

## Report of the 11th General Assembly of IMU

Kobe, Japan, August 18-19, 1990

### 1. Opening

The President opened the Assembly on August 18 at 10 a.m.

### 2. Address by the President

The address given by the President is given as Appendix 1.

It was decided that countries with at most two years of arrears are allowed to vote.

### 3. Committees

The following committees were appointed:

#### Credentials Committee:

V. Thomée, Chairman  
C. Alsina  
A.O. Kuku  
P.G. Rooney  
Olli Lehto, ex-officio

#### Resolutions Committee:

P.M. Cohn, Chairman  
A.A. Ashour  
A.A. Gonchar  
J.-M. Lemaire  
K. Tenenblatt  
Olli Lehto, ex-officio

#### Tellers:

O. Riemenschneider, Chairman  
P.S. Kenderov  
L.H.Y. Chen

#### Committee for Finance and Dues:

J.P. Bourguignon, Chairman  
S.D. Chatterji  
Ding, Shisun  
R.L. Graham  
G. Riera  
Olli Lehto, ex-officio

Nominating Committee:

Ludwig D. Faddeev, Chairman ex-officio  
 D.G. Costa  
 A. Dvoretzky  
 A. Figà-Talamanca  
 G.I. Gaudry  
 L. Keen  
 M. Nagata  
 Cz. Olech  
 S. Ramanan  
 Jürgen Moser, ex-officio

4. Members

4.1. Saudi Arabia

Saudi Arabia will be admitted to the Union in Group I as of January 1, 1991. However, the membership shall not become effective until the composition of its Committee for Mathematics has been made known to the Union.

4.2. Israel

The group of adherence of Israel was raised from II to III. The change will take effect on January 1, 1991.

4.3. Georgia

The General Assembly decided to defer the application of Georgia to become a member of the Union in Group I, by a majority vote.

4.4. Dues arrears

The Secretary informed the Assembly that many countries with sizable dues arrears had been able to settle them. Countries with many years of dues arrears are Pakistan, Romania and Turkey. The Assembly decided, referring to the IMU Statutes, Article 21:

4.4.1. Turkey

Since Turkey had paid many of its dues arrears, Turkey can keep its membership with voting rights and the remaining past arrears will be excused.

4.4.2. Romania

Romania had repeatedly informed the Union of its wish to stay in IMU and of its intention to settle its dues arrears. It was decided that Romania can stay in IMU but in Group I, without voting rights. Romania shall become a voting member again when the dues of the ongoing period and three previous ones of Group I have been paid.

#### 4.4.3. Pakistan

Pakistan had not paid any dues since 1982 and before that Pakistan had also sizable dues arrears. Moreover, Pakistan had not contacted the Union concerning its dues arrears. Therefore it was decided that Pakistan's membership in the Union will cease.

The first session was closed at 12 o'clock noon.

The second session started at 10.15 on August 19.

#### 5. Activities of the Union

The activities of the Union in the years 1986–1989 had been reviewed in the Special Number Bulletin 31. The reports in the Bulletin covering symposia and conferences supported by IMU, IMU lectures, ICMI activities, CDE activities, ICHM activities and the IMU Bulletin and the World Directory of Mathematicians were approved.

#### 6. Report of the Committee for Finance and Dues

Professor Bourguignon, Chairman of the Committee for Finance and Dues, reported on the work of the Committee. His report is printed as Appendix 3. The financial reports for the years 1986–1989 and the audited accounts for the years 1986–1989 as well as the work of the Executive Committee were accepted by acclamation.

The Committee recommended the acceptance of the budget the Executive Committee had proposed for the years 1991–1994 with one exception: funds assigned to ICMI: 3000 Swiss francs were removed from Schedule A and moved to ICMI Scientific activities. The budget was accepted; it is printed as Appendix 4.

#### 7. Elections

The Nominating Committee had met during the break. The Committee had not received any names from the floor. Since no further names were suggested for any office, the Assembly decided to waive the provision of written ballots and accept the slates by acclamation.

The IMU Executive Committee, elected unanimously, for the years 1991–1994 consists of

President:	J.L. Lions
Vice-Presidents:	J. Coates D. Mumford
Secretary:	J. Palis
Members:	J. Arthur

A. Dold  
 H. Komatsu  
 L. Lovász  
 E. Zehnder

The Past President, Ludwig D. Faddeev, will be a member ex-officio.

The ICMI Executive Committee, elected unanimously, for the years 1991-1994 consists of

President:	M. de Guzmán
Vice-President:	J. Kilpatrick Lee Peng-Yee
Secretary:	M. Niss
Members:	Yu. L. Ershov E. Luna A. Sierpinska

Members ex-officio are J.-P. Kahane, J.L. Lions, Jacob Palis and the IMU representative at ICSU/CTS.

The following Commission for Development and Exchange, elected unanimously, for the years 1991-1994 consists of

Chairman:	M.S. Narasimhan
Members:	P. Bérard C. Camacho A. Grunbaum A.O. Kuku J. Mawhin T. Ochiai P.L. Papini Wu Wen Tsun

Members ex-officio are J.L. Lions and Jacob Palis and the IMU representative at COSTED (ICSU).

Professors Jean Dhombres and H. Edwards were elected as IMU members to the Executive Committee of the joint International Commission on the History of Mathematics for the years 1991-1994.

#### 8. IMU representatives to ICSU bodies

Professor Jacob Palis was elected to represent IMU at ICSU in the years 1991-1994.

Professor J.L. Lions was elected to represent IMU at COSPAR in 1991-1994.

Professor J.H. van Lint was elected to represent IMU at CTS in 1991-1994.

Professor M.S. Narasimhan was elected to represent IMU at COSTED.

The IMU representatives at these organizations should report to the General Assembly of their activities.

#### 9. ICM-1994

The President announced that the Site Committee recommends Zürich as the site for the 1994 International Congress of Mathematicians. The Assembly decided by majority vote that the 1994 Congress be held in Zürich. Professor Chatterji welcomed the mathematical community to Switzerland in 1994.

The next Executive Committee shall formulate the rules for the Site Committee, giving it to the members in 1991.

There was a break from 12 noon till 2 p.m.

#### 10. Resolutions

The Resolutions Committee presented Resolutions 1-9 for approval. Following a discussion the following resolutions were accepted:

##### Resolution 1

The General Assembly resolves that the next meeting of the General Assembly be held at a time and place conveniently linked to the International Congress of Mathematicians in Zürich, Switzerland in 1994.

##### Resolution 2

Whereas the IMU wishes to mark the turn of the century in a manner appropriate to the standard set by David Hilbert in 1900, the General Assembly directs the Executive Committee to set up a committee to report to the adhering bodies by September 1991 how to accomplish this so that in 1994 the Assembly can discuss it and decide how to proceed.

##### Resolution 3

The General Assembly records its satisfaction that more women than ever before have been invited to speak at ICM-90 and expresses the wish that this trend continue in the future.

##### Resolution 4

The General Assembly

- i) expresses its gratitude to UNESCO and ICSU for the help and support that these organizations have provided to various mathematical activities, in particular those carried out in cooperation with the Commission for Development and Exchange (CDE) and International Commission on Mathematical Instruction (ICMI) of the IMU;

- ii) points out, however that the funds currently allocated to the UNESCO research and higher education programme in Mathematics seem quite insufficient to respond to the needs of the International Community, in particular those of developing countries;
- iii) expresses its strong wish that the financial provisions devoted by UNESCO to its above-mentioned mathematical programme be significantly increased;
- iv) requests the President of the IMU to transmit these wishes to the International Council of Scientific Unions (ICSU) and the Director General of UNESCO.

#### Resolution 5

All Adhering Organizations are reminded that they should review their national representation on ICMI and that normally national representatives should not be asked to serve for more than two consecutive four-year terms.

#### Resolution 6

The General Assembly expresses its gratitude to those bodies who contributed to the Special Development Fund in the past four years, which allowed 47 young mathematicians from developing countries to attend the ICM-90. The General Assembly hopes that they will continue their efforts and urges other adhering bodies and Committees for Mathematics to work towards ensuring more contributions to the Special Development Fund.

#### Resolution 7

The General Assembly expresses its gratitude to the Japanese organizers of the 1990 Congress for its hospitable reception and excellent arrangements for this meeting of the General Assembly as well as for their generosity in helping to bring several mathematicians from developing countries to the Congress.

#### Resolution 8

The eleventh General Assembly gives warm thanks to the Executive Committee and to the President of the IMU for their work during the period 1986-90.

#### Resolution 9

The General Assembly gives special thanks to Professor Olli Lehto for his excellent work as Secretary to the IMU over the last eight years ably assisted by Mrs. Tuulikki Mäkeläinen. It also thanks the University of Helsinki and the Finnish Ministry of Education for their generous support of the IMU secretariat over this period.

### 11. Regional conferences

The Assembly expressed the wish that the Executive Committee should find ways to give financial support to regional conferences.

### 12.

The Assembly discussed the problem of recruitment to, and retention on, mathematics degrees courses. The Assembly was informed that a panel discussion on the topic was organized during ICM-90.

### 13.

The Assembly expressed again its concern that IMU should support also applied fields.

The President declared the 11th General Assembly of IMU closed at 4 p.m.

The report of the Credentials Committee is printed as Appendix 2, the list of participants as Appendix 5.

## **Report of the International Congress of Mathematicians 1990**

The International Congress of Mathematicians 1990 was held in the Kyoto International Conference Hall in Kyoto, Japan on August 21–29, 1990. A total of 4107 mathematicians from 79 countries and districts registered and 3955 from 76 countries and districts attended in person together with 470 accompanying members and 92 child members.

The Congress was organized under the auspices of the International Mathematical Union by the Science Council of Japan, the Mathematical Society of Japan, the Japan Society of Mathematical Education, The History of Science Society of Japan, The Institute of Actuaries of Japan, the Japan Society for Software Science and Technology, The Japan Statistical Society and the Operations Research Society of Japan, and was supported by the Ministry of Education, Science and Culture, by Kyoto Prefecture, Kyoto City, Kyoto University and the Information Processing Society of Japan.

The Opening Ceremony took place in the Event Hall of KICH in the morning of Tuesday August 21. The President of the International Mathematical Union, Ludwig D. Faddeev, declared the Congress open and announced the following members of the Program Committee which was responsible for the scientific program of the Congress: Nicolaas H. Kuiper (Chairman), V. I. Arnold, Alain Connes, Ronald L. Graham, Heisuke Hironaka, Masaki Kashiwara, Robert P. Langlands,



Sigeru Mizohata and Daniel G. Quillen. Then, by his proposal Hikosaburo Komatsu, a Vice-President of the Organizing Committee, was elected President of the Congress, and by the proposal of Akio Hattori, the President of the Mathematical Society of Japan, Kiyosi Itô was elected Honorary President. Welcome Addresses were given by Professor Jiro Kondo, the President of the Science Council of Japan, Mr. Kosuke Hori, the Minister of Education, Science and Culture, Mr. Teiichi Aramaki, the Governor of Kyoto Prefecture, Dr. Tomoyuki Tanabe, the Mayor of Kyoto City and Professor Masanori Nishijima, the President of Kyoto University. Then followed the Presentation of Commemorative Stamps by Mr. Tomoyuki Onozawa, the Director General of Posts.

The Chairman of the Fields Medals Committee, Faddeev announced the recipients of the Fields Medals; V. G. Drinfeld, Vaughan F. R. Jones, Shigefumi Mori and Edward Witten. Mr. Hori handed the Medals and the Prizes to the winners. The Chairman of the Rolf Nevanlinna Prize Committee, László Lovász announced A. A. Razborov as the recipient of the Prize. Mr. Hori handed him the Prize. The Fields Medals Committee consisted of Ludwig D. Faddeev (Chairman ex-officio), M. F. Atiyah, J. M. Bismut, E. Bombieri, C. Fefferman, Kenkichi Iwasawa, P. D. Lax, and I. Shafarevich, and the Rolf Nevanlinna Prize Committee László Lovász (Chairman), A. Chorin, M. Rabin and V. Strassen.

In the afternoon of August 21 Addresses on the Works of Prize Winners were given in the Main Hall. M. Jimbo read Y. I. Manin's report on the work of Drinfeld, J. S. Birman described the work of Jones, H. Hironaka the work of Mori, Faddeev explained the work of Witten, quoting Atiyah's report, and Lovász described the work of Razborov. Then Reception was held in the Event Hall.

From the next day August 22 to the last day August 29, except for Sunday 26 and the afternoon of Saturday 25 and 29, one-hour Plenary Addresses were delivered in the Main Hall in the morning, and then 45-minutes Section Lectures in 6 parallel sessions and 10-minutes Short Communications in 8 rooms were given in the afternoon. In total, there were 15 Plenary Addresses and 138 Section Lectures in 18 Sections which were actually delivered. The Organizing Committee invited those speakers according to the decision of the Program Committee. No invited speakers declined for political or economical reasons. In addition, there were five 45-minutes lectures invited by the International Commission on Mathematical Instruction, which were scheduled along with the Section Lectures. The participants gave 620 Short Communications in total and conducted many informal seminars and other meetings. The details of scientific activities will be reported in the Proceedings of the Congress, which will be published by the end of 1991.

The Organizing Committee was able to support only the prize winners and some officials of IMU but the Japan Association for Mathematical Sciences, the Mathematical Society of Japan, the Oriental Life Insurance Cultural Development Center, the Commemorative Association for the Japan World Exposition (1970) and The Kajima Foundation allocated 61,806,695 Yen in total for the support of



269 foreign participants from 50 countries. Most of them came from developing countries or countries in tight currency situations. The number includes 41 invited speakers and 47 IMU Scholars whose travel expenses were supported by the Special Development Fund of IMU.

At the Closing Ceremony in the afternoon of August 29 the President of IMU, Faddeev, announced the new officials of IMU for 1991–94 and the site of ICM-94 as decided by the General Assembly of IMU which met in Kobe on August 18–19. S. D. Chatterji invited mathematicians of the world to the next ICM in Zürich, Switzerland in 1994. Carol S. Wood from U.S.A. and J. F. Voloch from Brazil expressed their thanks to the Organizers of the Congress. Finally the President of the Congress, Komatsu, thanked all people concerned and declared the Congress closed.

Ancient court music and dance accompanied the Opening Ceremony. A Cello Recital was held in the evening of August 23, and Traditional Musical Performances in the afternoon of August 25. Sunday August 26 was a holiday on which several guided tours were arranged. The Closing Ceremony was followed by Banquet with an entertainment of folk music and dance.

Hikosaburo Komatsu, President of ICM-90

## Members

Akademie der Wissenschaften der DDR, the Adhering Organization of the German Democratic Republic, has informed the Union that the German Democratic Republic resigns its membership in IMU as of December 31, 1990.

## Conferences supported by IMU

1991:

*IAMP Congress*, to be held in Leipzig, DDR, on July 30–August 8, 1991.

IMU Contribution: 10000 CHF

IMU representative: L.D. Faddeev

Contact person: Professor John R. Klauder, Department of Mathematics, University of Florida, Gainesville, FL 32611, U.S.A. Fax: 1-904-392-0524, e-mail: [klauder@neptune.phys.ufl.edu](mailto:klauder@neptune.phys.ufl.edu).

*Seventh Symposium on General Topology and its Relations to Modern Analysis and Algebra*, to be held in Prague, Czechoslovakia, on August 19–24, 1991.

IMU contribution: 5000 CHF

IMU representative: L. Lovász

Contact person: Professor Miroslav Fiedler, Academy of Sciences, Institute of Mathematics, Zitna ul. 25, Praha 1, Czechoslovakia 115 67.

*3rd Pan-African Congress of Mathematicians*, to be held in Nairobi, Kenya, on August 13–23, 1991.

IMU contribution: 10 000 CHF

Contact person: Professor A.O. Kuku, Mathematics Department, University of Ibadan, Ibadan, Nigeria; telex: campus 31128 ng.

*International Conference on Algebra in Honour of A.I. Shirshov's 70th Anniversary*, to be held at the Altai University, Barnaul, U.S.S.R., on August 23–27, 1991.

IMU contribution: 5000 CHF

IMU representative: W. Feit

Contact person: Professor Sergei A. Syskin, Institute of Mathematics, Novosibirsk 90, U.S.S.R. 630090. Telex: 133146 tevus su, fax: 7-3832-352653.

The international symposium *Algebraic Groups and Related Number Theory*, to be held in Minsk, U.S.S.R., on May 22–29, 1991.

IMU contribution: 5000 CHF

IMU representative: W. Feit

Contact person: Professor V. Platonov, Academy of Sciences, Byelorussian S.S.R., Institute of Mathematics, ul. Surganova, 11, 220604 Minsk, U.S.S.R.

1994:

*International Congress of Mathematicians*, to be held in Zürich, Switzerland, on August 3–11, 1994.

Contact person: Professor H. Carnal, Universität Bern, Institut für mathematische Statistik, Sidlerstraße 5, CF-3012 Bern, Switzerland.

*The twelfth General Assembly* will be held in Switzerland on July 31–August 2, 1994.

### World Directory of Mathematicians

The 9th edition of the *World Directory of Mathematicians*, compiled and printed by the American Mathematical Society under the supervision of Professor Walter Feit, is now available.

### Special Development Fund

The Executive Committee acknowledges with gratitude the following donations to the Special Development Fund:

Wiskundig Genootschap	1500 CHF
Swedish Mathematical Society	177 CHF