

IMU

**BULLETIN
OF THE
INTERNATIONAL MATHEMATICAL UNION**

**No. 29
May 1989**

SECRETARIAT

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

List of abbreviations

IMU	International Mathematical Union
- ICMI	International Commission on Mathematical Instruction
- CDE	Commission on Development and Exchange
- ICHM	(Joint) International Commission on the History of Mathematics
IUHPS	International Union of the History and Philosophy of Science
ICSU	International Council of Scientific Unions
- COSPAR	Committee on Space Research
- COSTED	Committee on Science and Technology in Developing Countries
- CTS	Committee on the Teaching of Science

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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, 1989:

- 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.

In a postal ballot conducted among the Adhering Organizations of IMU, the group of Spain was raised from II to III. All the votes received, 65 out of 120 possible, in the ballot were in favor of the change. The change will take effect as of May 1, 1989.

Meetings of the Executive Committee

The Executive Committee had its 53rd meeting 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.

Conferences Supported by IMU in 1988

The Ramanujan Birth Centenary International Colloquium on Number Theory and Related Topics was held at the Tata Institute of Fundamental Research in Bombay, India, on January 4–11, 1988. The colloquium highlighted recent developments in number theory and related topics, especially those related to the work of Srinivasa Ramanujan, for example the circle method, sieve methods and combinatorial methods in number theory, partition congruences, Rogers–Ramanujan identities, lacunarity of power series, hypergeometric series and special functions, modular forms and functions, complex multiplication, and Hecke theory. The meeting was organized by the Tata Institute with the support of IMU and Sir Dorabji Tata Trust.—The IMU representatives were Professors M.S. Narasimhan and C.S. Seshadri; IMU gave a grant of 10000 Swiss francs to the meeting.

The IXth Congress of the International Association of Mathematical Physics, Swansea, United Kingdom, July 17–27, 1988.—The IMU representative was L.D. Faddeev and the IMU contribution 10000 Swiss francs.

The 9th Latin American School of Mathematics, ELAM, was held in Santiago, Chile, on July 20–31, 1988. About 200 participants from 14 countries attended the meeting covering algebraic geometry and related topics.—The IMU representative was Professor J. Palis Jr. and the IMU financial contribution to the meeting was 10000 Swiss francs.

The Third Congress on Probability and Statistics, was held in Montevideo, Uruguay, on September 19–28, 1988. About 80 members from 15 countries attended the meeting, which was organized by the Centro de Matemática de la Universidad de la República, the Latin-American Branch of the Bernoulli Society with financial support from IMU, UNESCO, and Universidad de la República and PEDECIBA.—The IMU representative was Professor J. Palis Jr.; the IMU financial support was 7000 Swiss francs.

Conferences supported by IMU

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 Boer.

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

A special event in honor of Professor K. Chandrasekharan, Paris, France, April 20, 1989.

A workshop to honor the occasion of Professor Ilya Piatetski-Shapiro's 60th birthday, Tel-Aviv University, Tel-Aviv, Israel, May 14–19, 1989.

IMU representative: J. Coates. IMU contribution: 5000 CHF.

Contact person: Professor Zvi Ziegler, Technion, Computer Centre, Haifa, Israel.

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 5-8, 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

International Symposium on Cauchy and French Mathematics, in connection with the Bicentennial of the French Revolution, Paris, summer 1989.

IMU contribution: 1500 Swiss francs.

Contact person: Professor J. Dhombres, Institut de Mathématiques, Université de Nantes, 2 Chemin de la Houssinière, F-44027 Nantes Cédex, France.

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

International Conference on Algebra, Novosibirsk, August 21-26, 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.

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

1990:

Asian Mathematical Conference, Hong Kong, August 14-18, 1990, will be endorsed by IMU.

Contact person: Dr. K.P. Shum, President, Hong Kong Mathematical Society, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong.

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.

Travel Grants for Young Mathematicians

The International Mathematical Union will award travel grants to young mathematicians to help them to attend the ICM-90, Kyoto, Japan, August 21-29, 1990. The grants are intended primarily for young mathematicians from developing countries (not necessarily members of IMU), but applications from countries with strict monetary regulations will also be considered.

The age-limit for the grants is 35 years. The candidates should present evidence of research work on post-doctoral level (such as publications in journals or preprints), and they should be able to benefit from the interaction with mathematicians from other countries attending the Congress.

In addition to the name and address of the candidate, the applications should contain a brief curriculum vitae plus a list of publications and preprints.

The International Congress of Mathematicians will provide a special allowance to the grantees to cover their registration, board and lodging.

Applications for the travel grant may be sent directly to the Secretary of the Union. Applications may also be submitted through the Committees for Mathematics, which in such a case will send all the relevant information about the candidates to the Secretary.

All applications should reach the Secretary by January 1, 1990.

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) and a report on the scientific activities are 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 should be observed. 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.

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.

Report on ICMI Activities for 1988

1. The principal ICMI activity in 1988 was the holding of the Sixth International Congress on Mathematics Education in Budapest, Hungary. This was most successful. The number of participants, almost 2,500, was the largest ever attracted to an ICME and there was a very good representation from the Socialist

countries. The Hungarian organization was outstandingly good and is perhaps best reflected in the fact that the *Proceedings* of the Congress (which contained not only texts of plenary talks but also reports of the work of all the discussion groups) was published before the end of the year.

Financially, the meeting was a success and, thanks to grants from IMU, ICSU, UNESCO and others, ICMI was able to make travel grants to over 30 educators from developing countries. It is possible that the Hungarian organizers will reimburse ICMI for some of the IPC expenses. In addition ICMI may recoup some money through the sale of the *Proceedings*.

An IPC for ICME 7 (Laval University, Quebec, 1992) has been appointed and will meet for the first time in September, 1989.

2. No Regional Meetings were held in the ICME year but further meetings are planned for South East Asia and the Americas. In addition ICMI will jointly sponsor meetings in Beijing, China, and in Seville, Spain, both in September, 1990.

3. No study symposia were held in 1988. However, two volumes resulting from the 1987 Udine Seminar on 'Mathematics as a Service Subject' were published (Cambridge University Press and Springer-Verlag). An editorial meeting was held on the PME-group's study on *Cognition and Mathematics Education* (which it is hoped will appear in 1989). *School Mathematics in the 1990's* appeared in Japanese translation and was reprinted in English. Further translations are in preparation.

A discussion document on 'The popularization of mathematics' appeared prior to the seminar to be held in Leeds, England, in September, 1989. Work began on a study on 'Evaluation and Assessment' to be held in Spain in April, 1991.

4. Two *Bulletins* were published—one with the aid of a UNESCO grant.

5. The Executive Committee met in Budapest in July, 1988.

17.3.1989

A.G. Howson

Report on the Commission on Development and Exchange of IMU for the year 1988

The Commission on Development and Exchange (CDE) signed a contract with UNESCO for the two-year period 1988–89 under which UNESCO will make available to CDE \$ 10,000 to support travel of mathematicians from developing countries. A circular regarding this programme was sent to all Adhering Organizations of IMU. As a result of this, we received about 20 applications.

The CDE has received 150,000 Yen from the Mathematical Society of Japan. The following conferences were supported:

1. Mathematics and Computation, Ho Chi Minh Ville, Vietnam, April 1988, SF 1500.

2. ELAM, Santiago de Chile, July 1988, SF 5000.
3. College on Global Analysis, Cotonou, Benin, December 1988, SF 4500.
4. Workshop on Mathematical Analysis and Applications, Bujumbura, Burundi, postponed to January 1989, SF 4000.

The CDE paid (SF 2250) part of the round the world ticket of Professor Yin Weiping (USTC, Hefei, China) who made long visits to Tata Institute of Fundamental Research (Bombay), The University of Poitiers (France) and the Mathematical Sciences Research Institute (Berkeley, USA).

We have already offered travel support to three mathematicians during the year 1989 and have supported the Workshop on Algebraic Geometry in Mexico City in January 1989.

In its meeting held in 1987, CDE decided that it should support some centres or groups of mathematicians in developing countries. Although we have not been able to obtain separate funds for this purpose as was hoped, it is planned to support at least one such group during 1989 with the funds available with us.

March 1989

J.P. Bourguignon

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 unreduced to mathematicians from developing countries, 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.

Means to the Special Development Fund come from donations. Donations 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.

The next goal is to collect money for travel grants for the 1990 International Congress of Mathematicians in Kyoto.

The following contributions have been received in the years 1983–1987:

	Swiss francs
1983:	
Wiskundig Genootschap, Netherlands	2403
London Mathematical Society, United Kingdom	1595
1985:	
London Mathematical Society, United Kingdom	3050
Danish Mathematical Society, Denmark	421
1986:	
Wiskundig Genootschap, Netherlands	1878
Australian Mathematical Society, Australia	973
Swedish Mathematical Society, Sweden	76
Finnish Mathematical Society, Finland	323
1987:	
Norwegian Mathematical Society, Norway	1079
London Mathematical Society, United Kingdom	2245
1988:	
American Mathematical Society, USA	6917
Instit. Mat. Pura e Apl., Brazil	7500
Royal Society, United Kingdom	11476
1989:	
American Mathematical Society, USA	17265
London Mathematical Society, United Kingdom	2750

On behalf of IMU, the Executive Committee of IMU expresses its deep gratitude for these donations.

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. The fellowship grants are intended mainly for travel expenses with the understanding that the host institution will cover the local expenses of the student. Suggestions for possible candidates from the Committees for Mathematics should reach the Secretary before March 1, 1990.

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, 1990.

Professor V.I. Arnold gave his IMU lectures "Contact geometry and wave propagation" at the University of Oxford in November–December 1988.

World Directory of Mathematicians

The editor of the 9th World Directory of Mathematicians, Professor Walter Feit, has asked the Committees for Mathematics to send their lists of mathematicians to be included in the directory. A copy of the letter appears at the end of this Bulletin.

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 1988.

APPENDIX 1

INTERNATIONAL MATHEMATICAL UNION

ACCOUNTS

YEAR ENDED DECEMBER 31, 1988

SALMI, VIRKKUNEN & HELENIUS OY

AUTHORISED PUBLIC ACCOUNTANTS

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

Helsinki, March 7, 1989

AUDITORS' REPORT

We have audited the Financial Statements of the International Mathematical Union (I.M.U.) prepared by the Executive Secretary of I.M.U. for the year ended December 31, 1988. The Statement of Income and Expenditure is 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 exchanged into US dollars by applying the Unesco Standard Rates of Exchange based on December 1988.

Income and Expenditure for each month was translated into US dollars at the Unesco Rate of Exchange, which the International Council of Scientific Unions (I.C.S.U.) has made available throughout the year.

2. Income

The contributions from national members, USD 110,672, have been recorded on cash basis. Seventeen (17) members have not cleared their dues for the year 1988 and some members have unpaid dues for several previous years. The unpaid

dues of a total of USD 44,408 ought to be collected or decreased according to the rules of the organisation.

The list of the unpaid dues is attached to the Financial Statements.

3. Sales of publications

The income of the 7th and 8th editions of the World Directory of Mathematicians during the year 1988 is USD 11,705. These editions have been sold in the year 1987 according to the bank statement of the Bank of Boston, USA.

4. Expenditure

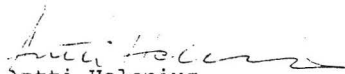
Expenditure is recorded on accrual basis. The Statement of Income and Expenditure includes loss of exchange for the year 1988 USD 13,849.

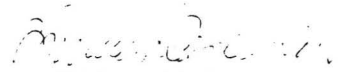
5. Bank accounts

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

In our opinion, with reservation of the comments above, the Balance Sheet and the Statement of Income and Expenditure give a true and fair view of the financial status of the International Mathematical Union at December 31, 1988.

SALMI, VIRKKUNEN & HELENIUS OY
Authorised Public Accountants


Antti Helenius
Authorised Public Accountant


Annikki Rasilainen
Approved Accountant

INTERNATIONAL MATHEMATICAL UNION

Statement of Income and Expenditure
for the Year Ended 31 December 1988

NOTES

1.	<u>INCOME</u>	US dollars
	Allocation from Unesco Subvention to ICSU	14.601,14
	Contributions from Members	1. 110.672,40
	Sale of publications	11.705,00
	Bank interest and gain on exchange	7.379,30
		<u>144.357,84</u>
II.	<u>EXPENDITURE</u>	
	a. <u>Scientific Activities</u>	
	Conferences	61.353,30
	Grants to Individuals/Organizations	2. 16.196,34
	b. <u>Routine Meetings</u>	
	Bureau/Executive Committee	22.743,88
	Other	2.083,33
	c. <u>Publications</u>	3. 10.714,41
	d. <u>Administrative Expenses</u>	
	General Office Expenses	9.371,07
	Audit fees	1.316,20
	Bank charges and loss on exchange	14.680,88
		<u>138.459,41</u>
	Excess of Income Over Expenditure	5.898,43
	Accumulated Balance at 1 January 1988	<u>273.973,90</u>
	Accumulated Balance at 31 December 1988	279.872,33 =====

Balance Sheet at December 31, 1988

	Notes	1988		1987
ASSETS				
Bank accounts and cash	4			
Current accounts		211.622		174.184
Deposit accounts		136.219	347.841	140.325
Prepayments	5		5.387	7.079
TOTAL ASSETS			<u>353.228</u>	<u>321.588</u>
LESS: LIABILITIES				
Creditors and accruals	6		17.674	22.901
			<u>335.554</u>	<u>298.687</u>
			=====	=====
ACCUMULATED FUNDS				
General fund	7			
Balance at December 31, 1987		273.974		210.633
Excess of Income Over Expenditure		5.898		63.341
Balance at December 31, 1988		<u>279.872</u>		<u>273.974</u>
			<u>279.872</u>	
		Transfer	279.872	273.974

	Transfer	279.872		273.974
Special Development fund	7			
Balance at December 31, 1987		2.777		487
Interest		167		30
Donations				2.260
American Mathematical Society		5.124		-
Royal Society, London		7.970		-
Instituto de Matemática e Apli- cada do CNPq, Rio de Janeiro, Brazil		<u>5.208</u>		-
Balance at December 31, 1988		21.246		2.777
General Assembly fund				
Balance at December 31, 1987		7.230		5.024
General Assembly 1990		<u>2.083</u>		<u>2.206</u>
Balance at December 31, 1988		9.313		7.230
World Directory of Mathematicians fund				
Balance at December 31, 1987		14.706		-
World Directory, IX ed.		<u>10.417</u>		<u>14.706</u>
Balance at December 31, 1988		<u>25.123</u>		<u>14.706</u>
		335.554		298.687
		=====		=====

INTERNATIONAL MATHEMATICAL UNION

1. STATEMENT OF CONTRIBUTIONS RECEIVED FROM MEMBERS DURING THE YEAR
ENDED DECEMBER 31, 1988

MEMBER	PAYMENT CONCERNING THE YEAR			
	PRE 1988	1988	1989	TOTAL
Argentina	1482	1266		
Australia		2878		
Austria		1399		
Belgium	2878			
Brazil		2878		
Bulgaria		1389		
Cameroon		655		
Canada		5185		
China				
- Chinese Mathematical Society	2532	2532		
- Mathematical Society, Taipei		1324		
Cuba	104	694		
Czechoslovakia		2963		
Denmark		1439		
Egypt	775	667		
Finland		1399		
France		6981		
German D.R.		2649		
Germany, F.R.		7194		
Greece	695	695		
Hong Kong	1331			
Hungary	417	2452		
India		2878		
Iran		719		
Ireland		1324		
Israel		1482		
Italy		4430		
Ivory Coast		775		
Japan		6329		
Korea, D.P.R.	775			
Korea, Rep.		719		
Netherlands		2532		
New Zealand		775		
Norway		649		
Portugal	540	719		
Singapore		775	694	
South Africa		1550		
Sweden		2649		
Switzerland		2963		
United Kingdom		7752		
U.S.A.		6494		
U.S.S.R.		6296		
	<hr/>	<hr/>	<hr/>	<hr/>
	11529	98449	694	110672

2. GRANTS TO INDIVIDUALS/ORGANIZATIONS

I.C.M.I	6.976
C.D.E	6.443
I.C.S.U	2.377
C.T.S	400

16.196
=====

3. PUBLICATIONS

Publications expenditure is made up as follows:

	1988	1987
I.M.U. bulletin	298	617
World Directory of Mathematicians, VIII and IX ed.	<u>10.416</u>	<u>14.706</u>
	<u>10.714</u>	<u>15.323</u>
	=====	=====

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

			1988		1987	
			-----		-----	
4. Banks and cash			Currency	USD	Currency	USD
The amount held with banks is made up as follows			-----	---	-----	---
Credit Swiss	SWITZERLAND					
- Current account		FS	131.961	91.639	115.797	85.145
Kansallis-Osake-Pankki	FINLAND	FIM	67.267	16.407	5.860	1.429
Kansallis-Osake-Pankki	FINLAND	USD	-	5.458	-	4.221
Kansallis-Osake-Pankki	FINLAND	FS	47.264	32.822	39.872	29.318
Kansallis-Osake-Pankki	FINLAND					
- Deposit account (RESERVE)		FS	196.156	136.219	190.842	140.325
- Longterm account		FS	68.223	47.377	66.375	48.805
Bank of Boston	USA	USD	-	17.919	-	5.266
			=====	-----	=====	-----
				347.841		314.509
				=====		=====

5. PREPAYMENTS

Secretarial help, President, 1989	1.295
Secretarial help, President, 1990	927
Israel Conference 1989	3.165
	<u>5.387</u>
	=====

6. CREDITORS AND ACCRUALS

I.M.U. lectures	1.884
Audit	1.000
CDE, administrative expenses	3.717
CDE, scientific expenses	6.401
Novosibirsk meeting -89	4.672
	<u>17.674</u>
	=====

7. FUNDS

These funds represent the amounts set aside to cover the following

Provided in year ended	1988 General fund	1988 General Assembly	1988 World Directory	1988 Special Development fund
-----	-----	-----	-----	-----
General fund				
<u>Balance 31.12.1987</u>	273.974			
Transfer from the excess of income over expenditure	5.898			
Special Development fund				
<u>Balance 31.12.1987</u>				2.777
Interest				167
Donations				18.302
General Assembly fund				
<u>Balance 31.12.1987</u>		7.230		
General Assembly 1990		2.083		
World Directory of Mathematicians fund				
<u>Balance 31.12.1987</u>			14.706	
World Directory, VIII ed.			10.417	
	-----	-----	-----	-----
	279.872	9.313	25.123	21.246
	=====	=====	=====	=====

STATEMENT OF INCOME AND EXPENDITURE:
FINANCIAL YEARS 1987 AND 1988 COMPARED

INCOME	1988		1987	
Allocation from Unesco grant to ICSU	14.601		18.415	
Contributions from Members	110.672		95.605	
Sale of publications	11.705		7.077	
Bank interest	6.833		4.957	
Next exchange loss / (gain)	<u>13.849</u>		<u>55.036</u>	
		<u>129.962</u>		<u>181.090</u>
 EXPENDITURE				
A. MEETINGS				
Representation at meetings	15.944		7.536	
Program Committee	6.800		3.676	
General Assembly	<u>2.083</u>		<u>2.206</u>	
		24.827		13.418
 B. PUBLICATIONS		10.714		15.323
 C. SCIENTIFIC ACTIVITIES				
Colloquia	26.317		24.801	
Other activities				
ICM 1990	16.296		14.379	
I.C.M.I	11.655		14.317	
Conferences/ICSU	7.086		11.052	
CDE	<u>6.443</u>		<u>7.353</u>	
		67.797		71.902

D. ADMINISTRATIVE EXPENSES

Grant to C.T.S.	400		396	
Grant to I.C.M.I.	6.977		6.000	
Grant to C.D.E.	3.507		3.396	
Contribution to I.C.S.U.	2.377		1.832	
Audit fees	1.316		500	
General office expenses	5.864		4.680	
Bank charges	<u>285</u>		<u>302</u>	
	20.726		17.106	
	124.064		117.749	
	=====		=====	
	5.898		63.341	

EXCESS OF INCOME OVER EXPENDITURE

Allocated to:				
General fund	<u>5.898</u>		63.341	
	5.898		63.341	
	=====		=====	

INTERNATIONAL MATHEMATICAL UNION

Dues arrears as of January 1, 1989:

Member	Dues (Swiss francs)	Year(s)	USD
Belgium	4.000	1988	2.778
Chile	2.850	1988, 1987, 1986	1.979
France	200	part of 1988, 1987	139
Hong Kong	1.000	1988	694
Iceland	2.000	1988, 1987	1.389
Korea, D.P.R.	1.000	1988	694
Mexico	1.000	1988	694
Nigeria	4.700	1988, 1987, 1986, 1985, 1984, 1983	3.264
Pakistan	10.800	1988, 1987, 1986, 1985, 1984, 1983	7.500
Philippines	2.000	1988, 1987	1.389
Poland	4.000	1988	2.778
Romania	12.000	1988, 1987, 1986, 1985, 1984, 1983, 1982	8.333
Spain	2.000	1988	1.389
Turkey	4.850	1988, 1987, 1983, 1982, 1981, 1980, 1979, 1978	3.368
U.S.S.R.	3.000	part 1988, part 1987	2.083
Viet Nam	2.850	1988, 1987, 1986	1.979
Yugoslavia	5.700	1988, 1987, 1986	3.958
			<hr/> 44.408
			=====

1 USD = 1,44 SFR = December 31, 1988

INTERNATIONAL MATHEMATICAL UNION

Date: February 21, 1989
To: The Chairmen of the Committees for Mathematics of the IMU
Subject: *World Directory of Mathematicians*, 9th Edition
From: Professor Walter Feit, Editor
c/o American Mathematical Society
P.O. Box 6248
Providence, RI 02940

The Executive Committee of the International Mathematical Union has commissioned me to collect the material for the 9th Edition of the *World Directory of Mathematicians*. As before, the Executive Committee asks for your assistance in supplying the names and addresses of those mathematicians in your country who should be listed in the new edition. The following general rules should be observed:

1. The list of names should be ordered alphabetically according to surnames in the rules adopted by *Mathematical Reviews*. For diacritical marks, please follow the rules (listed on the enclosed separate sheet), adopted in the 6th Edition.
2. Generally, one title, such as Dr., Doz., Prof., should be given. The addresses should be complete, including postal codes (if known), but should be as short as possible.
3. The general criterion of admissibility of a person to the 9th Edition of the Directory is the existence of two (2) articles of his or hers, reviewed either in *Mathematical Reviews*, *Referativnyi Zhurnal* or *Zentralblatt*. It is important that this general criterion be upheld, even if it implies the omission of names included in earlier editions of the Directory.
4. Every National Committee has the privilege of adding a "discretionary supplement" of names. This supplement is to contain no more than 5% of the number of names eligible under rule 3.
5. Membership in a national mathematical society should be neither a necessary nor a sufficient condition for admissibility. In the interest of completeness, it is desirable to include all mathematicians living in your country who have published two articles reviewed in *Mathematical Reviews*, *Referativnyi Zhurnal* or *Zentralblatt*.

The Executive Committee is fully aware that in many countries, the Chairman of the Committee for Mathematics must delegate the preparatory work to a special Committee, working with questionnaires to Heads of Departments of Mathematics, Research Institutes, etc., but in no case should the decision for inclusion or exclusion be delegated to individuals. This is to enable the National Committees to be the judges of what the final list should be like for their own countries.

The final list of names and addresses should be sent to the World Directory of Mathematicians, c/o American Mathematical Society, Attn: Rosanne Granatiero, P.O. Box 6248, Providence, RI 02940, U.S.A. The lists should be sent to the AMS as soon as possible but no later than **October 15, 1989**.

Since the AMS will be using a computer composition system to prepare the 9th Edition, it may be possible to submit lists on some form of magnetic media rather than on paper. The AMS would be able to accept the following forms of magnetic media:

Diskettes: IBM-format (MS-DOS), any density up to 1.2MB
Macintosh format, up to 800K density
Tapes : VAX/VMS, COPY or BACKUP format, up to 6250bpi
DEC-20/TOPS-20 Dumper format up to 1600bpi

Magnetic tapes in a format other than those listed above may also be usable, with these specifications. The tape must be a standard 9-track 1/2 inch type (no cartridge or cassette tapes can be used), and should contain standard ANSI volume labels, file headers, and trailer labels. The record format on this labeled tape may be fixed length, variable length, or spanned. Variable length is preferred. Blocks should be no longer than 4096 bytes, and the data should be 8-bit ASCII.

If you wish to send the AMS a tape written in a foreign format (i.e., other than a VAX/VMS or DEC-20 tape), you should include with your tape a detailed description of the tape format, along with a printout of the contents of the tape. The printout of the contents of the tape will be used to manually key the data into the AMS's computer systems if it is deemed that the tape cannot be reliably read.

In addition to these forms of magnetic media, AMS is also on the Internet electronic mail network. Lists could be mailed to the Internet address:

WLDDIR@MATH.AMS.COM

A listing of the individuals included in the 8th Edition is enclosed for your information. Also included is the list of Mathematical Organizations as it appeared in the 8th Edition. Please provided updates for your country/area.

ALPHABETICAL ORDERING

Our alphabetical order is based on the following principles:

1. Accented characters are not distinguished from unaccented characters in determining the ordering. For example, *a* and *a* with some sign (*á*, *ã*, etc.) are not distinguished, nor are *c*, ç, *c'*, *c̃*, *ĉ*, nor *L* and *Ł*.
2. In case a family name (or corresponding part) consists of plural parts, there are several principles in ordering. We took one, which can be explained by introducing the following (imaginary) family names.
 - De La Bore, De Labore, De'Elabore, D'elabore, are completely equivalent, if their primary classifications (given by the national committees) are all D.
 - If "de la Bore" is classified by *B*, then it is equivalent to "Bore, (given name) de la".

WORLD DIRECTORY OF MATHEMATICIANS, VIIIth EDITION

The 8th edition of the World Directory of Mathematicians is now available. This 976 page directory contains the names and addresses of approximately 40 000 individual mathematicians from 83 countries.

The price of the Directory is \$ 30, plus shipping and handling, and no discounts are allowed. Shipping and handling charges are: for surface delivery - \$ 2 for the first copy, \$ 1 for each additional copy; for air delivery - \$ 5 for the first copy, \$ 3 for each additional copy. Orders should be sent to:

American Mathematical Society
Sales Department
P.O. Box 6248
Providence, RI 02940
USA

All orders must be prepaid; proforma invoices will be sent for any unpaid orders that are received.

Orders from Europe, the Middle East, and Africa should be addressed to:

Mr. Barry Emms, Managing Director
Clarke Associates - Europe Limited
Unit 2, Pool Road Trading Estate
West Molesey, Surrey KT8 0HE, England