (GA) and to propose resolutions. The selection process of the delegation started in the summer of 2001 when the Chair of the US National Committee of Mathematics (US NCM) contacted the President and Executive Director of the three major American mathematics societies and those of the major statistical society to ask for their nominations of delegates and their thoughts about the appropriate changes which would be needed in the IMU. This was followed by a request for the same information from all members of the Combined Board of Mathematical Sciences. Consequently, the elected and professional officers of all organizations involved in mathematics were asked for their thoughts. (This is the first time the selection of a delegation was made after consulting with the major mathematical organizations.) All of this information was presented to the US NCM and discussed at our meetings.

After nominations for delegates were made both at the fall 2001 NCM meeting and then through e-mail correspondence, a secret ballot was conducted via e-mail. The top choices were further discussed among the full committee via e-mail correspondence to ensure that the selected group would reflect a desired balance and they would be effective in meeting our goals. At that stage, the delegation was appointed. Potential delegates were contacted starting in January, 2002.

US delegates on GA committees. Much of the General Assembly business was carried out by four committees; the US was represented on each of them. Chayes served on the Finance and Dues committee, Eisenbud on the nominating committee, Saari on the resolution committee, and Siu on the teller and credentials committee.

2. Activities of the IMU. In addition to its major activity, which is the planning and running of the International Congress of Mathematics, the following provides a brief outline of other IMU activities over the last four years. Still other activities, such as their work with developing countries, along with more details about the listed ones, can be found in Bulletin No. 48 of the IMU, June 2002. This is available from the IMU secretary, P. Griffiths, Institute for Advanced Studies, Einstein Drive, Princeton, NJ. 08540.

- The year 2000 was proclaimed the UNESCO/ICSU World Mathematical Year. During this year, the IMU supported at least one multinational conference on each continent where the topics covered several subject areas within mathematics.
- Since 1999, the IMU sponsored 20 international conferences, and offered its imprimatur, but no financial support, for eight other international conferences. It is interesting to note that these conferences include a wide selection of topics such as the teaching of mathematics, mathematical physics, computational mathematics, and the history of mathematics in addition to more traditional mathematical themes.
- Other general activities of the IMU are best indicated by the names of commissions; e.g., the International Committee of Mathematical Instructions, the International Commission on the History of Mathematics, and the Committee on Electronic Information and Communication.
- The IMU published the book *Mathematics: Frontiers and Perspectives* to provide the views of outstanding mathematicians on the state of mathematics at the end of the millennium. The hardcover version quickly sold out, and it was reprinted in a paperback version. It now is being translated.
- Two new international prizes in mathematics were created. The *Abel Prize* is intended to reach the significance of the Nobel Prize. The *Gauss Prize* will be awarded every four years for outstanding mathematical contributions in the applications of mathematics. As for the Abel Prize, nominations will be solicited

this coming year. A way to show international support for this award would be for large numbers of mathematicians to make nominations.

- Six issues of the IMU Bulletin have come out. The 11th Edition of the World directory of Mathematicians was published in 1998.
- A Committee on Electronic Information and Communication (CEIC) was established to address the coordination of worldwide efforts to establish web-based servers for mathematical papers, preprints, journals, and books. This includes issues of uniformizing metadata, search engines for mathematical material, etc.

3. IMU Legislation

Two relevant items of legislation involved the passage of a 10% dues increase and the selection of Spain for the site of the 2006 International Congress of Mathematicians.

Selection of the 2006 site. There were three bids for the 2006 ICM; they came from India, Italy, and Spain. For a variety of reasons which include an attempt to balance the global location of these meetings, to keep down the average costs for delegates over the various congresses, and a sense about the current level of preparation and financial support for such a meeting, Spain was recommended. During the GA, Italy and India expressed their support for Spain. After a discussion, Spain was selected by acclamation.

Dues increase. A 10% dues increase was proposed.. The increase appears to be justified because the IMU has been active over the past four years with the various activities described above, with its need to assume more expenses of its subgroups in history and education, and because of the growing expenses the IMU will incur with the leadership role they have assumed in an international and cross disciplinary development of electronic information and communication. The increase appears to be reasonable because it is the first dues increase in eight years. With compound interest, this 10% increase comes to about a 1% increase per year compounded annually; an increase which does not match inflation. After considerable discussion, the motion for a 10% increase passed with one negative vote.

4. Major resolutions. What follows is a listing of the major resolutions, along with some background information.

Resolution. *The General Assembly recommends continuing the tradition of the 1994, 1998, 2002 ICMs by holding an Emmy Noether lecture at the next two ICMs (2006 and 2010) with the selection of the speakers to be made by an IMU appointed committee.*

Background: This is the first of the three resolutions proposed by the US NCM and introduced by the US delegation. For several meetings of the GA, the US delegation has consistently but unsuccessfully proposed resolutions to ensure the selection of more women and minorities as major ICM speakers. At this GA, the US NCM and the US delegation assumed a more pragmatic stance by asking for a lecture honoring one of the most important women mathematicians. (In

preparing this resolution, the US NCM consulted with the American and European societies for women mathematicians; the AWM and EWM.) The resolutions passed by acclamation.

Resolution. *The General Assembly of the IMU endorses the “Best Practices” document of the Committee on Electronic Information and Communication, also endorsed by the IMU Executive Committee at its April 13, 2002, meeting. In particular the Assembly endorses the provisions designed to ensure access by mathematicians of the developing world to current mathematical literature: the posting of the articles on personal homepages and servers and the practice now beginning with several publishers of making journal articles in electronic form freely accessible five years after they have been published, or even sooner.*

Background: This is the second resolution proposed by the US NCM and introduced by the US delegation. This resolution reflects a continuing interest of the US to have research material made available on the web and elsewhere for mathematicians from developing countries. Such a program will enhance the development of mathematics in these countries, as well as internationally. We also recognize that such a program will assist mathematicians from rural and underprivileged regions within the US. Concerns were raised by the French delegation about the five year period. After this was discussed, the resolution passed by acclamation.

Resolution. *Notwithstanding these times of heightened tension and security concerns, we urge a continuation of scientific exchange and publication. The IMU opposes efforts either by governments, organizations, or individuals to restrict contacts and interactions in the world mathematical community. Specifically we oppose holding individual mathematicians liable for the actions of their governments. The IMU endorses the principles expressed in the International Council for Science (ICSU) ARTICLE 5 of STATUTES.*

Background: This is the third and last resolution proposed by the US NCM and introduced by the US delegation. This resolution reflects a worry that travel and other restrictions which have been imposed, or suggested that they will be imposed, on the free flow of responsible scientists and mathematicians will have an adverse effect on mathematics both here in the US and abroad. As an illustration, this includes concern about a May, 2002, ad which was placed in an European newspaper urging a boycott, it includes concern about visa problems and other possible restrictions imposed on mathematicians wishing to work with colleagues in the US. During the GA, the American delegation carefully discussed this resolution with delegates from most countries to ensure the wording carried the intended interpretation (as a result, some wording changes were made) and to enlist support. After a lively discussion, the resolution passed with one (unofficial) abstention. Immediately following passage, delegates representing several different countries expressed their thanks to the US delegation for proposing this resolution.

Resolution: *The General Assembly of the IMU expects the Executive Committee to develop a proposed mechanism to involve members from the National Committees for Mathematics, not on the Executive Committee, to assist in the selection of slates. This Proposal should be put forth to the 2006 General Assembly.*

Background: It was felt during the meeting that people beyond those on the Executive Committee should be involved in the selection of slates of names for the next Executive Committee. This resolution was passed.

Resolution. *The General Assembly recommends the guidelines for receiving Colloquia support from the IMU be further developed and made available on the IMU website. These scarce funds should go primarily to supporting mathematicians from developing countries and high quality international conferences that take place in developing countries.*

Background: The issue here was to make more precise procedures for IMU sponsored conferences. This resolution passed.

5. Election outcomes. The new officers of the IMU elected during the general assembly are:

President: John Ball (UK)

Vice Presidents: Jean-Michel Bismut (France), Masaki Kashiwara (Japan)

Secretary: Phillip Griffiths (USA)

The newly elected Executive Council:

Andrey Bolibruch (Russia)

Martin Grötschel (Germany)

Zhi-Ming Ma (China)

Ragni Piene (Norway) (the first woman ever elected to the Executive Council)

Madabusi Raghunathan (India).