

**Bulletins of the
International
Mathematical Union**



Bulletin of the IMU, No. 28 (1988)

Bulletin of the International Mathematical Union

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IMU

**BULLETIN
OF THE
INTERNATIONAL MATHEMATICAL UNION**

**No. 28
September 1988**

SECRETARIAT

**Department of Mathematics
University of Helsinki
Hallituskatu 15
SF-00100 Helsinki
Finland**

International Mathematical Union

Executive Committee

January 1, 1987–December 31, 1990

President:	Professor Ludwig D. Faddeev
Vice-Presidents:	Professor Walter Feit Professor Lars Hörmander
Secretary:	Professor Olli Lehto
Members:	Professor John Coates Professor Hikosaburo Komatsu Professor László Lovász Professor Jacob Palis Jr. Professor C.S. Seshadri
Past President:	Professor Jürgen Moser

Members of the Union

The following countries were members of IMU as of January 1, 1988:

- I: Cameroon, Chile, Cuba, Egypt, Greece, Hong Kong, Iceland, Iran, Ivory Coast, Democratic Republic of Korea, Republic of Korea, Mexico, New Zealand, Nigeria, Norway, Philippines, Portugal, Singapore, Turkey, Vietnam.
- II: Argentina, Austria, Bulgaria, Denmark, Finland, Ireland, Israel, Pakistan, Romania, South Africa, Spain, Yugoslavia.
- III: Australia, Belgium, Brazil, Czechoslovakia, Democratic Republic of Germany, Hungary, India, Netherlands, Poland, Sweden, Switzerland.
- IV: Canada, Italy.
- V: China, France, Federal Republic of Germany, Japan, United Kingdom, USA, USSR.

Meetings of the Executive Committee

The Executive Committee had its 52nd meeting in Rio de Janeiro, Brazil, on April 15, 1988.

The next meeting of the Committee will be in Paris, France, on April 21-22, 1989.

IMU General Assembly

The 11th General Assembly of IMU will be held in Kobe, Japan, on August 18-20, 1990.

Joint Commission on the History of Mathematics

The International Commission on the History of Mathematics (Division of History of the International Union of the History and Philosophy of Science) voted at its International Congress in Berkeley in 1985 in favor of establishing a Joint Commission with IMU on the History of Mathematics.

The Executive Committee of IMU decided, at its meeting in May 1987, to recommend to its members the establishment of the joint commission. A postal ballot was conducted in the fall of 1987. All votes received in the ballot were in favor and so the Joint International Commission on the History of Mathematics has been functioning since the beginning of 1988.

The Executive Committee of the joint commission is as follows: Joseph W. Dauben, Chairman, S.S. Demidov, Vice Chairman, Kirsti Andersen, Secretary, Christoph J. Scriba, Treasurer, Kurt-R. Bierman, Umberto Bottazzini, Jean Dhombres, Harold Edwards, Ivor Grattan-Guinness, R.C. Gupta and Lam Lay-Yong, members. In addition, the Editor of *Historia Mathematica*, Eberhard Knobloch, is an ex-officio member of the Executive Committee.

Instructions for seeking support for conferences

1. The International Mathematical Union sponsors, or co-sponsors, "colloquia"; it does not sponsor or co-sponsor "institutes". A colloquium is understood to mean a closed meeting (closed in a weak sense) of experts, together with a limited number of other invited participants, convened to discuss the results of recent research. (Expository lectures are not meant to be included.) A colloquium is intended to last about a week.
2. Any colloquium sponsored or co-sponsored by the Union is to be designated "an international colloquium".
3. The co-sponsorship of the Union usually (though not always) implies a financial contribution by the Union of a few thousand Swiss francs. It is understood that such a contribution will be matched by at least an equal contribution from the organizers themselves.
4. The Union's contribution is to be utilized for meeting the travel expenses of the invitees. The living expenses are to be met from other sources.
5. If the Union co-sponsors a colloquium, it has the right to nominate two members to the Organizing Committee of the Colloquium. It does not make any stipulation regarding the rest of the membership of the Organizing Committee. The Union's nominees should have a share in the preparation of the scientific program and in the selection of speakers. It is customary that one of the nominees of the Union is a member of the Executive Committee of the Union, while the other is usually a mathematician of eminence conversant with the needs of the Colloquium. The Union's nominees have generally drawn high praise from the Organizing Committees, and we have never had any kind of trouble on their account.
6. Immediately after the Colloquium is over, a financial statement giving the full budget of the Colloquium (showing the income from *all* sources, and the expenditure on all accounts) is to be sent by the Chairman of the Organizing Committee to the Secretary of the Union.
7. The Union's deadline for receiving applications for colloquia is March 1 of the year preceding the Colloquium. Even if the full picture of the Colloquium is not clear by that date, an application giving the topic, the names of the officers of the Organizing Committee, if possible the names of the invited speakers, the probable size of the Colloquium, and the probable size of the budget, together with the place where the Colloquium will be held, should be sent in.
8. The ICSU resolution on the free circulation of scientists stating that before the Symposia or meetings are arranged, an assurance in writing should be obtained from the organizers in the country concerned that visas will be granted to bona fide scientists if proper applications are made should be observed.

Conferences supported by IMU

1988:

The Ramanujan Birth Centenary International Colloquium, Bombay, India, January 4–11, 1988.

IMU representatives: M.S. Narasimhan and C.S. Seshadri. IMU contribution: 10000 Swiss francs.

Contact person: Professor M.S. Raghunathan; TIFR; Department of Mathematics; Homi Bhabha Road; Bombay 400 005; India.

The IXth Congress of the International Association of Mathematical Physics, Swansea, United Kingdom, July 17–27, 1988

IMU representative: L.D. Faddeev. IMU contribution: 10000 Swiss francs.

Contact person: Professor A. Truman; University of Wales; University College of Swansea; Department of Mathematics and Computer Science; Singleton Park; Swansea SA2 8PP; United Kingdom.

The 9th Latin American School of Mathematics, ELAM, Santiago, Chile, July 20–31, 1988.

IMU representative: J. Palis Jr. IMU contribution: 10000 Swiss francs.

Contact person: Dr. Ricardo Baeza, Department of Mathematics, University of Chile, Casilla 653, Santiago, Chile.

6th International Congress on Mathematical Education, ICME 6, Budapest, Hungary, July 27–August 3, 1988.

IMU contribution: \$ 15 000.

Contact person: c/o Janos Bolyai Mathematical Society; P.O.B. 240; H-1368 Budapest; Hungary.

The Third Congress on Probability and Statistics, Montevideo, Uruguay, September 19–28, 1988.

IMU representative: J. Palis Jr. IMU contribution: 7000 Swiss francs.

Contact person: Professor Enrique Cabana, Instituto de Matematica e Estatistica, Facultad de Ingenieria y Agrimensura, Av. J. Herrera y Reissig 565, Casilla nr. 30, Montevideo, Uruguay.

1989:

International Conference on Ring Theory in Honour of Professor S. Amitsur, Israel, January 2–5, 1989. (December 26, 1988 – January 1, 1989 a workshop.)

IMU representatives: J. Coates and N. Jacobson. IMU contribution: 5000 Swiss francs.

Contact person: Professor Moshe Jarden, School of Mathematical Sciences, Tel Aviv University, Ramat Aviv, Tel Aviv 69978, Israel. e-mail: jarden@taurus (bitnet)

Conference Honoring Professor Richard S. Varga, Kent, Ohio, USA, March 1989.

IMU representative: C. de Boor.

Contact person: Professor Eugene C. Gartland, Department of Mathematical Sciences, Kent State University, Kent, OH 44242, USA. e-mail: egartlan@kentvm (bitnet)

Geometry of Banach Spaces, Linz, Austria, June, 1989.

IMU representative: J. Lindentrauss. IMU contribution: 3000 Swiss francs.

Contact person: Doz. Dr. Walter Schachermayer, Johannes Kepler Universität Linz, Institut für Mathematik, A-4040 Linz, Austria.

International Colloquium on Complex Analysis, Bucharest, Romania, June 1989.

IMU representative: O. Lehto. IMU contribution: 7000 Swiss francs.

Contact person: Professor C. Andreian Cazacu, Central Institute of Mathematics, str. Academiei 14, Bucharest, Romania

EQUADIFF 7, Prague, Czechoslovakia, August 21-25, 1989.

IMU representative: L. Hörmander. IMU contribution: 7000 Swiss francs.

Contact person: Professor Jaroslav Kurzweil, Chairman, EQUADIFF 7, Institute of Mathematics, Czechoslovak Academy of Sciences, Zitna ul. 25, 115 67 Praha 1, Czechoslovakia

Third International Conference on the Theory of Groups and Related Topics, Canberra, Australia, September 25-29, 1989.

IMU representative: W. Feit. IMU contribution: 7000 Swiss francs.

Contact person: Professor G.E. Wall, The University of Sydney, Department of Pure Mathematics FO7, NSW 2006, Australia. fax: (02) 692 4203

International Conference on Algebra, Novosibirsk, August - September 1989, commemorating the 80th birthday of A.I. Maltsev.

IMU representative: L.D. Faddeev. IMU contribution: 5000 Swiss francs.

Contact person: Academician M.M. Lavrentjev, Director of the Institute of Mathematics, Novosibirsk, 630090, U.S.S.R.

1990:

International Congress of Mathematicians, Kyoto, Japan, August 21-29, 1990.

IMU contribution: 66 000 Swiss francs for ICM 1990, 22 000 Sw. frs. for travel grants to ICM 1990.

International Congress of Mathematicians 1990

The next International Congress of Mathematicians will be held in Kyoto, Japan, at the Kyoto International Conference Hall from August 21 to August 29, 1990. A preliminary announcement has been sent out and the First Announcement will be distributed in July 1989. For further information please write to: ICM-90 Secretariat; Research Institute for Mathematical Sciences; Kyoto University; Kitashirakawa, Sakyo-ku; Kyoto 606; Japan.

International Congress on the History of Science

The 18th International Congress on the History of Science, "Science and Political Order/Wissenschaft und Staat" will be held on August 1–9, 1989, in Hamburg and Munich. For more information, please write to Professor C.J. Scriba; Institut für Geschichte der Naturwissenschaften, Mathematik und Technik; Universität Hamburg; Bundesstraße 55; D-2000 Hamburg 13; Federal Republic of Germany.

Scientific activities in 1987

The International Symposium on Approximation and Optimization was held in Habana, Cuba, on January 12–16, 1987. The meeting was attended by 50 mathematicians from abroad and 45 from Cuba. The Proceedings of the Seminar will be published later.

IMU supported the Symposium with 5000 Swiss francs and ICSU with 7000 US dollars.

The IMU representatives were Z. Ciesielski and H. Wallin.

ICMI Symposium on the Teaching of Mathematics as a Service Subject was held in Udine, Italy, on 6–10 April, 1987. The meeting was attended by some 40 participants from 18 different countries. The Proceedings will be published by Cambridge University Press early in 1988 and a volume of 'Selected Papers' is planned in the Springer series of proceedings of seminars held at the International Centre for the Mechanical Sciences.

IMU granted the Symposium 6000 Swiss francs. ICSU supported the ICMI study "Mathematics as a Service Subject" in 1987 with 4000 US dollars.

The conference *Potential Theory* was held in Prague, Czechoslovakia, on July 19–24, 1987. The conference was attended by 100 foreign participants from 25 countries and 36 participants from Czechoslovakia. It was one of a series of meetings devoted to potential theory and the topics covered a broad range from abstract theory to applications. The program consisted of plenary surveys and specialized lectures.

The IMU representatives were H. Bauer and E. Fabes.

IMU granted the conference 3000 Swiss francs.

The International Symposium and Summerschool on K -Theory and its Applications were held in Ibadan, Nigeria, on July 29–August 15, 1987. The summerschool consisted of two weeks of expository lectures on topological and algebraic K -theories. The summerschool was attended by some thirty participants and the symposium, which was held after the summerschool, by some forty participants, from 17 countries, ranging from specialists to postgraduate students.

The IMU representative was J. Coates and the IMU grant 5000 Swiss francs.

The *13th Rolf Nevanlinna Colloquium* was held in Joensuu, Finland, on August 10–13, 1987.

The Colloquium was attended by 160 participants from 25 countries. The program concentrated on complex analysis and related topics and it was partly devoted to the scientific work of L.V. Ahlfors on the occasion of his 80th birthday.

The IMU representatives were L. Carleson and O. Lehto. IMU supported this meeting with 7000 Swiss francs.

The *Second International Conference on Combinatorial Mathematics and Computing* was held in Canberra, Australia, on August 24–28, 1987. The approximately 80 participants came from 13 countries.

The IMU representative was J. Coates. The IMU grant was 7000 Swiss francs.

The *International Conference on Computational Geometry and Topology and Computers in the Teaching of Mathematics* was held in Sevilla, Spain, on August 31–September 4, 1987. The main themes of the conference were the theoretical foundations of the computational techniques used in symbolic computation, development of computational techniques for mathematical applications and processing scientific text, the influence of computation sciences on the mathematics curricula and the development of tutorial systems for the teaching of mathematics using computers.

The IMU representative was J. Palis Jr. IMU granted this conference 5000 Swiss francs.

The *Workshop on Mathematical Physics* was held on September 28–October 10, 1987, in Bujumbura, Burundi. The meeting was attended by 36 participants from nine countries. The lectures concentrated on the latest developments in mathematical physics. During the meeting the Central African Association of Mathematics, Physics and Computer Science was established.

IMU granted this meeting 5000 Swiss francs through CDE. The IMU representative was J. Palis Jr.

The *International Conference in Topology and its Applications* was held in Baku, U.S.S.R., on October 3–8, 1987. There were some 500 participants, about 180 from outside the U.S.S.R. The scientific program included not only the main topics in topology but also related topics in physics, algebra, geometry and differential equations.

The IMU representative was L.D. Faddeev. IMU supported this meeting with a grant of 5000 Swiss francs.

Special Development Fund

The Special Development Fund aids IMU to fulfill the important obligation of helping developing countries within the framework of mathematical research.

The means of the Fund, which go un-reduced to mathematicians from developing countries, come from donations. They are used primarily for travel grants to young mathematicians, to make it possible for them to participate in International Congresses of Mathematicians. The Executive Committee of IMU elects an international committee to distribute the grants.

The next goal is to collect money for travel grants for the 1990 International Congress of Mathematicians in Kyoto. In 1988 we have received the generous contribution of 5000 US dollars from the American Mathematical Society. The Executive Committee expresses its heartfelt thanks. The E.C. appeals strongly to the Mathematical Societies of the other member countries of IMU for further contributions. AMS will also be inviting members of the Society to contribute to the Special Development Fund as they pay their dues and the E.C. encourages other societies to follow the example set by AMS.

Donations to the Special Development Fund can be sent, at any time and in any convertible currency, to the following accounts:

Account no. 0862-656208-21
Schweizerische Kreditanstalt
Stadtfiliale Zürich-Rigiplatz
Universitätstraße 105
CH-8033 Zürich
Switzerland

Account no. 100020-411-CHF-5706 FR
Kansallis-Osake-Pankki
Aleksanterinkatu 42
SF-00100 Helsinki
Finland.

Prizes of the Union

Fields Medals

Fields Medals, awarded to young mathematicians for outstanding achievements in mathematics, have been granted since 1936. The funds for the medals are constituted by balances left after the Toronto International Congress of Mathematicians, in 1924, and the Vancouver Congress, in 1974. The International Mathematical Union has decided to award no less than two and no more than four medals at each International Congress of Mathematicians.

Fields Medals have been awarded in the past to the following persons:

1936: Lars Ahlfors, Finland
 Jesse Douglas, USA
1950: Atle Selberg, USA

- Laurent Schwartz, France
- 1954: Kunihiro Kodaira, USA
Jean-Pierre Serre, France
- 1958: Klaus Roth, UK
René Thom, France
- 1962: Lars Hörmander, Sweden
John Milnor, USA
- 1966: Michael Atiyah, UK
Paul J. Cohen, USA
Alexander Grothendieck, France
Stephen Smale, USA
- 1970: Alan Baker, UK
Heisuke Hironaka, USA
Sergei Novikov, USSR
John G. Thompson, USA
- 1974: Enrico Bombieri, Italy
David Mumford, USA
- 1978: Pierre Deligne, Belgium
Charles Fefferman, USA
G.A. Margulis, USSR
Daniel Quillen, USA
- 1982: Alain Connes, France
William Thurston, USA
S.T. Yau, USA
- 1986: Simon Donaldson, UK
Gerd Faltings, FRG
Michael Freedman, USA

Fields Medals Committees:

Oslo 1936:

Francesco Severi (Chairman), Constantin Carathéodory, G.D. Birkhoff, Elie Cartan, Teiji Takagi. Committee elected at the Closing Session of the 1932 ICM.

Cambridge, USA, 1950:

Harald Bohr (Chairman), L.V. Ahlfors, Karol Borsuk, Maurice Fréchet, W.V.D. Hodge, A.N. Kolmogorov, D. Kosambi, Marston Morse. Committee appointed by the organizers of the 1950 Congress, in 1948. (The Executive Committee of the 1936 Congress appointed the following committee: (G.H. Hardy, Chairman; declined), S. Lefschetz (Chairman), Paul Alexandroff, E. Hecke, G. Julia, T. Levi-Civita.)

Amsterdam 1954:

Hermann Weyl (Chairman), E. Bompiani, F. Bureau, H. Cartan, A. Ostrowski, Å. Pleijel, G. Szegő, E.C. Titchmarsh. Committee appointed by the organizers of the 1954 Congress.

Edinburg 1958:

Heinz Hopf (Chairman), K. Chandrasekharan, K. Friedrichs, P. Hall, A.N. Kolmogorov, L. Schwartz, C.L. Siegel, O. Zariski. Committee appointed by the organizers of the 1958 Congress.

Stockholm 1962:

Rolf Nevanlinna (Chairman), P. Alexandroff, E. Artin, S.S. Chern, C. Chevalley, H. Whitney, K. Yoshida. The Committee was appointed by the Executive Committee of IMU.

Moscow 1966:

Georges de Rham (Chairman), D. Davenport, M. Deuring, W. Feller, M.A. Lavrentiev, J-P. Serre, D.C. Spencer, R. Thom. (IMU E.C.)

Nice 1970:

Henri Cartan (Chairman), J.L. Doob, F. Hirzebruch, L. Hörmander, S. Iyanaga, J.-W. Milnor, I.R. Shafarevitch, P. Turan. (IMU E.C.)

Vancouver 1974:

K. Chandrasekharan (Chairman), J.F. Adams, K. Kodaira, L.S. Pontrjagin, B. Malgrange, A. Mostowski, J. Tate, A. Zygmund. (IMU E.C.)

Helsinki 1978:

D. Montgomery (Chairman), L. Carleson, M. Eichler, I.M. James, J. Moser, J.V. Prohorov, B.S. Nagy, J. Tits. (IMU E.C.)

Warsaw 1982-83:

L. Carleson (Chairman), H. Araki, P. Malliavin, G.I. Marchuk, D. Mumford, L. Nirenberg, A. Schintzel, C.T.C. Wall. (IMU E.C.)

Berkeley 1986:

J. Moser (Chairman), P. Deligne, J. Glimm, L. Hörmander, K. Ito, J. Milnor, S. Novikov, C.S. Seshadri. (IMU E.C.)

Rolf Nevanlinna Prize

The University of Helsinki has granted funds to award a Rolf Nevanlinna Prize in the mathematical aspects of information science to a young mathematician, to be given at the International Congress of Mathematicians since 1982. The following persons have received the Rolf Nevanlinna Prize:

1982: Robert Tarjan, USA

1986: Lesley Valiant, UK

Rolf Nevanlinna Prize Committees:

Warsaw 1982-83:

J.L. Lions (Chairman), A. Salomaa, J. Schwartz.

Berkeley 1986:

L.D. Faddeev (Chairman), S. Cook, S. Winograd.

The President of the Union, Professor Ludwig D. Faddeev, has sent a letter to the Committees for Mathematics, inviting them to recommend candidates for both awards. The suggestions should contain complete biographies and motivations. They should be sent not later than January 1, 1989, to his address:

Professor Ludwig D. Faddeev
L.O.M.I.
Fontanka 27
Leningrad D-11
U.S.S.R.

IMU Fellowship Fund

The IMU Fellowship Fund is intended to provide help to advanced level graduate students, especially to those coming from less well-off countries, to take benefit from a long-period stay abroad at a well-known university or institute. Suggestions for possible candidates from the Committees for Mathematics should reach the Secretary before March 1, 1988.

IMU Lectures

In 1971, the Executive Committee of IMU decided to invite, from time to time, a distinguished and active mathematician, of international standing, to give a set of four to six lectures, on important new developments in mathematics to which the lecturer, directly or indirectly, has made a contribution, and which deserve to be 'surveyed' at some length, for the benefit of younger mathematicians as well as others.

The lectures should be given at mathematical centers and they will be published in the *L'Enseignement Mathématique*.

Suggestions for IMU lecturers should reach the Secretary by March 1, 1988.

IMU-UNESCO Visiting Mathematicians Program

Thanks to special UNESCO support, CDE will provide for the biennium 1988-1989 a limited number of grants aiming in particular to partially cover travel expenses of mathematicians wishing to visit academic institutions abroad.

They may either come from developing countries to spend a research period in well qualified mathematical centers, or come from developed countries, to spend reasonably long teaching/research periods in universities or research centers in developing countries.

Applications containing a curriculum vitae and detailed information on the applicant's scientific achievements and interests as well as a description of the program related to the request should be sent to the Secretariat of CDE: c/o Professor Jean Pierre Bourguignon; Centre de Mathématiques; Ecole Polytechnique; F-91128 Palaiseau Cedex; France.

CDE Regional Libraries

CDE aims at creating regional libraries in developing countries. CDE has had some contacts with commercial editors to get discounted prices for books and journals for developing countries. It is also possible to donate individual collections of books to developing countries through CDE. Efforts should be made to induce publishers to save copies of books prior to destructing them and send them to developing countries through CDE. The Commission will work in close cooperation with the Third World Academy of Sciences. The address of the CDE Secretariat is above.

The following pages consist of the financial report of the Union for the year 1987.

International Mathematical Union
University of Helsinki
Department of Mathematics
Hallituskatu 15
00100 HELSINKI FINLAND

Helsinki, April 5, 1988

AUDITORS' REPORT

We have audited the Financial Statements of the International Mathematical Union (IMU), prepared by the Executive Secretary of IMU, for the year ended December 31, 1987. The Statement of Income and Expenditure was prepared in accordance with the instructions given by the International Council of Scientific Unions in a letter dated November 16, 1987. The Balance Sheet and the accounting principles are similar to those of the previous years.

Principles and comments:

1. Currency

The Financial Statements are expressed in US dollars. Balances in other currencies have been translated into US dollars by applying the Unesco Standard Rates of Exchange based on December 1987.

Income and expenditure for each month was translated into US dollars at the Unesco Standard Rate of Exchange for the month.

2. Income

The contributions from national members, USD 95,605, have been recorded on cash basis. Sixteen (16) members have not paid their dues for the year 1987 and four (4) members have paid only a part of their due. The unpaid dues are USD 21,322 for 1987 and USD 19,585 for previous years (total USD 40,907). The list of the unpaid dues is attached to the financial statements.

3. Sale of publications

The income of the sale of the 7th and 8th editions of the World Directory of Mathematicians in 1987 is USD 7,077. The income in 1987 includes in 1986 estimated costs for the 8th edition of the WDM which, however, according to the billing by the American Mathematical Society has been covered by the income of the sale. The Executive Secretariat has had difficulties in getting reliable information about the number of editions sold, the income of the sale, the production costs and confirmations on balances of bank accounts.

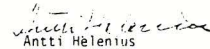
4. Expenditure

Expenditure is recorded on accruals basis. The Statement of Income and Expenditure includes gain on exchange USD 55,036.


5. Bank accounts

The balances of bank accounts agree with the respective bank statements.

In our opinion, with reservation of the comments above, the Balance Sheet and the Statements of Income and Expenditure give a true and fair view of the financial status of the International Mathematical Union at December 31, 1987.


Antti Helenius

Authorised Public Accountant


Annikki Rasilainen

Authorised Accountant

INTERNATIONAL MATHEMATICAL UNION

Statement of Income and Expenditure
for the Year Ended 31 December 1987

NOTES

1. <u>INCOME</u>	US dollars
Allocation from Unesco Subvention to ICSU	18.415,-
Contributions from National Members	1. 95.605,09
Sale of publications	7.077,17
Bank interest and gain on exchange	<u>59.992,84</u>
	181.090,10
II. <u>EXPENDITURE</u>	
a. <u>Scientific Activities</u>	
Conferences	64.548,99
Grants to Individuals/Organizations	2. 15.580,88
b. <u>Routine Meetings</u>	
Bureau/Executive Committee	11.212,99
Other	2.205,88
c. <u>Publications</u>	3. 15.322,77
d. <u>Administrative Expenses</u>	
General Office Expenses	8.075,93
Audit fees	500,-
Bank charges and loss on exchange	<u>302,11</u>
	117.749,55
Excess of Income Over Expenditure	63.340,55
Accumulated Balance at 1 January 1987	<u>210.633,35</u>
Accumulated Balance at 31 December 1987	273.973,90
	=====

Balance Sheet at December 31, 1987

	Notes	1987	1986
ASSETS			
Bank accounts and cash	4	161.703	
Current accounts		55.596	217.299
Deposit accounts		314.509	<u>7.000</u>
Prepayments	5	<u>7.079</u>	224.299
TOTAL ASSETS		321.588	
LESS: LIABILITIES			
Creditors and accruals	6	<u>22.901</u>	<u>8.154</u>
		298.687	216.145
ACCUMULATED FUNDS			
General fund	7		
Balance at December 31, 1986		161.534	
Excess of income over expenditure		<u>63.341</u>	210.634
Balance at December 31, 1987		273.974	<u>210.634</u>
		Transfer	273.974

210.634

Transfer 273.974

7

Special Appeal fund

Balance at December 31, 1986		8.396		
Interest	487	252		
Donations	30	235		
Travel grants	2.260	(8.396)		
Balance at December 31, 1987			487	
General Assembly fund				
Balance at December 31, 1986		3.477		
General Assembly 1990	5.024	1.547		
Balance at December 31, 1987	2.206		5.024	
World Directory of Mathematicians fund				
Balance at December 31, 1986		9.372		
World Directory, IX ed.	-	(9.372)		
Balance at December 31, 1987	14.706			
IMU Development fund				
Balance at December 31, 1986		7.670		
Travel grants 1986	-	(7.670)		
Balance at December 31, 1987				
			216.145	

INTERNATIONAL MATHEMATICAL UNION

1. STATEMENT OF CONTRIBUTIONS RECEIVED FROM MEMBERS DURING THE YEAR ENDED DECEMBER 31, 1987

MEMBER	PAYMENT CONCERNING THE YEAR		
	PRE 1987	1987	TOTAL
Australia		2649	
Austria		1316	
Belgium	2222		
Brazil		2596	
Bulgaria		1307	
Cameron	506	729	
Canada		4294	
Mathematical Society, Taipei		1227	
Cuba		590	
Czechoslovakia		2703	
Denmark		1307	
Egypt	563		
Finland		1307	
France	76	6623	
Germany, D.R.		2778	
Germany, F.R.		6623	
Hungary		2222	
Iceland	521		
India		2649	
Iran		676	
Ireland		1299	
Israel		1307	
Italy		4575	
Ivory Coast		654	
Japan		6494	
Korea, Rep.		654	
Mexico		667	
Netherlands		2454	
New Zealand		654	
Norway		667	
Philippines	466		
Poland		2667	
Portugal		163	
(Singapore paid its dues for 1987 in 1986)			
South Africa		1227	
Spain		1333	
Sweden		2649	
Switzerland		2614	
Turkey	590		
United Kingdom		6622	
U.S.A.		6622	
U.S.S.R.		5743	
	4944	90661	95605

2. GRANTS TO INDIVIDUALS/ORGANIZATIONS

I.C.M.I	7.832
C.D.E	7.353
C.T.S	<u>396</u>
	15.581
	=====

3. PUBLICATIONS

Publications expenditure is made up as follows:

	1987	1986
I.M.U bulletin	617	740
World Directory of Mathematicians, VIII and IX ed.	<u>14.706</u>	<u>21.153</u>
	15.323	21.893
	=====	=====

NOTES TO BE READ IN CONNECTION WITH THE FINANCIAL STATEMENT
OTHER NOTES

	1987		1986	
	Currency	USD	Currency	USD
4. Banks and cash				
The amount held with banks is made up as follows				
Credit Swiss	SWITZERLAND			
- Current account	FS	115.797	83.881	49.929
Kansallis-Osake-Pankki	FINLAND	5.860	10.750	2.194
Kansallis-Osake-Pankki	FINLAND	-	-	1.450
Kansallis-Osake-Pankki	FINLAND	39.872	82.762	49.263
Kansallis-Osake-Pankki	FINLAND			
- Deposit account (RESERVE)	FS	190.842	93.402	55.596
- Longterm account	FS	66.375	92.914	55.306
Colonial Bank	USA	-	-	3.561
Bank of Boston	USA	-	-	
		=====	=====	=====
		314.509		217.299
		=====		=====

5. PREPAYMENTS

Advance payment to Bombay Conference 1988

7.079

7.079

6. CREDITORS AND ACCRUALS

I.M.U lectures
Audit
Secretarial help, president
CDE
I.C.M.I
Symposia, Baku
Program Committee

1.884
858
1.324
7.807
3.676
3.676
3.676

22.901

7. FUNDS

These funds represent the amounts set aside to cover the following

Provided in year ended	1987 General fund	1987 General Assembly	1987 World Directory	1987 Special Appeal fund
-----	-----	-----	-----	-----
General fund				
<u>Balance 31.12.1987</u>	210.633			
Transfer from the excess of income over expenditure	63.341			
Special Appeal fund				
<u>Balance 31.12.1987</u>				487
Interest				30
Donations				2.260
General Assembly fund				
<u>Balance 31.12.1987</u>		5.024		
General Assembly 1990		2.206		
World Directory of Mathematicians fund				
<u>Balance 31.12.1987</u>			-	
World Directory, VIII ed.			14.706	
	----- 273.974 -----	----- 7.230 -----	----- 14.706 -----	----- 2.777 -----

STATEMENT OF INCOME AND EXPENDITURE:
FINANCIAL YEARS 1986 AND 1987 COMPARED

INCOME	1987	1986
Allocation from Unesco grant to ICSU	18.415	20.085
Contributions from National Members	95.605	74.022
Sale of publications	7.077	2.240
Bank interest	4.957	5.959
Next exchange (loss) / gain	<u>55.036</u>	<u>34.988</u>
	<u>181.090</u>	<u>137.294</u>
EXPENDITURE		
A. MEETINGS		
Representation at meetings	7.536	22.345
Program Committee	3.676	-
General Assembly	<u>2.206</u>	<u>1.548</u>
	13.418	23.893
B. PUBLICATIONS		
	15.323	21.893
C. SCIENTIFIC ACTIVITIES		
Colloquia	24.801	3.530
Other activities		
ICM 1990	14.379	-
I.C.M.I	14.317	2.797
Conferences/ICSU	11.052	-
CDE	<u>7.353</u>	<u>-</u>
	71.902	6.327
D. ADMINISTRATIVE EXPENSES		
Grant to C.T.S.	396	396
Grant to I.C.M.I.	6.000	3.349
Grant to C.D.E.	3.396	1.435
Contribution to I.C.S.U	1.832	1.400
Travel grants	-	23.050
Audit fees	500	500
General office expenses	4.680	5.456
Bank charges	<u>302</u>	<u>495</u>
	<u>17.106</u>	<u>36.081</u>
	117.749	88.194
	=====	=====
	63.341	49.100
EXCESS OF INCOME OVER EXPENDITURE		
Allocated to:		
General fund	63.341	<u>49.100</u>
	63.341	49.100
	=====	=====

INTERNATIONAL MATHEMATICAL UNION

The following members have not paid their dues for the year 1987:

Member	Dues (Swiss francs)	USD
Argentina	2.000	1.471
Belgium	4.000	2.941
Chile	1.000	735
Chinese Math. Soc.	4.000	2.941
Egypt	1.000	735
Greece	1.000	735
Hong Kong	1.000	735
Iceland	1.000	735
Korea, D.P.R.	1.000	735
Nigeria	1.000	735
Pakistan	2.000	1.471
Philippines	1.000	735
Romania	2.000	1.471
Turkey	1.000	735
Viet Nam	1.000	735
Yugoslavia	2.000	<u>1.471</u>
		19.116

The following members have part of their dues for 1987 unpaid:

Member	Arrears (Swiss francs)	USD
Cuba	150	110
Hungary	600	441
Portugal	751	552
U.S.S.R.	1.500	<u>1.103</u>
		2.206

The following members have earlier unpaid dues as follows:

Member	Sum (Swiss francs)	Year(s)	USD
Chile	850	1986	625
France	186	1986	137
Hong Kong	850	1986	625
Malaysia	850	1986	625
		(withdrawn from IMU 1.1.1987)	
Nigeria	2.700	1983-1986	1.985
Pakistan	6.800	1983-1986	5.000
Romania	8.000	1982-1986	5.882
Turkey	3.850	1978-1983	2.831
Viet Nam	850	1986	625
Yugoslavia	1.700	1986	<u>1.250</u>
			19.585
		TOTAL	<u>40.907</u>

1 USD = 1,360 SFR = december 31, 1987

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