# IMU 

BULLETIN<br>OF THE<br>INTERNATIONAL MATHEMATICAL UNION

No. 25
SPECIAL NUMBER

TENTH GENERAL ASSEMBLY 1986

## SECRETARIAT

Department of Mathematics
University of Helsinki
Hallituskatu 15
SF-00100 Helsinki 10
Finland

## Contents

Agenda for the Tenth General Assembly ..... 5
Report of the Executive Committee to the General Assembly Members ..... 6
Scientific activities ..... 7
ICMI ..... 11
CDE ..... 13
Publications of the Union ..... 15
Financial reports 1982-1985
Comparison with the budgets ..... 16
Balances of the Union's bank accounts ..... 17
Subventions from ICSU ..... 18
Financial reports on scientific activities ..... 19
Special Appeal Fund ..... 20
Membership dues ..... 21
World Directory of Mathematicians, 6th edition ..... 23
World Directory of Mathematicians, 7th edition ..... 24
ICMI Accounts ..... 26
CDE financial statement ..... 30
Postal ballots ..... 31
Executive Committee meetings ..... 32
Representation at other international organizations ..... 32

# INTERNATIONAL MATHEMATICAL UNION EXECUTIVE COMMITTEE <br> (January 1, 1983 - December 31, 1986) 

| President: | Professor Jürgen Moser |
| :---: | :---: |
| Vice-Presidents: | Professor L.D. Faddeev |
|  | Professor J-P. Serre |
| Secretary: | Professor 0lli Lehto |
| Members: | Professor S. Mizohata |
|  | Professor G.D. Mostow |
|  | Professor M.S. Narasimhan |
|  | Professor Czesław Olech |
|  | Professor J. Palis Jr. |

TENTH GENERAL ASSEMBLY
OF THE
INTERNATIONAL MATHEMATICAL UNION

OAKLAND, CALIFORNIA, USA, July 31 - August 2, 1986
(Opening session: 10.00 a.m.)

AGENDA

1. Opening of the Assembly
2. Address by the President
3. Appointment of Committees
(i) Credentials Committee
(ii) Resolutions Committee
(iii) Tellers
(iv) Committee for Finance and Dues
(v) Nominating Committee
4. Change of Statutes
5. Members
6. Review of the activities of the Union:

A - (i) Symposia and conferences, (ii) IMU lectures, (iii) ICMI, (iv) CDE

B - (i) IMU Bulletin, (ii) World Directory of Mathematicians
7. Finance and dues:

A - Financial reports for the years 1982-1985
B - Budget for 1987-1990
8. Elections:
(i) Executive Committee of IMU
(ii) Executive Committee of ICMI
(iii) CDE
(iv) Representatives of IMU to ICSU, COSPAR, CTS
9. Adoption of Resolutions
10. Next meeting of the General Assembly
ll. Any other item with the permission of the President

Report of the Executive Committee to the Tenth General Assembly

This report covers the period from July l, 1982, to June 30, 1986.

Members

The Union has 52 members, with two new members admitted during the period of this report. Chile, admitted at the Ninth General Assembly of the Union, entered the Union on January 1, 1983, and Malaysia, following a ballot among the National Adhering Organizations, on January l, 1985.

The group of adherence of Poland was lowered, following a ballot, from IV to III in 1983, and the group of Canada was raised from III to IV, also following a ballot, in 1986.

The members of the Union, as of January 1, 1986, were the following:
Group I: Cameroon, Chile, China-Taiwan, Cuba, Egypt, Greece, Hong Kong, Iceland, Iran, Democratic People's Republic of Korea, Republic of Korea, Malaysia, Mexico, New Zealand, Nigeria, Norway, Philippines, Portugal, Singapore, Turkey, Viet Nam;

Group II: Argentina, Austria, Bulgaria, Denmark, Finland, Ireland, Israel, Pakistan, Romania, South Africa, Spain, Yugoslavia;

Group III: Australia, Belgium, Brazil, Czechoslovakia, Democratic Republic of Germany, Hungary, India, Netherlands, Poland, Sweden, Switzerland;

Group IV: Canada, Italy;
Group V: France, Federal Republic of Germany, Japan, United Kingdom, U.S.A., U.S.S.R.

The total voting strength is 116 .

Scientific activities of the Union

1982: VIth SEAMS General Meeting, Manila, Philippines, postponed from 1981. A grant from ICSU to this meeting was $\$ 3000$ ( 6036 Swiss francs).

1983: International Congress of Mathematicians, Warsaw, Poland, August 16-24, 1983.
The work of the Congress was divided into 19 sections with 145 invited lecturers. The participants were also able to give short communications and attend seminars. The Congress was attended by about 2200 participants from 65 countries. A more extensive description of the Congress has been printed in the IMU Bulletin No. 2l. The Congress Proceedings came out in 1984. The IMU subvention totalled $\$ 43337$ ( 87194 Sw. frs.).

IMU awarded travel grants to young mathematicians from developing countries and countries with severe monetary regulations to help them to attend the Congress. Grants were given to 33 persons from 21 countries; the total amount granted was \$ 32345 ( 67471 Sw . frs.).

In connection with the ICM, ICMI held a symposium on the Goals and the Content of General Mathematics Education, on August 17-22. There were 15 invited lectures and a concluding panel discussion. The grant by IMU was \$ 2000 (4 172 Sw. frs.).

Summer School on the History of Mathematics, Toronto, Canada, July 25 - August 2, 1983. The meeting aimed at improving mathematicians' competence in history for classroom use and acquainting historians of mathematics with the pedagogical needs of mathematicians. IMU granted \$ 2000 ( 4172 Sw. frs.) to this meeting.

The VIIth International Congress on Mathematical Physics, Boulder, Colorado, August 2-10, 1983. A wide variety of the most important recent developments in theoretical physics and mathematical techniques were presented. In addition to plenary sessions and sessions devoted to specialized topics, there were sessions for contributed papers and posters. The IMU support was \$ 4000 ( 8344 Sw. frs.).

The Second Inter-African Symposium on Partial Differential Equations, Yaoundé, Cameroon, September 26-30, 1983. About 70 mathematicians and engineers from 18 countries attended this meeting. The main lectures treated topics covering a selection of mathematical techniques in Partial Differential Equations likely to be useful in the solution of concrete problems. IMU granted $\$ 4000$ ( 8344 Sw . frs.) to the symposium.

Second International Conference on Operator Algebras, Ideals, and their Applications in Theoretical Physics, Leipzig, GDR, September 25 - October 2, 1983. The program was divided into three main topics: topological algebras and their representations, operator ideals and geometry of Banach spaces, and algebraic approach to quantum field theory and statistical physics. IMU granted $\$ 1000$ (2086 Sw. frs.) to the conference.

School Mathematics in and for Changing Societies, Tokyo, Japan, October 10-14, 1983. This conference was the main regional activity of ICMI in the early 80 's. The meeting was attended by 380 participants from 27 countries. IMU/ICSU support was $\$ 2000$ (4 172 Sw. frs.).

1984: International Colloquium on Vector Bundles on Algebraic Varieties, Bombay, India, January 9-16, 1984. The purpose of the meeting was to highlight recent developments in the general area of vector bundles as well as principal bundles on both affine and projective varieties. Topics covered included also projective modules and quadratic spaces over general rings. IMU granted $\$ 5000$ (11640 Sw. frs.) to the colloquium.

ICMI-SEAMS Third Southeast Asian Conference on Mathematical Education, Hat Yai, Thailand, May $22-25,1984$. The theme of the conference was "Mathematics Education in the Computer Age". There were 150 participants from 12 countries. The program included invited lectures, contributed papers, panel discussions and informal group discussions. IMU granted \$ 1400 to this meeting, of which $\$ 400$ ( 931 Sw. frs.) are recorded in the 1984 accounts.

ELAM VII (Latin American School of Mathematics), Caracas, Venezuela, July 16-27, 1984. The main topic of the conference was differential equations with emphasis on geometric aspects. There were about 100 participants from various countries. IMU granted $\$ 5000$ to this meeting, $\$ 441$ of which was returned. Thus the final IMU contribution was 10613 Sw. frs.

The Fifth International Congress of Mathematical Instruction, Adelaide, South Australia, August 24-30, 1984. The Congress was attended by 1984 participants representing 69 countries. In addition to plenary lectures, there were action and theme groups, short communications and a number of exhibitions. IMU supported the Congress with $\$ 15000$ ( 43920 Sw. frs.)

International Conference on Contemporary Problems of Algebra and Analysis, Moscow-Leningrad, September 24-28, 1984. The conference was attended by 40 foreign and 120 Soviet mathematicians. There were plenary lectures, seminars and informal meetings both in Moscow and Leningrad. IMU supported this conference with 5000 Sw. frs.

ICMI received a sum of \$ $2000(4656$ Sw. frs.) from ICSU for its project Mathematics as a Service Study.

CDE received a grant of \$ 5000 ( 11640 Sw. frs.) from ICSU for the First Inter-African Symposium on Mathematical Modelling, Ibadan, Nigeria, August l-12, 1984.

Professor M. Kashiwara from Kyoto University was appointed as the IMU lecturer in 1984. He gave a series of four lectures at the University of Berne; the lectures have been submitted for publication to l'Enseignement Mathématique.

1985: International Conference on Banach Spaces and Classical Analysis, Kent, Ohio, July 28 - August 10, 1985. The principal aim of this conference was to consolidate the insights made during recent years in harmonic analysis, complex analysis, and probability, from a Banach space perspective. The conference was attended by 275 mathematicians from over 35 countries. IMU granted 5000 Sw . frs. to this conference.

EQUADIFF 6 (International Conference on Differential Equations and their Applications), Brno, Czechoslovakia, August 25-30, 1985. The topic of the conference was differential equations in a broad sense. The main goal was to stimulate cooperation between various branches in differential equations. The conference was attended by 466 mathematicians from 31 countries. The IMU support was 7000 Sw. frs.

ICSU granted ICMI \$ 2000 (4920 Sw. frs.) for the International Seminar on the Influence of Computers and Informatics on Mathematics and its Teaching. ICMI organized this seminar on March 25-30, in Strasbourg, France.

ICSU granted \$ 5000 ( 12300 Sw. frs.) to CDE for the International Training Course on Partial Differential Equations of Fluid Mechanics.

International Commission on Mathematical Instruction

Report on the period 1983-1986

## 1. Executive Committee

Formal meetings of the Executive Committee were held in Adelaide, in August, 1984, and in Paris in February, 1986.

Informal meetings were held in Warsaw (August, 1983), Tokyo (October, 1983) and Strasbourg (March, 1985). A further informal meeting is planned for Berkeley (August, 1986).
2. Membership

The following countries have been admitted into membership of ICMI: Costa Rica, Cuba, Ghana, Ivory Coast, Mozambique.
3. General Assembly

A General Assembly of ICMI attended by representatives from 26 countries, was held in Adelaide, Australia in August 1984. A full-day General Assembly is planned for Budapest, Hungary in July 1988.

## 4. ICMI Studies

A feature of ICMI's work during the past years has been the launching of three studies:
(a) The impact of the Computer and Informatics on Mathematics and its Teaching
A discussion document was prepared and published (in English) in L'Enseignement Mathématique in Summer 1984. (This document also appeared in translation in several other languages including French, Spanish, Japanese and Polish.)

A symposium was held in Strasbourg in March 1985 and was attended by some 70 participants (see Zentralblatt für Didaktik der Mathematik, 1986(2) for an account).
Arising from that meeting were two publications: the official proceedings which were published as ICMI Study Series l by the Cambridge University Press (1986), and a volume of 'Supporting Papers', published by the IREM, Strasbourg and distributed in North America by the Mathematical Association of America. An Arabic translation of the Proceedings is being prepared.
Follow-up talks have been given at other international conferences and a 'follow-up' meeting was arranged in Marseille-Luminy in January, 1986.
(b) School Mathematics in the 1990s

A discussion document was widely circulated in 1985 and précis appeared in a number of mathematical journals.
A closed meeting of invited mathematics educators was held in Kuwait in February, 1986 under the generous patronage of the Kuwait Foundation for the Advancement of Science, the Kuwait Ministry of Education, and Kuwait University.
The Proceedings are being prepared and will appear as No. 2 in the ICMI Study Series.
(c) Mathematics as a Service Subject

A discussion document relating to this study, which is being jointly undertaken with ICSU-CTS, will appear in English in the next issue of L'Enseignement Mathématique. Again, the document will also be published in various other languages.

An international meeting on the subject will be held at the International Centre for the Mechanical Sciences, Udine, Italy in April, 1987.

It is hoped soon to begin work on a study on 'cognition'.
Further areas being considered for future studies include:
The popularisation of mathematics;
Different modes of student assessment and their effects on teaching and learning;
Teacher education.
Money to fund the studies have been received from a number of agencies and institutions and it is intended to make a further appeal for funds.

## 5. Scientific Meetings

(a) International Congress on Mathematical Education

A most successful congress was held in Adelaide in August, 1984. It was attended by just under 2000 members drawn from 69 different countries.
(b) International Congresses of Mathematicians

A series of special sessions was arranged at the 1983 Warsaw ICM around the theme of 'What should be the goals and content of general mathematical education?'

A series of sessions surveying the range of ICMI activities is planned for the Berkeley ICM in August, 1986.
(c) Regional Meetings

Regional meetings have been held in Japan (JSME) in October, 1983, Thailand (SEAMS) in May, 1984, and in Mexico (IACME) in November, 1985. Further meetings are provisionally planned for Singapore (SEAMS) in 1987 and Dominican Republic (IACME) in 1987.
(d) Other meetings

In addition to the meetings to which reference has already been made, ICMI has helped sponsor a meeting on computers in developing countries (ICOMIDC/IFIP, Tunisia, 1986) and on classroom observation methods (England, September, 1986).
(e) ICME 6

The Sixth ICME will be held in Budapest, Hungary in July/August 1988. An International Program Committee was appointed and met for the first time at Oxford, England in August, 1985. A second meeting is planned for July, 1986 in Hungary.
(f) ICME 7

Bids to host ICME 7, 1992 have been received. It is hoped to make a decision in early 1987 on where ICME 7 will be held.
6. Bulletins

The following Bulletins have been published: No. 13 in February, 1983, No. 14 in October, 1983, No. 15 in January, 1984, No. 16 in June, 1984, No. 17 in December, 1984, No. 18 in June, 1985, and No. 19 in December, 1985.
7. ICMI Study Groups

The International Group for the Psychology of Mathematics Education has continued to hold an annual conference. These have been held in 1983 in Israel, in 1984 in Australia, in 1985 in the Netherlands, in 1986 in England, and will be held in 1987 in Canada and in 1988 in Hungary.
The International Study Group for the Relations between the History and Pedagogy of Mathematics has also continued to maintain a high level of activity.
8. IMO Site Committee

The IMO SC has continued to arrange appropriate sites for the annual International Mathematical Olympiads.
9. Finances

Copies of the ICMI accounts for the years 1983 , 1984 and 1985 appear elsewhere in this Bulletin, together with a statement referring to the 'Studies' account held at the Fondation de France.

14 March 1986

A.G. Howson

Commission on Development and Exchange

Brief report of activities 1982-1986

1. Support of scientific activities in developing countries

Grateful to ICSU grants the CDE has financially supported four mathematical seminars in developing countries: Cameroon (1983), Brazil and Nigeria (1984) and Nigeria (1985).
2. Selective Bibliography of Mathematics

This project, adopted by the General Assembly of IMU in Warsaw (1982) is a programme to help developing countries to start constitution of their mathematical libraries taking in account their financial difficulties and the lack of local specialists. The first draft of this Selective Bibliography, prepared by DIEUDONNE has been published in 1985. Various contributions of many other mathematicians will be published in 1986.
3. Mathematical Directory of the developing countries

The purpose of this project is to collect and publish a maximum amount of information on the state of mathematics and mathematics institutions in the developing countries, especially relating to human and material resources, teaching and research activities and facilities. A questionnaire has been sent to all mathematical institutions in developing countries.

First contributions have been published in June 1985. A global directory is in preparation in cooperation with the International Centre for Pure and Applied Mathematics (Nice, France).
4. Travel grants

Grateful to UNESCO grant, the CDE has contributed financially to ICME 5 (Adelaide) and to the IMU Programme of travel grants for ICM 86.
5. Bulletin "Mathematics and Development"

The IMU/CDE has supported scientifically and financially (through UNESCO) the launching of this Bulletin in cooperation with ICPAM (International Centre for Pure and Applied Mathematics), Nice, France. The first issue was devoted to the Selective Bibliography of Mathematics, the second to the mathematical directory of developing countries and the third again to the Selective Bibliography of Mathematics.
6. Cooperation with other organizations

The IMU/CDE has cooperated with various organizations to promote support of mathematical activities in developing countries, mainly with UNESCO, ICSU, Third World Academy of Sciences, International Centre for Pure and Applied Mathematics (Nice), International Centre for Theoretical Physics (Trieste). In this cooperation IMU/CDE has worked mainly as scientific advisor.

Publications of the Union

Six issues of the Bulletin have come out during the four year period:
No. 19, December 1982;
No. 20, June 1983;
No. 21, November 1983;
No. 22, September 1984;
No. 23, June 1985;
No. 24, November 1985.

In addition to this Special Number Bulletin 25, No. 26 Bulletin will come out later in 1986.

World Directory of Mathematicians

The final report for the 6th edition of the World Directory of Mathematicians was given by Professor M. Nagata in November 1982. The financial report is included among the other financial reports.

The 7th edition was prepared under the supervision of Professor M. Nagata. The printing was done by the American Mathematical Society, which was also one of the distributors. The other distributors were North-Holland and Kinokunyia. The directory was also sold directly from the Bureau of WDM in Kyoto. The financial report is printed elsewhere in this Bulletin.

The 8th edition is supervised by Professor G.D. Mostow, and the printing is done again by AMS. The 8th edition is due in the summer 1986.

## International Mathematical Union

Financial report for the years 1982-1985 in Swiss francs

|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Budget | 1982 | Actual | 1983-1986 | 1983 |
| Budget | Actual | 1984 | 1985 |  |
| Actual | Actual |  |  |  |

Expenditure:
Schedule A:

| Secretarial help, IMU office | 11 |  | 11 | 916 | 15 | 000 |  | - |  | - |  | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Secretarial help, President | 1 | 300 |  | - | 1 | 500 |  | - | 1 | 500 | 1 | 500 |
| ICMI |  | 900 | 4 | 024 | 4 | 000 | 4 | 000 | 4 | 000 | 4 | 000 |
| CDE |  | - | 2 | 012 | 3 | 000 | 3 | 000 | 3 | 000 | 3 | 000 |
| C.T.S. |  | 900 |  | 804 |  | 900 |  | 834 |  | 935 |  | 984 |
| Office expenses (including postage) | 5 | 200 |  | - | 6 | 000 |  | 980 |  | 179 | 2 | 923 |
| Travel expenses of the E.C. | 18 | 200 | 34 | 660 | 19 | 000 | 16 | 475 | 18 | 426 | 13 | 599 |
| President's and Secretary's expenses | 1 | 850 | 5 | 009 | 1 | 500 |  | 693 | 1 | 517 | 2 | 369 |
| Contribution to ICSU | 2 | 500 | 2 | 243 | 3 | 000 | 2 | 762 | 3 | 201 | 3 | 785 |
| IMU Bulletin | 2 | 600 | 5 | 831 | 3 | 000 |  | 497 |  | 479 |  | 572 |
| Audit fee | 1 | 000 | 3 | 236 | 1 | 500 | 1 | 446 | 1 | 397 | 1 | 476 |
| General Assembly | 2 | 600 | (-3 | 232) | 2 | 600 | 2 | 600 | 2 | 600 | 2 | 600 |
| World Directory of Mathematicians | 10 | 000 | 41 | 311 | 10 | 000 | 19 | 576 |  | - | 10 | 000 |
| Contingencies | 2 | 500 |  | 45 | 2 | 000 |  | - | 3 | 000 | 3 | 000 |
| Total | 61 | 250 | 107 | 859 | 73 | 000 | 52 | 863 | 40 | 234 | 49 | 808 |

Schedule B:
Scientific activities
IMU Fellowship Fund
Consultative/Program Committee
IMU Development Fund
Subvention to ICM
Iotal

A+B. Total

| 60000 | 6036 | 70000 | 100 | 213 | 81 | 262 | 31 | 680 |
| ---: | :---: | ---: | ---: | :---: | :---: | :---: | :---: | :---: |
| 6000 | - | 4000 | - | - | - |  |  |  |
| 4000 | - | 4250 | 4067 | 8 | 993 | 9 | 453 |  |
| 10000 | - | 6000 | - | 12000 | 6 | 000 |  |  |
| 18750 | - | 18750 | 18750 | 18 | 750 | 18 | 750 |  |
| 98750 | 6036 | 103000 | 123030 | 121005 | 65 | 883 |  |  |
| 160000 | 113895 | 176000 | 175893 | 161 | 239 | 115 | 691 |  |


| Income: |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Membership dues | 93 | 000 | 104 | 072 | 136 | 000 | 111 | 033 | 141 | 894 | 139 | 626 |
| ICSU subvention | 35 | 000 | 27 | 782 | 25 | 000 | 30 | 677 | 38 | 635 | 48 | 231 |
| Sales of WDM | 7 | 000 | 2 | 972 | 7 | 000 | 38 | 134 |  | 917 | 9 | 309 |
| Special Appeal Fund | 25 | 000 | 8 | 193 | 8 | 000 | 2 | 989 |  | - | 4 | 521 |
| Bank interest (less charges) |  | - | 3 | 621 |  | - | 4 | 122 | 5 | 306 | 15 | 842 |
| Total | 160 | 000 | 146 | 640 | 176 | 000 | 186 | 955 | 186 | 752 | 217 | 529 |

Balances of the Union's bank accounts at the end of the financial year, 1982-1985, in Swiss francs


Subvention from the International Council of Scientific Unions (ICSU) in 1982-1985, in Swiss francs.

| 1982: | Basic allocation | 21746 |  |
| :---: | :---: | :---: | :---: |
|  | Grant, CDE | 6036 | 27782 |
| 1983: | Basic allocation | 22333 |  |
|  | Grant (travel grants) | 4172 |  |
|  | Grant, ICMI | 2086 |  |
|  | Grant, CDE | 2086 | 30677 |
| 1984: | Basic allocation | 22339 |  |
|  | Grant, ICMI | 4656 |  |
|  | Grant, CDE | 11640 | 38635 |
| 1985: | Basic allocation | 31011 |  |
|  | Grant, ICMI | 4920 |  |
|  | Grant, CDE | 12300 | 48231 |

Total for 1982-1985 145325
Budget for 1982-1985
110000

```
Financial report for scientific activities of the Union in 1982-1985
in Swiss francs
1982: SEAMS/CDE, Manila (ICSU) 6 036
    (ICM 82
87 194)
                                    636
1983: Toronto
472
    Boulder 8 344
    Yaoundé 8 344
    Leipzig 2086
    Travel grants 67471
    ICMI regional conferences 4 172
            Warsaw 4 172
            Other l }45
                                    100 213
1984: Bombay
11 }64
    Caracas 10 613
    Moscow 5000
    ICMI ICME 5 34 920
    SEAMS/Hat Yai 931
    ICSU grant 4656
    CDE, ICSU grant ll 640
    IMU lectures 1 862
    81 262
1985: Kent 5 000
    Brno 7000
    ICMI SEAMS (84) 2460
            ICSU grant 4920
    CDE, ICSU grant 12 300
    31680
Total for 1982-1985
(87 194) + 219 191
Budget for 1982-1985:
4 0 7 7 5 0
```

Special Appeal Fund
Donations in the years 1983-1985 in Swiss francs
1983:
Wiskundig Genootschap ..... 2403
London Mathematical Society ..... 1600

$$
4003
$$

Erroneous sum (82) credited -1 012 ..... 2991
1985:
London Mathematical Society ..... 3589
Danish Mathematical Society ..... 494 ..... 4083
Interest ..... 435
Total ..... 7509

International Mathematical Union

Membership dues paid in the years 1982-1985 in Swiss francs

| Group of adherence | I | II | III | IV | V |
| :--- | :--- | :---: | :---: | :---: | :---: |
| Units of dues | 1 | 2 | 3 | 7 | 10 |
| Unit: 600 Swiss francs in | 1982, | 850 | Swiss | francs in | $1983-1985$. |

Payment in

| Country and group | 1982 | 1983 | 1984 | 1985 |
| :---: | :---: | :---: | :---: | :---: |
| Argentina II | 1200 |  | 1190 * | 3875 ** |
| Australia III | 2400 | 3400 | 3400 | 3400 |
| Austria II | 1200 | 1700 | 1700 | 1700 |
| Belgium III | 2400 * | 2400 * | 3400 * | 3400 * |
| Brazil III | 3692 | 5853 ** | 3400 | 3400 |
| Bulgaria II | 1200 | 1700 | 1700 | 1700 |
| Cameroon I | 543 | 814 | 722 | 984 |
| Canada III | 2400 | 3400 | 3400 | 3400 |
| Chile (member 1983) I | - | 855 | 954 | 1046 |
| China-Taiwan I | 600 | 850 | 850 | $1700^{l}$ |
| Cuba I |  | 1360 ** | 850 | 850 |
| Czechoslovakia III | 2400 | 3400 | 3400 |  |
| Denmark II | 1200 | 1700 | 1700 | 1700 |
| Egypt, Arab R. I | 600 |  | 850 * | 1700 ** |
| Finland II | 1200 | 1700 | 1700 | 1700 |
| France V | 5565 | 5651 | 10928 ** | 9924 ** |
| German D.R. III | 2400 | 3400 | 3400 | 3400 |
| Germany, F.R. V | 6000 | 8500 | 8500 | 8500 |
| Greece I | 1200 ** | 850 | 850 |  |
| Hong Kong I | 600 | 850 |  | 1700 ** |
| Hungary III | 2400 | 3400 | 3400 | 3400 |
| Iceland I | 600 | 850 |  | 850 * |
| India III | 2400 | 3400 | 3400 | 3400 |
| Iran I | 600 | 1450 ** | 850 | 850 |
| Ireland II | 1200 | 1700 | 1700 | 1700 |
| Israel II | 1143 | 1700 | 1700 | 1700 |
| Italy IV | 8400 * | 4200 * | 11900 ** | 5950 |


| Country and group | Payment in |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1982 | 1983 | 1984 | 1985 |
| Japan V | 6000 | 2500 | 14500 ** | 8500 |
| Korea, D.R. I | 590 | 850 |  | 1700 ** |
| Korea, R. I | 600 | 850 | 850 | 850 |
| Malaysia (member 1985) I | - | - | - | 850 |
| Mexico I |  |  | 2300 ** | 850 |
| Netherlands III | 1931 |  | 3400 * | 6800 ** |
| New Zealand I | 600 | 841 | 850 | 850 |
| Nigeria I | 3000 ** |  |  | 615 |
| Norway I | 600 | 850 | 850 |  |
| Pakistan II |  | 1200 * |  |  |
| Philippines I | 1800 ** | 850 |  | 782 |
| Poland IV - III | 5800 |  | 3400 | 3400 |
| Portugal I | 600 | 850 |  | 850 |
| Romania II | 1200 * |  |  |  |
| Singapore I |  | 1450 ** | 850 | 850 |
| South Africa II | 1200 | 1700 | 1700 | 1700 |
| Spain II | 1200 | 1700 | 1700 | 1700 |
| Sweden III | 2400 | 3400 | 3400 | 3400 |
| Switzerland III | 2400 | 3400 | 3400 | 3400 |
| Turkey I |  |  | 850 |  |
| United Kingdom V | 6000 | 8500 | 8500 | 8500 |
| U.S.A. V | 5986 | 8959 | 8500 | 8500 |
| U.S.S.R. | 6000 | 6000 | 11000 ** | 8500 |
| Viet Nam I |  | 2050 ** |  |  |
| Yugoslavia II | 2622 ** |  |  | 5100 ** |
| Total | 104072 | 111033 | 141894 | 139626 |

* concerns payment for previous year(s)
** includes a payment for previous year(s)
1 includes an advance payment
Dues arrears as of December 31, 1985, in Swiss francs:
Belgium 3400, Czechoslovakia 3400, Greece 850, Iceland 850, Nigeria 1850 (1983,1984,1985), Norway 850, Pakistan 5100 (1983,1984,1985), Philippines 850, Portugal 850, Romania 6300 (1982,1983,1984,1985), Turkey 4700 (1978-1983,1985), Viet Nam 1700 (1984, 1985).

World Directory of Mathematicians
6th Edition (1978)

Final Report

This report is based on the final report by Professor M. Nagata, on November 30, 1982, as published in the IMU Bulletin 19. Yens and dollars have been converted to Swiss francs using the UN average rates of exchange for the year 1982.

Income:
Swiss francs
Sales in
$1978 \quad 3477$
1979
12128
1980
10684
1981
2913
1982
2012
31214
Interest
less charges $\quad 269$
Total income
31755

Expenditure:
Cost of printing 36351
Postage etc.
Total expenditure
7191
43543

The total number of copies produced was 2000 , out of which 1190 were sold and 58 given as presents. Thus the stock remaining at the end of the period was 752 copies.

World Directory of Mathematicians
7th Edition (1982)

Financial report for the years 1983-1985:

The account at Dai-Ichi Kangyo Bank was closed at the end of the year 1985 and its balance was transferred to Colonial Bank, New Haven.

Colonial Bank, New Haven USD Swiss francs

Balance 1.l. 1983
0
AMS 7.7.1983 5284
11022
North-Holland 12.8.1983
AMS 5.8.1984
North-Holland 6.11.1984
Interest 1984
Balance 31.12.1984
3000
6258
5398.51

12568
$1125 \quad 2619$
$\begin{array}{ll}1329.44 \\ 16136.95 & 3095 \\ 35562\end{array}$

AMS 1985
North-Holland 1985
Dai-Ichi Kangyo, transfer
Interest 1985
Balance 31.12.1985
$3244 \quad 7980$
5401328
$3702.24 \quad 9108$
1375.99
24999.18 $\frac{3385}{57363}$

The financial report above covers the sales for the years 1982-1984 for American Mathematical Society ( 748 copies) and North-Holland ( 371 copies) and the sales for the years 1982-1985 for Kinokunya and the Kyoto office of WDM ( 230 copies). AMS has reported the sales for 85 copies in 1985 and North-Holland for 14 copies. With 54 copies given or damaged, the remaining stock of the directories was, at the end of the year 1985 , 538 copies out of a total of 2040 printed.

The following page consists of the final report on the World Directory account in Japan.

# DEPARTMENT OF MATHEMATICS <br> FACULTY OF SCIENCE <br> KYOTO UNIVERSITY <br> KYOTO, JAPAN 

Final Report on WDM-account in Japan
(1) Number of copies

$$
\text { At the start in } 1982 \text { (7th edition) } 450
$$

Balance at the end of 1984255
Sold in 198535
Balance at the end of 1985220
(2) Bank account

Balance at the end of 1984
¥630, 826
Income through selling ( 35 copies) ¥122, 100
Interests
Total
¥757,998
(3) Sending the amount to WDM-account in USA

Bank charge 将2,500
Exchange rate ¥ 203.90 $(757998-2500) / 203.9=3705.2378$
Thus the amount of $\$ 3,705.24$ was sent to WDM-account at Professor G. Moscow.

Since I do not expect any more selling of the copies of the 7 th edition, I closed the bank account in Japan, and this report is the final report on the WDM-account in Japan.

December 16, 1985

M. Nagata

1983
Dollar Account (as at 3 January 1984)


Sterling Account (as at 3 January 1984)

| Income | $\nsim$ | Expenditure | f |
| :---: | :---: | :---: | :---: |
| Transfer from P.J. Hilton | 122 | AGH's visits to Paris |  |
| Transfer from E. Stenson <br> (ICMI Bulletin account) |  | (1982-83 (3)) | 274 |
|  |  | Other secretarial expenses 6 |  |
| IMU contribution for 1983 | 1289 | Reproduction and postage |  |
| IMU to EC expenses | 322 | Bulletin 13 | 165 |
| Royalties on Developments in |  | Bulletin 14 | 99 |
| Mathematical Education | 23 | EC travelling expenses | 200 |
|  | 2261 | AGH visit to Paris (7-8.1.84) 72 University of Southampton: secretarial expenses |  |
|  |  |  |  |
|  |  |  | 216 |
| Interest (less bank charges) |  | Bank balance at 3 January 1984 Deposit Current |  |
|  | 85 |  |  |
|  |  |  | 1033 |
|  |  |  | 97 |
|  | 2346 |  | 2346 |

Dollar Account


Sterling Account

| Income |  |  |
| :--- | ---: | ---: |
| Bank balance at |  | 130 |
| $\quad 3$ January 1984 |  |  |
| Royalties on Developments |  |  |
| in Mathematical Education | 34 |  |
| Transfer from Dollar |  |  |
| $\quad$ Account | 306 |  |
| Interest (less charges) | 37 |  |

Expenditure
A.G.H. visit to Paris Jan 7/8 ..... 29
Postage (Bulletin 15) ..... 60
Printing (Bulletin 15) ..... 75
EC Expenses
Z. Semadeni (Southampton) ..... 31
J-P. Kahane (Bielefeld) ..... 201
B. Christiansen (Adelaide) ..... 150
A.G.H. (Adelaide) ..... 104 **
A.G.H. (Budapest) ..... 199
B. Nebres (Southampton) ..... 10
Postage (Bulletin 16) ..... 64
Printing (Bulletin 16) ..... 80
Balance at
4 January 1985 ..... 3504 *
4507

* Commitments include:Service Study1653
Southampton University ..... 500
Postage and Printing ..... 175$\nless 2328$** Includes cost of presentations to organizers

ICMI Accounts
4 January 1985 - 8 January 1986
Dollar Account

| Income | $\$$ |
| :---: | :---: |
| Balance at 4 January 1985 | 15172 |
| IMU Secretarial and EC expenses | 2617 |
| UNESCO Oxford meeting | 2000 |
| ICSU Strasbourg | 2000 |
| IMU Ivory Coast Meeting | 500 |
| UNESCO Bulletins | 2000 |
|  | 24289 |
| Interest (less charges) | 712 |

Sterling Account

| Income |  | $\mathcal{L}$ | Expenditure | $\mathcal{L}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Balance at 4 January 1985 | 3 | 504 | Soton University (for 1984) |  | 500 |
| CUP Royalties |  | 90 | Bulletins and postage |  | 509 |
| Royal Society (for Studies) | 1 | 000 | Service Study |  | 50 |
| Sweden (postage) |  | 20 | Strasbourg |  | 889 |
| Transfer from dollar account | 4 | 694 | IPC meeting | 2 | 511 |
| ICME 5 (Repayment of loan) | 2 | 923 | AGH visit to Paris (June) |  | 183 |
| CDE (Repayment of expenses) | 2 | 214 | Nottingham meeting |  | 150 |
|  |  | 445 | Service Study P.C. |  | 376 |
| Interest (less charges) |  | 590 | Soton University (1985) services |  | 850 |
|  |  |  | Balance on 8 January 1986 <br> Higher Rate <br> Current | 8 | 714 <br> 303 |
| $\not 2$ | 15 | 035 | $\nsim$ | 15035 |  |
| French Franc Account |  |  |  |  |  |
| Income |  |  |  | Expenditure |  |  |
| Transfer from Strasbourg | 20 | 722 | Service Study P.C. | 2 | 000 |
| Interest |  | 143 | Balance at 8 January 1986 |  | 865 |
|  |  | 865 |  |  | 865 |


| Expenditure | $\$ \$$ |
| :--- | ---: |
| ICME 6 (to Budapest) | 1500 |
| Strasbourg (Computer Study) | 3840 |
| IPC (Oxford meeting) | 800 |
| Ivory Coast meeting | 500 |
| Transfer to Sterling Account | 6000 |
| Service Study P.C. | 505 |
| Balance at 8 January 1986 | 11856 |
|  |  |

Expenditure ..... 500 ..... 509
Service Study ..... 889
AGH visit to Paris (June) ..... 183
Service Study P.C. ..... 376 ..... 850
Higher Rate ..... 714
15035ExpenditureService Study P.C. 200020865

Débit

| Cornu | 742,40 | Dons entreprises Hermann | 1000,00 |
| :---: | :---: | :---: | :---: |
| Pluvinage | 462,00 | " " IBM Europe | 39 906,16 |
| Churchhouse (Réunion Paris ENS) | 2 251,57 | " " IBM France | 20000,00 |
| Van Lint | 1606,57 |  |  |
| Ralston | 5714,12 | UNESCO (The Influence of computers...) (preliminary study) | 5000,00 |
| Enseignement Mathématique | 2582,47 | UNESCO (les Math. comme instrument. . ) |  |
| Symposium Strasbourg | 40000,00 | - (étude préliminaire) | 4000,00 |
|  |  | UNESCO (The Influence of computers...) | 14 350,00 |
| Journees :Marseille-Luminy | 5000,00 | UNESCO (les Math. comme instrument. .) | 6000,00 |
|  | 58358,73 |  |  |
| B.JLINCE | 31897,43 |  |  |
|  | $\underline{9}=256=16$ |  | 90256,16 |

## Crédit

UNESCO (The Influence of computers...) (preliminary study)

5000,00
UNESCO (les Math. comme instrument. .) (étude préliminaire)

4 000,00
UNESCO (The Influence of computers...) 14 350,00
UNESCO (les Math. comme instrument. .) 6000,00

90256,16

## INTERNATIONAL MATHEMATICAL UNION (I.M.U.)

- Commission on Development and Exchange (C.D.E.) -

Chairman : Professor Henri hogbe-nlend (Cameroon)

O3 MARCH, 1986

C D E FINANCIAL STATEMENT (1982-1986)
(in U.S. Dollars)


```
Postal ballots conducted among the National Adhering Organizations in
the years 1983-1985:
No. 20 May 5 - July l, 1983
    Change of Group of Poland from IV to III
    34 countries answered with 76 votes, all of them in favor
    Total voting strength: ll4 votes
No. 21 October 12 - December 15, 1984
    Admission of Malaysia to the Union
    36 countries answered with }82\mathrm{ votes, all of them in favor
    Total voting strength: ll4 votes
No. 22 May 27 - October 1, 1985
    Change of Group of Canada from III to IV
    30 countries answered with 67 votes, all of them in favor
    Total voting strength: 115
```

Executive Committee business conducted by postal ballot:

No. 1 August 1983
Support for the Second Inter-African Symposium on Partial Differential Equations, \$ 4000 granted.

No. 2 August 1984
Admission of Malaysia to IMU. Support for "Banach Space Theory and Classical Analysis", 5000 Swiss francs granted.

No. 3 October 1984
Admission of Ghana to ICMI.

No. 4 January 1985
Admission of Ivory Coast to ICMI.

Executive Committee meetings in 1982-1986:

43rd meeting, Paris, April 1-2, 1982
44th meeting, Warsaw, August 7, 1982
45th meeting, Paris, November 13, 1982

46th meeting, Helsinki, April 28-29, 1983
47th meeting, Zürich, May 3-4, 1984
48th meeting, Paris, May 9-10, 1985
49th meeting, Paris, April 3-4, 1986
50 the meeting will be held in Oakland, on July 30, 1986.

Union representation at the meetings of ICSU and other international organizations

The Secretary of the Union, 0. Lehto, has been the Union representative to ICSU. He has attended the 20th General Assembly of ICSU in Ottawa, September 23-28, 1983, and the meeting of the General Committee of ICSU in Munich, October 13-15, 1985, as a union member of the General Committee.

The President of the Union, J. Moser, has been the Union representative to COSPAR. He attended the COSPAR Plenary Meeting in Graz, June 25 - July 7, 1984.

Professor H. Hogbe-Nlend has represented the Union at CTS.

