Bulletins of the International Mathematical Union

IMU

B U L L E T I N

OF THE

INTERNATIONAL MATHEMATICAL UNION

No. 18

DECEMBER 1981

SECRETARIAT :

COLLEGE DE FRANCE

11, Place Marcelin Berthelot

75231 PARIS CEDEX 05 -FRANCE

INTERNATIONAL MATHEMATICAL UNION

EXECUTIVE COMMITTEE

(1.1.1979 - 31.12.1982)

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President :   Professor L. Carleson

Vice-Presidents :   Professor M. Nagata
                       Professor J.V. Prokhorov

Secretary :   Professor J.L. Lions

Members :   Professor E. Bombieri
                       Professor J.W.S. Cassels
                       Professor M. Kneser
                       Professor O. Lehto
                       Professor C. Olech

Past President :   Professor D. Montgomery

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I. MEMBERSHIP OF THE UNION.

I.1. CORRECTIONS AND CHANGES IN THE LIST OF N.A.O. AND N.C.

Further to the list published in Bulletin Nb. 17, the following corrections and changes in the names and addresses of N.A.O. and N.C. must be read :

NAME OF COUNTRY	GROUP	NATIONAL ADHERING ORGANIZATION (NAO)
		NATIONAL COMMITTEE FOR MATHEMATICS (NC)
AUSTRIA	II	NAO ÖSTERREICHISCHEN AKADEMIE DER WISSENSCHAFTEN WIEN (AUSTRIA)
		NC ÖSTERREICHISCHE MATHEMATISCHE GESELLSCHAFT Prof. Dr. M. Gruber, chairman Institut für Analysis Technische Universität A-1040 Wien (Austria) Karlsplatz 13
BELGIUM	III	NAO ACADEMIE ROYALE DE BELGIQUE Palais des Académies 1, rue Ducale B-1000 BRUXELLES (BELGIQUE)
		dues to : Le Chef du Secrétariat Mme L. Nicolas, address as above.
		NC COMITE NATIONAL DE MATHEMATIQUES Professor Florent Bureau, President Université de l'Etat à Liège 5, place d'Italie Boîte 042 B-4020 LIEGE (BELGIQUE)
		Professor J. Bilo, secretary Université de l'Etat à Gand 184 Oude Brusselse Weg, B-9219 GENTBRUGGE (BELGIUM)
		Correspondence to Secretary.
BRAZIL	II III	NAO CONSELHO NACIONAL DE DESENVOLVIMENTO CIENTIFICO E TECNOLOGICO - CNPq Instituto de Matematiça Pura e Aplicada Rua Luiz de Camões, 68 CEP 20000 RIO-DE-JANEIRO GB ZC 58 BRAZIL
		NC SOCIEDADE BRASILEIRA DE MATEMATICA Estrada Dona Castorina, 110 22460 RIO DE JANEIRO, RJ (BRAZIL)
		Professor Imre Simon, President Instituto de Matemàtica e Estatistica da Universidade de São Paulo

BRAZIL (continued)   Caixa Postal 20.570 (Agencia Iguatemi)
                                      01000 SAO PAULO, SP, BRAZIL

                                      Professor Antonio Conde, Secretary
                                      Address to S.B.M., as above.

GERMAN DEMOCRATIC REPUBLIC   III NC KOMMISSION FÜR MATHEMATIK DES NATIONAL-
                                      KOMITEES FUR MATHEMATIK, MECHANIK,
                                      KYBERNETIK UND INFORMATIONSVERARBEITUNG
                                      der DDR
                                      Prof. Dr. Klaus Matthes, chairman,
                                      Institut für Mathematik der Akademie
                                      der Wissenschaften der DDR,
                                      Mohrenstrasse 39, Postfach 1304
                                      DDR 1086 BERLIN

INDIA   III NC INDIAN NATIONAL COMMITTEE FOR IMU
                                      Prof. M.S. Narasimhen, chairman
                                      School of Mathematics
                                      Tata Institute of Fundamental Research
                                      Homi Bhabha Road
                                      BOMBAY-400005

DEMOCRATIC PEOPLE'S REPUBLIC
OF KOREA   I NAO ACADEMY OF SCIENCES OF THE D.P.R. OF
                                      KOREA.
                                      Mathematics Section
                                      PYONGYANG (D.P.R. OF KOREA)

                                NC   MATHEMATICAL RESEARCH COMMITTEE OF THE
                                      ACADEMY OF SCIENCES OF THE D.P.R. OF
                                      KOREA
                                      Dr. Ho-Gon Secretary,
                                      Address as above.

THE NETHERLANDS   III NAO DUTCH MATHEMATICAL UNION
                                      'WISKUNDIG GENOOTSCHAP'

                                      Dr. Ir. C. Roos, secretary
                                      University of Technology
                                      Department of Mathematics and
                                      Informatics
                                      Julianalaan 132
                                      2628 BL DELFT (HOLLAND)

SWEDEN   III NC SWEDISH NATIONAL COMMITTEE FOR
                                      MATHEMATICS
                                      Professor Lars Hörmander, chairman
                                      Lunds Universitets Matematiska Inst.^{t}
                                      Box 725
                                      S-220 07 LUND (SWEDEN)

                                      Professor Björn Engquist, secretary
                                      Institutionen för teknisk Databehand-
                                      ling II,
                                      Sturegatan 4B
                                      S-752 23 UPPSALA (SWEDEN)

SWITZERLAND   III NC   SOCIETE MATHEMATIQUE SUISSE
                                            Prof. Alain Robert, president
                                            Université de Neuchâtel
                                            Institut de Mathématiques
                                            Chantemerle 20,
                                            2000 NEUCHATEL (SUISSE)

                                            Prof. Sristhi Dhar Chatterji, secret.
                                            Ecole Polytechnique Fédérale
                                            Département de Mathématiques
                                            Avenue de Cour 61,
                                            1007 LAUSANNE (SUISSE)

I.2. *NEW MEMBERS* .

The following applications for membership, upon recommendation of the E.C. of
IMU, met with a favourable ballot among member nations.

    HONG-KONG :   Group of adherence I   NAO : THE HONG-KONG MATHEMATICAL SOCIETY
                                                  Department of Mathematical Studies
                                                  Hong-Kong Polytechnic
                                                  Kowloon - HONG-KONG

                                           NC :   The same as above :
                                                  Dr. I.C.H. Tang, president,
                                                  Dr. A.C.K. Poon, general secretary
                                                  Dr. K.P. Shum, treasurer,
                                           Prof. Yung chow Wong is Honorary President.

    REPUBLIC OF KOREA : Group I   NAO : THE KOREAN MATHEMATICAL SOCIETY
                                                  c/o Department of Mathematics
                                                  College of Natural Sciences
                                                  Seoul National University
                                                  SEOUL 151, KOREA

                                           NC :   Address as above
                                                  Prof. Dr. Taikyun Kwon, president,
                                                  Prof. Dr. Eulyoung Pak, ex-president

The results of the ballot are as follows :
Total answers : 35 countries (81 votes) : yes : 69 votes, no : 9 votes (5 c.)
                                           restrained voices : 5 (2 countries)
The admission starts on January 1st, 1981.

    REPUBLIC S. OF VIET-NAM : Group I   NAO : SOCIETE MATHEMATIQUE DU VIET-NAM
                                           NC :   "HOI TOAN HOC VIÊT NAM"
                                                  39 Trăn hrng Dạo
                                                  HANOI (REP. S. OF VIET-NAM)
                                                  Prof. Lê van Thiêm, president,
                                                  Prof. Dang Din Hang, secretary
                                                  Adresses as above.

The results of the ballot are as follows :

Total answers : 35 countries (81 votes) yes; 81 votes.

The admission starts on January 1st, 1981.

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II. MEETING OF THE EXECUTIVE COMMITTEE OF IMU.

The last meeting of the E.C. was held in Paris, at the Collège de France, on April 27 and 28, 1981.

The minutes of the 41st meeting were approved and the proposed agenda agreed upon. The following items were discussed :

1) - *Financial matters*.

The audited accounts were examined. A comment was made by the treasurer pointing out to a reverse situation in exchange difference as a result of the raise in the US $ currency (the IMU accounts, although budgeted in Swiss Frs. must be translated in US $ for ICSU/UNESCO purposes) ; this must be taken care of.

Authorization has been given to open a new IMU account in Poland in US $ for ICM and General Assembly transfers. This account will be closed after the ICM and the remaining funds, if any, retransferred to the Union's Swiss account.

The E.C. gave its approval on the 1980 accounts as they were presented. These figures are shown in this Bulletin in Appendix I.

Budgetary provisions.

Some concern about the future has been expressed by the Treasurer :

. fluctuation in exchanges rates,

. decrease in ICSU-UNESCO subventions due to a new basis of calculation of the Unions subventions and the major role played by UNESCO special contracts,

. increase in expenditure, particularly in travel expenses for meetings.

The E.C. recommended a proposal for a raise in the dues to be put in the agenda of the General Assembly.

The E.C. set the different budgeted items for 1981 and 1982, after having examined the new applications for support that were received during the year.

2) - *Scientific activities*.

The secretary gave a report on these activities ; this is given at the end of this Bulletin, in Appendix II.

3) - *ICM '82 and General Assembly*.

A report was made by Professor Olech, chairman of the Organizing Committee for ICM '82, on the preparation under hand in Warsaw for both meetings.

General Assembly : the E.C. decided that the First Communication should be sent to member nations before summer-time ; this has been done both in Bulletin Nb. 17 and by a special courrier addressed to each National Committee.

The new "Terms of Reference" for election of the EC of IMU, the EC of ICMI and for the Commission on Development and Exchange, agreed upon by postal ballot were also printed in this Bulletin.with emphasis on different deadlines for preparation of the General Assembly.

Please note the erratum on page 18 of Bulletin Nb. 17, which is corrected in this issue.

ICM'82 :

Travel Grants Committee: the EC set up a Committee and it was agreed that the First Call for candidacies should appear in Bulletin Nb. 17.

Following the efforts of the Helsinki Congress, the Organizing Committee for ICM '82 offers accommodation facilities to young mathematicians coming from developing countries. A financial provision is set for this purpose.

Developing Fund : Due to the efforts of some members, generous contributions were made to this Fund, settled by a resolution of the General Assembly in Otaniemi.

Special emphasis is made on Finland's donation : when the Organizing Committee of the 1978 International Congress of Mathematicians was dissolved, it advised the Finnish National Committee for Mathematics to make a contribution of $ 5,000 to the IMU Development Fund. The accounts of the Congress being closed, this sum has been remitted to the IMU.

The E.C. is sure to express the opinion of the whole Union in thanking Professor Lehto, chairman of this Organizing Committee and all the Finnish colleagues for this very generous donation.

4) - *Site Committee for 1986* :

The Site Committee will meet during the period of the General Assembly meeting. Invitations from prospective host for the ICM '86 should reach the secretary of the Union before February 1st, 1982.

5) - *World Directory of Mathematicians*.

Proposals for the 7th edition have been received by Professor M. Nagata, who is in charge of the 6th edition. The E.C., after inquiries, gave its approval on this edition being taken care of by AMS.

6) - *ICSU* : ICSU 13th General Committee met in Dubrovnik in September 1981. Professor O. Lehto was IMU representative.

The next ICSU General Assembly will be held in Cambridge (U.K.), September 13-17, 1982.

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GENERAL ASSEMBLY OF IMU

We reproduce below the most relevant communications concerning the elections at the General Assembly of IMU, drawing attention of National Committees that a *misprint has been made in Bulletin nb. 17, page 18.*
The following should be read :

ERRATUM :

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  IMPORTANT :  Each National Adhering Organization is hereby
  requested to give the undersigned, not later than DECEMBER 31,
  1981, proposals for membership of the new Executive of the CDE
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instead of "National delegates to CDE".

1. *DELEGATIONS AND THEIR VOTING STRENGTH*

    According to the Statutes of the Union, each National Adhering Organization "shall appoint and certify to the Secretary of the Union a delegation which shall have the number of votes corresponding to the Group in which it adheres as follows :

Group :	I	II	III	IV	V
Number of votes :	1	2	3	4	5

    provided that the number of delegates shall not exceed the corresponding number of votes. Any National Adhering Organization which desires to ensure its full quota of representatives at meetings of the General Assembly by the appointment of alternates for its regularly named delegates may do so, provided that no such alternate shall be permitted to participate in the work of the General Assembly until he has been duly certified to the Secretary of the Union as assuming the powers and duties of the delegate he has been designated to replace. No person shall be a member of the delegation of more than one country. Voting by the General Assembly shall be by delegations, provided that each delegation

shall be free to cast the votes to which it is entitled either
as a unit or divided in such a manner as it may determine".

2. _DELEGATES AND ALTERNATES AND THEIR PARTICIPATION._

It follows from the above extract from the Statutes that :

a) - the number of regular delegates from a member-country
cannot exceed the number of its votes (it can of course,
be smaller) ;

b) - the number of alternates cannot exceed the number of
regularly named delegates (there may, of course, be
no alternate at all) ;

c) - at any given question of the General Assembly, the
total number of delegates either regular or alternate,
representing a member-country, cannot exceed the number
of votes of that member-country ;

d) - and that the alternate delegates are permitted to parti-
cipate in the work of the Assembly only after due notifi-
cation to the Secretary.

3. _APPOINTMENT OF DELEGATIONS_

You are hereby requested to designate the delegation of your
country. The names of your delegates, with alternates, if any,
together with their addresses, may be please entered on the
accompanying blank and returned, so as to _reach the undersigned_
not later than March 1st, 1982.

This deadline is important since some of the delegates will be
proposed for election to various Committees of the Assembly at
the opening session.

Further information for the _stay_ in WARSAW is given in the
Second Communication, see below, pages 15 to 22.

4. *PROPOSALS FOR AGENDA*

As provided for in the By-Laws of the Union, National Adhering Organizations may propose business to be transacted at the General Assembly ; such proposals shall reach the undersigned at least four months before the meeting, i.e. *not later than April 8, 1982 and preferably before MARCH 20, 1982.*

5. *ELECTION OF THE NEW EXECUTIVE COMMITTEE*

PROCEDURE FOR THE ELECTION : see below, page *13*.

IMPORTANT : Suggestions from National Committees should reach the undersigned not later than DECEMBER 31, 1981.
The Executive Committee would like it to be clearly understood that no member of the Committee is elected to represent his country ; he is elected on his own merits, and is expected to serve the whole community of mathematicians which the Union represents.

6. *I.C.M.I.*

PROCEDURE FOR THE ELECTION : see below, page *14*.

IMPORTANT : Each National Adhering Organization is hereby requested to give the undersigned, not later than DECEMBER 31, 1981 the name of the national delegate which it designates to serve as a member of I.C.M.I. for the term January 1, 1983 to December 31, 1986, with a copy addressed to the Secretariat of I.C.M.I, Professor Peter Hilton, Department of Mathematics, Case Western Reserve University, Cleveland, Ohio, 44106 U.S.A.

7. *COMMISSION ON DEVELOPMENT AND EXCHANGE (C.D.E.)* :

PROCEDURE FOR THE ELECTION : see below, page *14*.
IMPORTANT : Each National Adhering Organization is hereby requested to give the undersigned, not later than DECEMBER 31, 1981, proposals for membership for the new Executive of the C.D.E. which it designates to serve for the term January 1, 1983 to December 31, 1986, with a copy addressed to the chairman of the C.D.E., Professor H. Hogbe-Nlend, c/o Université de Bordeaux-I, UER de Mathématiques et d'Informatique, 351, Cours de la Libération, F-33405 Talence, France.

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INTERNATIONAL MATHEMATICAL UNION

GENERAL ASSEMBLY
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Warsaw, Poland
August 8 & 9, 1982

APPOINTMENT OF DELEGATIONS

You are hereby requested to designate the delegation of your country :
Please fill this form in CAPITAL LETTERS :

Country : .... Group of Adherence :
National Adhering Organization : ....
.... Number of Votes :
Number of Delegates :

DELEGATE(S) :

1. Name : ....
    Address : .... ZIP Code ....
    .... Telephone or Telex No. ....

2. Name : ....
    Address : .... ZIP Code ....
    .... Telephone or Telex No. ....

3. Name : ....
    Address : .... ZIP Code ....
    .... Telephone or Telex No. ....

4. Name : ....
    Address : .... ZIP Code ....
    .... Telephone or Telex No. ....

5. Name : ....
    Address : .... ZIP Code ....
    .... Telephone or Telex No. ....

ALTERNATE(S)

1. Name : ....
    Address : .... ZIP Code ....
    .... Telephone or Telex No. ....

2. Name : ....
    Address : .... ZIP Code ....
    .... Telephone or Telex No. ....

IMPORTANT :   *Please return this form,* NOT LATER THAN MARCH 1, 1982 *to :*

IMU Secretariat
c/o Professor J.L. LIONS
COLLEGE DE FRANCE
11, Place Marcelin Berthelot
F-75231 PARIS CEDEX 05   (FRANCE)

PROCEDURE FOR THE ELECTION OF THE EXECUTIVE COMMITTEE OF I.M.U. :

The following procedure has been approved by postal ballot among member countries at a two-third majority :

1. - Not less than a year before the meeting of the G.A., the E.C. shall request proposals for the membership of the E.C. from National Committees, to be considered before the meeting of the E.C. in the spring before the Assembly.

   The E.C. shall then draw up its own list of nominations and this shall be made known to delegates not later than the beginning of the meeting of the G.A. The E.C. shall make certain that the candidate is willing to serve if elected.

2. - Further nominations may be made in writing before the commencement of business on the second day of the meeting provided that thay are signed by at least ten delegates and contain a statement by the candidate that he or she is willing to serve if elected.

   Each nomination shall be for a specified office : President, Secretary General, Vice-President or Member at large of the E.C.

3. - On the first day of the meeting, the General Assembly shall appoint a Nominating Committee consisting of :

   > a) the President (chairman) ;
   > b) all Past Presidents who are present (ex-officio) ;
   > c) eight further delegates.

   Election to c) shall be from names either proposed by the President or proposed and seconded from the floor ; and shall be by show of hands unless the meeting decides otherwise.

4. - The Nominating Committee shall propose a slate from the nominations made under 1) and 2) above and shall make it known to the meeting.
   No person shall be a candidate for more than one office.

5. - The General Assembly shall then elect the new Executive by written ballots.

   The voting slips shall contain all the names nominated under 1) and 2) (unless a candidate withdraws), but no others.

   A vote shall be invalid if more names are marked in any category than the

number of places to be filled (i.e. one each for President and Secretary, two for Vice-Presidents and five for Members at large).

A candidate for President or Secretary may be elected only if unopposed or if he or she obtains a majority of the votes cast. If the first ballot is indecisive, there shall be a second ballot.

In the ballots for Vice-Presidents and Members at large, the two or five candidates respectively who obtain the largest numbers of votes shall be declared elected.

In the event of a tie, the President shall decide.

NOTE : Statute 9 provides (inter alia) that : "each delegation shall be free to cast the votes to which it is entitled either as unit or divided in such a manner as it may determine".

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PROCEDURE FOR THE ELECTION OF THE EXECUTIVE COMMITTEE OF I.C.M.I. :

The rules for the election of I.C.M.I. Executive Committee are similar to those for the election of the Executive Committee of I.M.U. with the same Nominating Committee.

The E.C. shall request proposals for the membership of the E.C. of I.C.M.I. from National Committees and will conduct extensive consultations with the existing Executive of I.C.M.I. before proposing slates to the Nominating Committee.

No person can be a candidate for more than one office.

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PROCEDURE FOR THE ELECTION OF THE COMMISSION OF C.D.E.

A postal ballot is under process - and not yet completed at the moment of issuing the present Bulletin - to replace § 1 of the Terms of Reference for the Commission on Development and Exchange (C.D.E.) with the following text :

"The Commission shall consist of a Chairman, and nine other members (including the Secretary of IMU, ex-officio).

The rules for the election of the Commission are similar to those of the IMU E.C. and of the ICMI E.C., with the same Nominating Committee.
The E.C. shall request proposals for the membership of C.D.E. from National Committees and will conduct extensive consultations with the existing C.D.E. before proposing slates to the Nominating Committee".

INTERNATIONAL CONGRESS OF MATHEMATICIANS

WARSAW POLAND

SECOND ANNOUNCEMENT

The Organizing Committee is pleased to invite you to attend the International Congress of Mathematicians in Warsaw, Poland, Wednesday, August 11—Thursday, August 19, 1982.

This announcement advises members as to their arrival to Warsaw, describes Congress activities and explains how to register.

The detachable pages 9—12 consist of the registration form in duplicate. If you plan to attend the Congress, please fill in and return the two copies of the registration form as soon as possible.

The receipt of the registration form and of payments will be acknowledged by the Congress Bureau of the Polish Travel Office "Orbis". In spring 1982, the registered members will receive the Third Announcement which will include names of the invited speakers and the schedule of lectures. A more detailed schedule and other information will be provided in the "ICM-82 Programme" distributed to members upon arrival in Warsaw.

1. Place of the Congress

The Congress, as well as most of the accompanying events, will be held at Palace of Culture situated in the center of Warsaw, close to the central railway station, hotels, parking lots and grean areas. Palace of Culture houses, among others:

— Congress Hall,
— Department of Mathematics, Computer

Science and Mechanics of the Warsaw University,
— Institute of Computer Science of the Polish Academy of Sciences,
— Museum of Technology
— three theatres,
— a post office,
— restaurants, cafés, etc.

2. Mathematical activities

All the mathematical activities will take place in Palace of Culture.

2.1. Invited lectures

Plenary addresses. On the recommendation of the Consultative Committee, appointed by the International Mathematical Union, the Organizing Committee has invited 16 mathematicians to give one-hour plenary addresses. These lectures are intended to be broad surveys of major recent developments in mathematics meant for a wide audience. They will be given in Congress Hall at the Palace of Culture. The capacity of the hall is about 3000 seats.

Addresses in sections. On the recommendation of the Consultative Committee, 136 mathematicians have been invited to give 45--minute addresses in specified sections. These lectures are also meant to be broadly conceived and to present surveys not necessarily limited to the work of the speaker.

The list of sections is as follows:
1. Mathematical Logic and Foundations of Mathematics
2. Algebra
3. Number Theory
4. Geometry
5. Topology
6. Algebraic Geometry
7. Complex Analysis
8. Lie Groups and Representations
9. Real and Functional Analysis
10. Probability and Mathematical Statistics
11. Partial Differential Equations
12. Ordinary Differential Equations and Dynamical Systems
13. Mathematical Physics and Mechanics
14. Control Theory and Optimization
15. Numerical Methods
16. Combinatorics and Mathematical Programming
17. Computer and Information Sciences
18. New Applications of Mathematics
19. History and Education

2.2. Short communications

Members of the ICM-82 can present a 10--minute oral communication, provided they have registered by April 15, 82 and have informed the Organizing Committee of the title of their talk and the appropriate section by that date. They are also requested to submit an abstract in English, French, German or Russian. The abstracts, properly prepared and received by April 15, will be reproduced and distributed to all ordinary members on registration in Warsaw. The abstract must be typewritten (black ribbon) within a rectangle of 16.5 cm wide and 25 cm high on good quality paper. Handwritten symbols should be written in indelible black ink but used sparingly. Corrections to the typescript should be made by pasting in the new text or painting out errors with white correction fluid. Surname and first name or initials (in capital letters), institutional affiliation, country and title of abstract, in this order, should be typed single spaced. Requests for overhead projectors and the like should be made to the Organizing Committee in advance.

The Organizing Committee reserves the rights to limit the number of communications. In case a limitation is necessary, the communications accepted will be those first received.

Abstracts should be send either together with the registration form or directly to the Organizing Committee: Institute of Mathematics of the Polish Academy of Sciences, Śniadeckich 8, P.O. Box 137, 00-950 Warsaw, Poland.

2.3. Seminars

Members who want to organize spontaneous seminars are asked to make all arrangements among themselves, either in advance or during the Congress. A room for a specified time should be requested during the Congress through the Congress Bureau.

2.4. ICMI symposium

The International Commission on Mathematical Instruction will organize a symposium during four afternoons on goals and contents of school education in mathematics.

3. Proceedings of the ICM-82

Invited addresses and a report of the Congress will be published in the Proceedings of the ICM-82. The Proceedings are expected to appear by the end of 1983 and each ordinary member will receive a copy.

4. A tentative schedule

The Opening Ceremony will be held on August 11, at 9.00 in Congress Hall. The President of the International Mathematical Union will announce the names of the Fields medalists and the medals will be awarded.

After the Opening Ceremony, addresses on the work of Fields medalists will be given in Congress Hall.

Invited one-hour lectures will be delivered on: Thursday, Friday, Monday, Tuesday, Wednesday, August 12, 13, 16, 17, 18 — 9.30—10.30, 11.00—12.00; Saturday and Thursday, August 14 and 19 — 9.00—10.00, 10.30—11.30, 12.00—13.00.

Invited addresses in sections, short communications and seminars will take place in the afternoon on: Wednesday, Thursday, Friday, Monday, Tuesday, Wednesday, August 11, 12, 13, 16, 17, 18 from 15.15, to 19.00. It will also be possible to hold seminars at other times.

No scientific activities are planned for Saturday afternoon, August 14 and Sunday, August 15.

The Closing Ceremony is scheduled to be held in Congress Hall on Thursday afternoon, August 19.

During the Congress, an exhibition of mathematical books will be open in Palace of Culture.

5. Social events

The Organizing Committee hopes that scientific and social activities can be well integrated. The staff of the Congress Bureau will be pleased to provide all possible information and assistance to members to arrange informal gatherings or to explore Warsaw on their own. Materials describing various activities in Warsaw will be distributed at registration.

In order to further promote personal contacts between members, several social events will be organized, such as a get-together party, a concert and a picnic.

The party will be organized in two groups, on Thursday 12 and Friday 13.

The picnic will take place at the State Stallion Stud at Boguslawice, 125 km from Warsaw. The stud includes 160 stallion and about 50 sport horses. Besides a picnic party, participants will be offered a horse show called "Cracow Style Wedding". The show has been created jointly by the management of the State Stallion Stud at Boguslawice and a Cracow song and dance ensemble. It is a lively spectacle with folk songs, dances, colourful dresses and horses in original, Cracow harnesses. The "Cracow Style Wedding" represents good artistic level and a high class of riding teams and equipages. It was enthusiastically received by spectators in many countries, among others in Finland, Sweden and F.R.G. Considering the large number of persons participating in the excursion, there will be two groups arranged: one on August 14 (Saturday) and the second — on August 15 (Sunday). Also, on these two days, concerts will be given, each day for the group participating in the excursion the other day. The excursion to Boguslawice will start just after lunch and return is planned around midnight.

You are requested to give your preference on the registration form. However, it is possible that your wish will not be met as the number of places in each group is limited.

All the events described above are free of charge.

Orbis tours. During the Congress, "Orbis", the Polish Travel Bureau, will organize several excursions for accompanying persons in Warsaw and its vicinity. Orbis will also organize post-congress tours for members of the ICM-82. Details and prices are given in section 15 of this announcement.

6. Accommodation in Warsaw

Accommodation is handled by Congress Bureau "Orbis". Hotels are divided into following categories: Lux Intercontinental, Intercontinental, 1st A, B and C, 2nd A, B, C, and student hostels. The number of rooms with bathrooms as well as single rooms is limited in 2nd A, B and C category hotels. Suites are available in categories Lux Intercontinental thru 1st A, B and C. Prices of suites will be given on request.

In all hotels the block reservation for ICM participants has been made. However, the distribution of the available rooms in above categories may not conform to the wishes of the ICM members. It is therefore in the interest of participants who reserve accommodation through Congress Bureau "Orbis" to return the registration form as early as possible.

The room prices are in US dollars. Participants may choose between the following alternatives:

I. Package rates especially offered for ICM-82 members: tables I and II. These rates apply only if a room is booked for at least five overnights from 9 to 21.08.82 and no refund will be possible in case of earlier departure.

TABLE I (for the first five nights)

Category of hotel	Single room		Double room		Refund for meals per person in Polish Zlotys
	w/b	w/o b	w/b	w/o b	
Lux Int.	415		555		2720
Intercon.	310		430		2125
1st A	251	215	405	345	1700
B	225		335		1700
C	210		330		1700
2nd A	195	155	315	265	1445
B	155	130	250	215	1445

The above prices are in US dollars per room. They include breakfast and two meals served at the hotel of residence. Participants will receive coupons for lunch and supper in the period the room is booked for. The coupons are not refundable if not used. However, one can resign from taking lunches and suppers at the hotel of residence and in this

TABLE II (for every additional night above five)

Category of hotel	Single room w/b	Single room w/o b	Double room w/b	Double room w/o b	Refund for meals per person in Polish Zlotys
Lux Int.	83		111		544
Intercon.	62		86		425
1st A	51	43	81	69	340
B	45		67		340
C	42		66		340
2nd A	39	31	63	53	289
B	31	26	50	43	289

case a refund in Polish Zlotys will be paid, the amounts of which are shown in the last column. Table I shows the minimal charge if package rates are applied. Table II shows the charge for every additional night above the first five. If you wish to apply package accomodation then please mark on the registration form whether you intend to take meals at the hotel of your residence.

Note: the discount on room and breakfast part in the above offer is about 25%.

II. Persons requesting accommodation for less than 5 overnights or arriving before August 9 or leaving after August 21, 82 or not wishing to apply package accommodation will be charged with "bed and breakfast" rate as follows:

TABLE III

Category of hotel	Single room w/b	Single room w/o b	Double room w/b	Double room w/o b
Lux Int.	92		104	
Intercont.	66		78	
1st A	57	45	78	66
B	55		64	
C	45		64	
2nd A	43	31	62	50
B	32	24	45	35
C		19.5		30

The Table III above gives the present regular prices in US dollars for room per night. These prices include breakfast except for the category 2nd C where breakfast cannot be obtained.

III. Student hostels. The rooms in student hostels are of modest standard, there are neither hotel services nor private bathrooms and, in general, breakfasts cannot be obtained.

The occupancy in a room varies from 2 to 4 persons. The price is 15 US dollars per night and bed and part of this sum is refunded in 200 Polish Zlotys for meals. The reservation can be made in the period between August 9 and August 21, only.

You are requested to give several preferences for hotel accommodation by indicating the first choice by 1, the second by 2, etc. on the registration form. The reservation will be made successively as the bookings reach Congress Bureau "Orbis" and every effort will be made to meet the requirements of each participant. After a booking has been made you will be informed by Congress Bureau "Orbis" about the name, address and exact rate of lodging. **All correspondence regarding accommodation should be addressed to Congress Bureau "Orbis" and not to the Organizing Committee.** Even if you do not reserve accommodation through "Orbis", you are kindly requested to include information about your reservation in the registration form.

7. Congress fees

A participant of the ICM-82 is an ordinary member or an accompanying person. The accompanying persons will not receive copies of abstracts or of the Proceedings of the ICM-82, but will enjoy all other privileges of ordinary members.

All children under 15 years of age accompanying an ordinary member may be covered by a single accompanying person fee. No fee will be charged for children if the only service requested for them is reservation of accommodation.

The fees, in United States dollars, are as follows:

	before May 15, 82	after
— ordinary members	US $ 90	US $ 120
— accompanying persons	US $ 45	US $ 60

Participants reserving accomodation through Congress Bureau "Orbis" have to pay the following **hotel deposits:**

— in categories Lux Intercontinental thru 1st A,B,C	US $ 50
— in other categories	US $ 20

The registration fee and hotel deposit should be paid through your travel agent (list enclosed) or to the Account Congress Bureau "Orbis" 1094-3173, NBP IX OM Warsaw ICM-82. No payments should be sent to the Organizing Committee. It is very important

that the name of participant and code ICM-82 be indicated on the bank draft. Personal cheques will not be accepted. Be sure you get a receipt of your payment from the agent or bank and keep a copy of it with you when you arrive in Warsaw. In order to ensure the proper remittance of fees, the members are kindly requested to enclose one copy of the receipt of the payment to the registration form.

A registration will be valid only after the Congress fee has been paid. Similarly, a reservation of accomodation will be valid only after payment of hotel deposit.

The remaining sum for hotel accomodation can be paid:

1. through one of your local travel agencies (list enclosed) or to the account of Congress Bureau "Orbis", 1094-3173 NBP IX OM Warsaw, ICM-82 (please keep the receipt);

2. at the Congress Desk in your hotel in Warsaw or at the Main Registration Desk in Palace of Culture.

Deadline for registration is May 15, 1982.

If a cancellation is received by Congress Bureau "Orbis" before May 31, 82, the Congress fees and other payments including hotel deposit will be refunded. **No refunds will be possible after May 31, 82.**

8. Registration form

Registration form should be typed or printed in duplicate and returned with a copy of payment enclosed to the following address:

Congress Bureau "Orbis"
ICM-82, P.O.BOX 146
00-950 Warsaw
Poland

9. Travel

Warsaw can easily be reached by direct planes and trains from all European countries. There are also direct flights from Middle and Far East as well as from North America.

Polish Airlines "LOT", the official carrier of the Congress, will be pleased to provide travel information. The addresses of its offices are attached LOT will offer a 10% reduction on regular ticket price for every member of the Congress having a Confirmation of Booking. Such a Confirmation is sent by the Polish Travel Office "Orbis" to each participant after his registration form has been received.

Besides using LOT agencies, connected with the ICM, members or member groups are free to make other arrangements for their travel.

10. Reception in Warsaw

An information desk for ICM members will operate at Warsaw Airport on August 9—11, 1982.

Transportation (Airport-Hotel only) will be provided free of charge for members arriving on August 9, 10 and 11, 1982. However, the necessary information about the date and time of arrival and flight number must be included in the registration form. Participants can also take, at their own expenses, an Airport Bus to the Air Terminal, a city bus No. 175 to the center of Warsaw (stopping by Forum and Victoria hotels, in particular) or a taxi directly to the hotel.

The reception desk will be functioning in Palace of Culture. Also, on August 10 and 11, it will be possible to register directly at the hotel. Congress materials will be available in Palace of Culture after presentation of the participation card.

The Congress Bureau, which includes various service and information desks, will be situated in Palace of Culture.

The cable address is ICM PANIM PL-Warszawa, telex: 816112 PANIM PL. Mail to members, if not sent to their hotels, can be addressed: c/o International Congress of Mathematicians, P.O.Box 137, Warsaw, Poland.

11. A special stamp series will be issued on the occasion of the Congress.

It will bear portraits of S. Zaremba, Z. Janiszewski, S. Banach and W. Sierpiński. First day covers will be available at the Post Office in Palace of Culture on the opening day, August 11, from 9 to 19 o'clock.

12. Departure transfers

Persons requesting individual transportation from hotel to the Airport are asked to include the necessary information on the registration form indicating the date, exact time and flight no.

price: US $ 15 per person

The group departure transfers may also be arranged an request. Price depends upon the number of persons in a group.

13. General information

Foreigners coming to Poland should be in possession of a passport and a visa which may be obtained through Polish consular offices or embassies (this does not concern citizens of countries with which Poland had signed non-visa agreements). Applying for Polish visa, the following documents should be presented to the consulate officials: visa inquiry sheet, 2 photographs and the Confirmation of Booking which is sent by the Polish Travel Office "Orbis" to all participants after registration forms have been received. Visa formalities do not require your personal calling at Polish consulates.

It is advisable to apply for the visa promptly.

Any amount of **foreign currency** in cash or travellers cheques may be brought to Poland under the condition that it is reported on a customs declaration. This declaration is to be presented to the Polish custom authorities on your departure. It is not allowed to take Polish Zlotys neither to nor out of Poland.

The Polish Travel Office "Orbis"-Congress Bureau organizes special currency exchange desks in hotels and in Palace of Culture. You are requested not to make voucher or currency exchanges in places other than those mentionned above. The unused Polish money received from vouchers exchange or exchange orders cannot be re-exchanged into foreign currency.

The Polish currency is złoty (zł). 1 złoty equals 100 groszy (gr). The following bank notes are in circulation: 2000 — 1000 — 500 — 200 — 100 — 50 zł and coins: 20 — 10 — 5 — 2 — 1 zł and 50 — 20 — 10 gr. The exchange rate at the time the announcement was prepared was about 33 zł per one US dollar.

Duty-free are items of personal and professional use.

Vaccination is required only from persons coming from areas struck by an epidemy.

In Poland, average day **temperature** in August is about 17° Centigrade. Days are mainly sunny with occasional showers.

Bus and **tram** service operate in Warsaw. Tickets have to be bought at street kiosks.

Alternate **current** with 220 V tension, 50 Hz is supplied in Poland. European plugs have to be used.

During your stay in Poland you may **rent cars** with or without driver. For details, contact the travel office or directly ORBIS AVIS RENT A CAR service in 00-511 Warsaw, Nowogrodzka Str. 72, phone: 21-019/1711 or 1811, telex: 812685 orcar pl.

14. The plan on page 13 indicates the place of the Congress (Palace of Culture), hotels, the central railway station, the Air Terminal and the Institute of Mathematics of the Polish Academy of Sciences (IM PAN), the Banach Center, the Warsaw University and the Technical University of Warsaw.

15. "Orbis" excursions and tours

1. Old town.

Completely destroyed during the II World War. Rebuilt in early 50's. People come here to admire the beauty of churches, the defence walls, the Barbican and the burghers'

houses with their late Renaissance or Baroque facades.

price: US $ 10 per person

2. Wilanów

On the outskirts of Warsaw, the Wilanów Palace was the summer residence of King John III Sobieski — the conquerer at Vienna. The splendour of its Baroque architecture and exquisite interiors places Wilanów among the most beautiful historical monuments in the world. Its magnificent rooms contain period furniture, collections of 16th and 19th century china, old clocks and a 'gallery of Polish portraits.

price: US $ 6.50 per person

3. Łazienki

The private residence of the last Polish King — Stanisław August Poniatowski. The most beatiful park in Warsaw, where one can admire many Baroque and Neo-Classical buildings. The Palace on Island is the most magnificent example of the architecture in Poland of that period. It contains a collection of 17th and 18th century paintings and sculptures. In the park — Chopin's monument erected in 1926.

price: US $ 6.50 per person

4. Wedding in Łowicz (full day)

Folklore performance in Arkadia Park near Nieborów, traditional Łowicz wedding, dancing party with the participation of artists, treat consisting of typical meals.

price: US $ 26 per person

5. Żelazowa Wola

A historical manor house in a picturesque park, where F. Chopin was born in 1810. Now, Chopin's museum. Piano concert and dinner in a country inn.

price: US $ 25 per person

6. Dinner

At a typical restaurant in Warsaw with folklore performance.

price: US $ 16 per person

7. Częstochowa (full day)

The principal center of religious traditions in Poland to which numerous pilgrimages are made every year (especially in August). Founded in 1382. The Pauline Monas-tery in the western part of the town situated on the Hill of Jasna Góra.

price: US $ 45 per person

8. Kazimierz Dolny — Majdanek (full day)

Kazimierz — a precious architectural and landscape complex, town of poets and painters, monuments of Renaissance culture and art.

Majdanek — Nazi concentration camp opened on Himmler's order in 1941.

price: US $ 29 per person

Excursions 1—4 will be organized every morning except for the days reserved for social events (cocktails and picnics) as well as the days museums are closed. Excursions 5—6 — every evening except for the days reserved for social events. All 1—6 start August 12 and continue until 19. Excursions 7 and 8 (full day, meal included) start August 16 and continue until August 20.

Coaches will be leaving from the Palace of Culture. Persons who register for separate excursions will be given a ticket at the registration indicating the date and time of departure. Members are kindly requested to indicate the date of the excursion they wish to participate in on the registration form.

Post-congress tours:

1. Białowieża — primordial forest

The greatest primordial forest in central European plain. Białowieski National Park formed in 1921 — nature reserve and European bison reserve (240 bison live in Białowieska Forest)

price: US $ 135

2. Kraków — southern Poland

Former capital of Poland. Now the largest center of culture and learning in Poland. The seat of Jagiellonian University (where Copernicus studied) — one of the oldest in Europe. The Main Market Square, Church of the Virgin Mary, the Royal Castle, Wawel, the Wawel Cathedral, to name just a few, are interesting sights in Cracow.

price: US $ 193
US $ 43 — single room
supplement

3. Zakopane — Tatra Mountains

The heart of the Tatra Mountains — the highest rocky mountains in Poland. Both

health resort and main center of winter sports. It has preserved its regional wooden architecture, furniture and decorative art.

price: US $ 204
US $ 28.50 — single room supplement

4. Rzeszów — Renaissance architecture in Poland

Carpathian Mountains region — capital city with Palace of Lubomirski family, Town Hall etc. Łańcut near Rzeszów has an imposing residence of the Lubomirski family and later of Potocki family, now museum, containing many works of art. Baranów Sandomierski — one of the most beatufil residences of Renaissance period in Poland.

price: US $ 200
US $ 40 — single room supplement

5. Gdańsk — Northern Poland

A harbour city on the Bay of Gdańsk and Poland's largest and most modern sea-harbour. The central part of Gdańsk consists of historical districts: Old and Central Town, Old Suburb, the Granary Island and Lower Town. In Central Town famous "Royal Route" with Gothic and Renaissance gateways and bastions. In the oldest district of Gdańsk, the Old Town, the Gothic St. Elisabeth's Church, the late Gothic St. John's Church and the Old Town Hall.

price: US $ 198
US $ 52 — single room supplement

6. Olsztyn — Mazurian Lakes

The capital of the Mazurian Region, an industrial and cultural center and an ideal base for touring this region. The Mazurian Lakes District is often called the region of thousand lakes while in fact there are two thousand.

price: US $ 172 per person
US $ 23 — single room supplement

Tours 1 and 6 start on August 20 and finish with an overnight in Warsaw and breakfast on August 23.

Tours 2—5 start on August 20 and finish with an overnight in Warsaw and breakfast on August 24.

Persons requesting accomodation in Warsaw after the post-congress tours are asked to indicate it on the registration form.

All tours' prices include: accomodation at first category hotels (except for tour No. 1 as no single rooms are available), entrance fees, meals, coach transportation as well as an assistance of foreign language speaking "Orbis" guide-interpreter.

16. Payment for excursions, tours and transfers

No deposit is required for excursions, tours and transfers. Payment should be made:

1. through one of your local travel agencies (list enclosed) or directly to the account 1094-3173, Congress Bureau "Orbis", NBP IX OM Warsaw, ICM-82.

2. at the Congress Desk in your hotel in Warsaw or at the Main Registration Desk in Palace of Culture.

Persons ordering different post-congress tours or excursions will be given a ticket at the registration indicating time of departure.

In case the number of registered members is not sufficient, the excursion/tour will be cancelled and you will be offered to participate in another one or will get a full refund of the payment made.

Important: We wish to inform that all lists will be closed on July 26, 1982. Persons who will decide at the last moment to attend ICM-82 are requested not to mail any correspondence to Congress Bureau "Orbis" — new registrations will be accepted on the first day of the Congress at Main Registration Desk at Palace of Culture. However, accomodation will be provided only if hotel rooms are available.

ICM-82 REGISTRATION FORM

1. Surname .... First name/s .... Title ....

Date and place of birth .... Citizenship .... Sex /M or F/ ....

Accompanied by: Surname	First name/s	Sex /M or F/	Age if under 15
1.	....	....	....
2.	....	....	....
3.	....	....	....

Complete mailing address: .... telex: ....

.... phone: ....

Number of persons attending   coctail ...., picnic Aug. 14 .... Aug. 15 ....

I wish to attend sections: ...., to present a communication /yes or no/ ....

2. I. request accomodation for .... adult/s, ... child/ren.

Number of single rooms ...., double rooms ...., beds.

Please indicate at least two choices: first choice by 1, second choice by 2, etc.

	Lux Inter.	Inter.	1A	1B	1C	2A	2B	2C
single								
double								

Check-in date ....

Check-out date ....

No of beds in student hostel ....

If a single is not available, I will share a double /yes or no/ ....

I wish to be charged according to Tables I and II /yes or no/ ....

I wish to receive the refund for meals /yes or no/ ....

I wish to be charged according to Table III /yes or no/ ....

Special wishes ....

I have made my own reservation through /agent/ .... at /hotel/ ....

I am arriving on August .... at .... flight no .... from ....

I have sent to Account Congress Bureau "Orbis" NBP IX OM Warsaw nr. 1094—3173, ICM-82 the total

.... A copy of the receipt of payment is enclosed.   US $

The arrangements and payments have been made through /agent/ .... /yes or no/ ....

I have applied /I am going to apply/ for a Polish visa on/about .... at the Polish Embassy/Consulate in

....
(date)

....
(address)

Date ....   Signature ....

Verte

3. I wish to take part in the following excursions/tours:

		Excursion-Tour	Date		No of persons	US $	Total
			1st choice	2nd choice			
Excursions	1.	Old Town				10	
	2.	Wilanów				6,50	
	3.	Łazienki				6,50	
	4.	Wedding in Łowicz				26	
	5.	Żelazowa Wola				25	
	6.	Dinner				16	
	7.	Częstochowa				45	
	8.	Kazimierz D.-Majdanek				29	
Post-congress tours	1.	Primordial Forest				135	
	2.	Southern Poland				193	
	3.	Tatra Mountains				204	
	4.	Renaissance Architecture in Poland				200	
	5.	Northen Poland				198	
	6.	Mazurian Lakes				172	
Transfers hotel-airport		date .... time .... flight no				15	

TOTAL US $: ....

Accommodation requested after the Post-Congress Tour No ....

for .... nights (rates from table III).

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4. Payments

1 ordinary member registration fee   US $ ....

(US $ 90 before May 15, US $ 120 after)

.... accompanying person/s registration fee/s US $ ....

Hotel deposit

(US $ 50 in Lux Inter. — 1st A,B,C)   US $ ....

(US $ 20 in other categories)   US $ ....

Excursion/s No   US $ ....

Post-congress tour/s No   US $ ....

Transfer   US $ ....

Accomodation after post-congress tour   US $ ....

Please return this form by May 15, 1982 to:
CONGRESS BUREAU "ORBIS"
P.O.BOX 146
00-950 WARSAW, POLAND
telex: 814728 bkorb pl, cable: ozorbis, tel: 276208

ICM-82 REGISTRATION FORM

1. Surname .... First name/s .... Title ....

Date and place of birth .... Citizenship .... Sex /M or F/ ....

Accompanied by:

		Sex	
Surname	First name/s	/M or F/	Age if under 15
1.	.a........................	....	....
2.	....	....	....
3.	....	....	....

Complete mailing address: .... telex: ....

.... phone: ....

Number of persons attending   coctail ...., picnic Aug. 14 .... Aug. 15 ....

I wish to attend sections: ...., to present a communication /yes or no/ ....

2. I. request accomodation for .... adult/s, ... child/ren.

Number of single rooms ...., double rooms ...., beds.

Please indicate at least two choices: first choice by 1, second choice by 2, etc.

	Lux Inter.	Inter.	1A	1B	1C	2A	2B	2C
single								
double								

Check-in date ....

Check-out date ....

No of beds in student hostel ....

If a single is not available, I will share a double /yes or no/ ....

I wish to be charged according to Tables I and II /yes or no/ ....

I wish to receive the refund for meals /yes or no/ ....

I wish to be charged according to Table III /yes or no/ ....

Special wishes ....

I have made my own reservation through /agent/ .... at /hotel/ ....

I am arriving on August .... at .... flight no .... from ....

I have sent to Account Congress Bureau "Orbis" NBP IX OM Warsaw nr. 1094—3173, ICM-82 the total .... A copy of the receipt of payment is enclosed. US $

The arrangements and payments have been made through /agent/ .... /yes or no/ ....

I have applied /I am going to apply/ for a Polish visa on/about .... at the Polish Embassy/Consulate in
(date)

....
(address)

Date .... Signature ....

Verte

3. I wish to take part in the following excursions/tours:

		Excursion-Tour	Date 1st choice	Date 2nd choice	No of persons	US $	Total
Excursions	1.	Old Town				10	
	2.	Wilanów				6,50	
	3.	Łazienki				6,50	
	4.	Wedding in Łowicz				26	
	5.	Żelazowa Wola				25	
	6.	Dinner				16	
	7.	Częstochowa				45	
	8.	Kazimierz D.-Majdanek				29	
Post-congress tours	1.	Primordial Forest				135	
	2.	Southern Poland				193	
	3.	Tatra Mountains				204	
	4.	Renaissance Architecture in Poland				200	
	5.	Northen Poland				198	
	6.	Mazurian Lakes				172	
Transfers hotel-airport		date .... time .... flight no				15	

TOTAL US $: ....

Accommodation requested after the Post-Congress Tour No ....

for .... nights (rates from table III).

4. Payments

1 ordinary member registration fee   US $ ....

(US $ 90 before May 15, US $ 120 after)

.... accompanying person/s registration fee/s US $ ....

Hotel deposit

(US $ 50 in Lux Inter. — 1st A,B,C)   US $ ....

(US $ 20 in other categories)   US $ ....

Excursion/s No   US $ ....

Post-congress tour/s No   US $ ....

Transfer   US $ ....

Accomodation after post-congress tour   US $ ....

Please return this form by May 15, 1982 to:
CONGRESS BUREAU "ORBIS"
P.O.BOX 146
00-950 WARSAW, POLAND
telex: 814728 bkorb pl, cable: ozorbis. tel: 276208

APPENDIX I

FINANCIAL STATEMENTS

GUY ELBAUM

diplômé de l'Institut d'Études Politiques de Paris
diplômé d'Études Supérieures de Droit
expert comptable diplômé
commissaire aux comptes

115, rue Cardinet
75017 Paris
Tél. 755.90.34

INTERNATIONAL MATHEMATICAL UNION

Colège de France

11 place Marcelin Berthelot
75231 PARIS CEDEX 05

Dear Sirs,

In accordance with your instructions, we have prepared from the
Union's accounts and from the information and explanations supplied
to us by the Executive Secretary the balance sheet, Statement of
income and expenditure and annexed notes for the year ended
December 31, 1980.

Report of the auditors to the International Mathematical Union

Transactions in Japan relating to the World Directory of Mathematicians
have been included in the following Financial Statements based on a
schedule which has been reproduced as appendix 1 to these accounts.
We are unable to form an opinion regarding this schedule which has been
signed as having been audited.

Stocks of World Mathematicians Directories have not been evaluated for
accounts purposes.

In our opinion subject to the foregoing the balance sheet and the
income and expenditure accounts set out on page 2 to 3 together with
the notes and appendix attached thereto give a true and fair view of
the state of affairs of the INTERNATIONAL METHEMATICAL UNION at
December 31, 1980.

Paris, 20, March 1980

Guy ELBAUM

INTERNATIONAL MATHEMATICAL UNION

BALANCE SHEET AT DECEMBER 31, 1980
(expressed in US dollars)

	Notes	1980		1979	
ASSETS					
Bank and cash					
Current accounts	5	109 301		89 051	
Deposit account	5	46 530		49 019	
Cash		16		43	
			155 847		138 113
Prepayments	6	5 000		-	
Loan	7	983		983	
TOTAL ASSETS			161 830		139 096
LESS : LIABILITIES					
Creditors and accruals			1 773		2 142
Excess of assets over liabilities			160 057		136 954
			=======		=======
Represented by					
ACCUMULATED FUNDS					
General fund					
Balance at December 31, 1979		123 610		106 151	
Excess of income over expenditure		10 618		17 459	
Balance at December 31, 1980			134 228		123 610
General assembly and International Congress Funds					
Balance at December 31, 1979		13 344		-	
Allocation		12 485		13 344	
Balance at December 31, 1980	8		25 829		13 344
			160 057		136 954
			=======		=======

The notes set out on pages 26 to 28 form an integral part of these accounts.

STATEMENT OF INCOME AND EXPENDITURE

FOR THE YEAR ENDED DECEMBER 31, 1980
(expressed in US dollars)

	Notes	1980		1979	
INCOME	2				
Allocation from UNESCO, grant to ICSU		8 000		13 000	
UNESCO contracts		13 000		6 500	
Contributions from National Members		51 233		54 684	
Special appeal fund		6 756		5 062	
Sales of publications		5 482		7 764	
Bank interest		1 204		759	
Net exchange (loss) / gain		(8 083)		6 462	
			77 592		94 231
EXPENDITURE	3				
A. Meetings					
Representation at meetings		5 084		5 158	
Cost of General Assembly		-		-	
			5 084		5 158
B. PUBLICATIONS	9		1 948		24 626
C. SCIENTIFIC ACTIVITIES					
ICM Consutative Committee		3 962		-	
Colloquia		13 750		10 096	
Other activities					
Exchange commission		16 700		12 060	
IMU fellowship fund		-		799	
			34 412		22 955
D. ADMINISTRATIVES EXPENSES					
Grant to C.T.S.		400		300	
Grant to I.C.M.I.		1 000		500	
Contribution to ICSU		1 367		1 190	
Audit fees		1 753		1 645	
General office expenses		7 632		6 658	
Travel expenses		313		-	
Bank charges		580		396	
			13 045		10 689
			54 489		63 428
EXCESS OF INCOME OVER EXPENDITURE			23 103		30 803
Allocated to :					
General fund		10 618		17 459	
General assembly and International congress fund		12 485		13 344	
			23 103		30 803

The notes set out on pages 26 to 28 form an integral part of these accounts.

NOTES TO BE READ IN CONNECTION WITH THE FINANCIAL STATEMENTS

PRINCIPAL ACCOUNTING PRINCIPALS
_____

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 as at December 31, 1980.

   The income and expenditures for the year were translated at the rates
   applying at the date of payment, except for transactions in connection
   with the World Directory of Mathematicians which were translated
   at the UNESCO average rate for 1980.

   These standard rates closely follow quoted market rates.

2. INCOME

   Contribution and grants have been recorded on a cash basis as in
   previous years. That is to say only contributions actually received
   during the year have been taken as income. Therefore, no account has
   been taken of contributions due but not received by December 31, 1980.

3. EXPENDITURE

   Expenditure is record on an accruals basis. That is to say all
   expenses incurred during the year have been included in the accounts
   whether paid or not.

4. STOCK OF MATHEMATICIANS DIRECTORIES

   The stock of World Mathematicians Directories, according to the
   statement reproduced as appendix 1 amounted to 1044 copies at December 31,
   1980 (1443 at December 31, 1979) have not been evaluated for accounts
   purposes.

NOTES TO BE READ IN CONNECTION WITH THE FINANCIAL STATEMENT

OTHER NOTES

5. BANKS AND CASH

The amount held with banks is made up as follows

		1980		1979	
		Currency	US $	Currency	US $
The Chase Manhattan Bank	US $	-	3 731	-	19 727
Credit Swiss					
- Current account	FS	149 969	87 701	89 309	55 818
- Current account	US $	-	3 419	-	1 606
- Deposit account	US $	-	46 530	-	49 019
Bank Degroof	FB	-	-	10 995	386
Société Générale	FF	22 129	4 973	26 798	6 536
Day Ichikangyo	Yen	2 009 193	9 477	1 244 493	4 978
		=========		=========	
			155 831		138 070
			=======		=======

6. PREPAYMENTS

Prepayments represent support grants given in respect of a symposium and a colloque to be held during 1981.

7. LOAN

The loan made in respect of participation at the Helsinki Conference is due to be repaid during 1981.

NOTES TO BE READ IN CONNECTION WITH THE FINANCIAL STATEMENTS

8. GENERAL ASSEMBLY AND INTERNATIONAL CONGRESS FUNDS

These funds represent the amounts set aside to cover the following

Provided in year ended	1982 International Congress	1982 General Assembly	Total
31.12.1979	11 719	1 625	13 344
31.12.1980	10 965	1 520	12 485
	22 684	3 145	25 829
	======	=====	======

9. PUBLICATIONS

Publication expenditure is made up as follows :

	1980	1979
I.M.U. bulletin	1 553	1 060
World Directory of Mathematicians	395	23 566
	1 948	24 626
	=====	======

STATEMENT OF CONTRIBUTIONS RECEIVED FROM NATIONAL MEMBERS

DURING THE YEAR ENDED DECEMBER 31, 1980

| | Contributions in respect of | | |
NATIONAL MEMBERS	Pre 1980	1980	TOTAL
ARGENTINA		359	
AUSTRALIA		1 437	
AUSTRIA		750	
BELGIUM	1 297	-	
BRAZIL		-	
BULGARIA		736	
CAMEROUN	376	-	
CANADA		1 430	
CHINA (Taïwan)		359	
CZECOSLOVAKIA		2 945	
CUBA		356	
DENMARK		719	
EGYPT		-	
FINLAND		719	
FRANCE		3 951	
GERMANY (G.D.R.)		1 472	
GERMANY (F.R.G.)		3 681	
GREECE		373	
HUNGARY		1 500	
INDIA		1 437	
IRAN		351	
IRELAND		736	
ICELAND		351	
Carried forward	1 673	23 662	25 335

.../..

STATEMENT OF CONTRIBUTIONS RECEIVED FROM NATIONAL MEMBERS

DURING THE YEAR DECEMBER 31, 1980

	Contributions in respect of		
NATIONAL MEMBERS	Pre 1980	1980	TOTAL
Brought forward	1 673	23 662	25 335
ISRAEL		750	
ITALY		-	
JAPAN		3 681	
KOREA	359	351	
MEXICO		-	
NETHERLANDS		1 459	
NEW ZEALAND		375	
NIGERIA		-	
NORWAY		375	
PHILIPPINES		-	
POLAND		2 485	
PORTUGAL	649	-	
RUMANIA		1 472	
SINGAPORE		375	
SOUTH AFRICA		736	
SPAIN		736	
SWEDEN	(931)	- +	
SWITZERLAND		1 437	
TURKEY		-	
UNITED KINGDOM		3 593	
U.S.A.		3 683	
U.S.S.R.		3 594	
YUGOSLAVIA		719	
	1 750	49 483	51 233
	=====	======	======

+ The auditors circularization has indicated that the swedish 1980 contri-
  bution was in fact paid in July 1980. As a result of this information we
  are making the necessary enquires with the Swedish Academy and our bankers.

WORLD DIRECTORY OF MATHEMATICIANS

UNAUDITED FUNDING STATEMENT

	1979		1980	
FUNDING				
Balance at January 1, -		-		6 584
Initial advance	23 256		-	
Less net cost of edition	(16 672)		6 312	
		6 584		6 312
Balance at December 31,		6 584		12 896
		=====		======
Represented by				
ASSETS				
Banks				
Day Ichikangyo	1 606		9 477	
Credit Swiss	4 978		3 419	
		6 584		12 896
Stock				
Directories (copies 1979-1443, 1980-1062)		-		-
		6 584		12 896
		=====		======

NOTES

1. Stock has not been evaluated for the purposes of preparing this funding statement nor the International Mathematician Union accounts at December 31, 1979 and 1980

2. The foregoing has been prepared from statements supplied by the Union, a copy of the 1980 statement is included in appendix 1 to this report.

WORLD DIRECTORY OF MATHEMATICIAN

UNAUDITED STATEMENT OF INCOME AND EXPENDITURE
FOR THE TWO YEARS ENDED DECEMBER 31, 1980

	1979		1980		TOTAL	
	copies	US $	copies	US $	copies	US $
INCOME						
Sales						
in Japan	96		5	77	101	
Outside Japan	403		110	3 500	513	
By Kinokuniya	-		266	1 905	266	
	499		381	5 482	880	
		7 763+				13 417
Directories given as gifts	58		-	-	58	
	557		381		938	
Interest				172		
Copies sold	557		381		938	
Total income		7 763		5 654		13 417
EXPENDITURE						
Printing and binding	2 000	19 785	-	-	2 000	19 785
Secretarial services		1 058		-		1 058
Postage and telex		2 393		395		2 788
Printing etc.		329		-		329
Bank charges		-		92		92
Copies printed	2 000		-		2 000	
Expenditure		23 565		487		24 052
		15 802		5 167		10 635
Exchange loss / Gain		870		1 145		275
NET COST OF EDITION		16 672		6 312		10 360

+
  No breakdown available

W D M

at the end of 1980

Suisse account
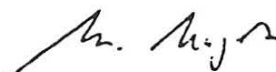
    Balance at the end of 1979 $1,606.10
    Income - charge $1,812.59
    Balance at the end of 1980 $3,418.69

Japanese account
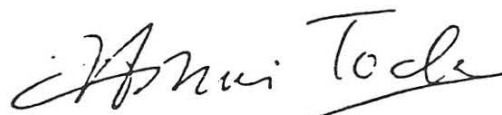
    Balance at the end of 1979   ¥1,244,493
    Postage stamps   - ¥ 90,000
    Income through Kinokuniya   ¥798,000   {266 copies sold)
    Direct sale in Japan   ¥ 17,500   (5 copies sold)
    Interest   ¥ 39,200
    Balance at the end of 1980   ¥2,009,193

Copies remaining

    1) Kyoto: at the end of 1979   943
                 sold during 1980   115   (out of Japan 110)
                 at the end of 1980   828

    2) Kinokuniya: original   500
                     sold   266
                     remaining   234

    3) Total number of copies remaining: 1,062

M. Nagata

Auditor

Hiroshi Toda

APPENDIX II

REPORT ON SCIENTIFIC ACTIVITIES OF THE UNION

Report for the year 1980 :

Bulletin Nb. 17 only gave the list of the meetings supported by IMU for 1980. Some more details are given below.

1. - *Symposium on Logic and Algorithmics,* Zürich(Switzerland) Feb. 5-11, 1980.

   This meeting was devoted to a field which is interdisciplinary in its character and which has in recent years emerged as a singularly fruitful source of problems and results for pure mathematics (from foundations to algebraic geometry) as well as applied mathematics and computer science.

   This Symposium was sponsored by a committee consisting of Pr. A. Huber, chairman of the ETH Department of Mathematics, Pr. de Rham (Lausanne), Pr. Kervaire (Geneva), Pr. B. Scarpellini (Basel) and Professors Engeler and H. Laüchli (ETH, Zürich) and V. Strassen from the University of Zürich.

   More than twenty invited speakers attended this meeting. Professors R. Karp, (Berkeley) and S. Kochen, (Princeton) were IMU representatives.

   A financial support of $ 1,500 provided help in travel expenses for foreign participants and a special effort was made to encourage the participation of young mathematicians from Switzerland and other countries. A volume of the proceedings will be printed.

2. - *International Conference on Functions, Series, Operators.* Budapest (Hungary), August 21-25, 1980.

   This Conference was organized under the auspices of the Hungarian Academy of Sciences, to commemorate the 100th anniversary of L. Fejér and F. Riesz.

   The chairman of the Organizing Committee was Pr. B. Szökefalvi-Nagy and beyond the participation of more than 100 mathematicians from Hungary, a wide participation came from abroad, working in mathematical analysis, classical and functional, and its applications.

   Professors L. Carleson and J.P. Kahane were IMU representatives, and the support of US $ 2,500 granted by the Union was decomposed as follows : $ 500 each to Drs. T. Ando (Sapporo, Japan), P.R. Halmos (Bloomington, USA), E. Hewitt (Seattle, USA), R.S. Phillips (Stanford, USA) and G. Polya (Palo Alto, USA), to help attending this Conference with travel expenses.

3. - *International Conference on Generalized Functions and their Applications in Mathematical Physics,* Moscow, November 24-28, 1980.

   This Conference was held under the auspices of the USSR Academy of Sciences (Steklov Mathematical Institute and Computing Center). The Organizing Committee included Acad. V.S. Vladimirov and S.L. Sobolev, J. Mikusinski (Poland), B. Stankovic (Yugoslavia) and B. Sz.- Nagy (Hungary). The IMU representatives were Professors Mikusinski and M. Sato.

Investigations in the field of generalized functions lead in general to develop the new methods for solving problems of mathematical and theoretical physics. This Conference was devoted, along with the traditional problems of the mathematical physics and the theory of differential equations, to an axiomatic formulation of quantum theory and related problems in the theory of generalized functions, boundary properties of functions of several complex variables and operational calculus.

A participation of $ 250 each was granted to the following, as IMU support for travel expenses to foreign participants :

Professors P. Lelong (France), P. Dierolf (F.R.G.), M. Sato (Japan, Komatzu (Japan), G.L.H. Rao (India), J. Mikusinski (Poland), and M. Morimoto (Japan).

A special stipend amounting to US $ 700- was also given to Pr. G.L.H Rao as a complement on IMU Fellowship fund.

Twenty plenary lectures were given in plenary sessions and three sections covered the following topics :

Session A : General theory of generalized functions and hyperfunctions.

Session B : Integral Transformations and Operational Calculus.

Session C : Generalized functions in Mathematical Physics.

4. - *I.C.M.E. IV.*
Berkeley, California (U.S.A.) August 10-16, 1980.

This four-years Congress on Mathematical Education is the most important gathering of the International Commission on Mathematical Instruction (I.C.M.I.) and has been organized by the National Academy of Sciences of the U.S.A. and the University of Berlekey, Professor H. Pollak being the chairman of the International Program Committee.

The scientific program examined a broad spectrum of problems in mathematical education at all levels and for every variety of learner. A special emphasis has been given to questions of universal primary education, of research, technology, applications, the profession of teaching, and the relationship of language and mathematics.

Four plenary sessions invited addresses included more than fifteen main invited speakers (1 hour each) and about sixty panels and debates of 1 to 2 hours were held. "Mini-conferences" on individual topics and "Poster Sessions" were also organized. Some miniconferences in honor of the late Edward G. Begle on critical variables in mathematical education were proposed, also several expository series on topics which have become so fundamental, applicable, and pedagogically accessible that they could be considered worldwide for inclusion in the mathematics curriculum.

Working and Study Groups (Exeter W.G. and Karlsruhe Study Groups) were able to meet, as well as the Inter-American Commission of Mathematical Instruction and the African Mathematical Union educational part.

A large number of participants in the program from developing countries have been invited, and it appeared that 40% came from Africa, 25% from Latin America, 25% from developing countries of Asia and the Pacific Islands, and the rest from the Caribbean area, totalling more than 40. This is the strongest technical participation from developing countries in any ICME.

A special help from IMU was granted to ICMI to ensure this participation, amounting to US $ 6,000, providing partial support for travel expenses.

It was then proposed that the Vth International Congress on Mathematical Education be held in

ADELAIDE (SOUTH-AUSTRALIA)
August 22 to 29, 1984,

on the invitation of the Australian Subcommission of ICMI, the City of Adelaide and the State of South Australia.

5. - *Scientific meetings supported by the IMU Commission on Development and Exchange.*

a)- *Dakar First African School on Mathematics and Economics:* Dakar (Senegal), April 28-May 7, 1980.

This course has been organized by the African Mathematical Union, with the help of the Senegal Government, the Dakar University, the CIDA, under the sponsorship of UNESCO and IMU/C.D.E.

It has been organized as a first step to the creation of the African Mathematical Center for Development.

More than one hundred participants attended this course and the seminar, coming from various parts of Africa (16 countries) and Europe, mainly from France.

The main topics were : Optimization and Control Theory, Optimal Control, Quasi-variational Inequalities, Applications to Distributed Systems, Finite Elements Method, applications to Stochastic Control, Game Theory.

A special contract IMU/ICSU/UNESCO has enabled CDE to grant an amount of US $ 3,500 as partial support for travel expenses. (UNESCO contract SC/RP 251 083).

b)- *Fifth Latin American School of Mathematics. ELAM Vth.* Mar del Plata (Argentina) July 28-August 8, 1980.

This meeting was sponsored by the following institutions : Organization of American States, IMU/CDE, National Research Council of Argentina, Research Commission of the State of Buenos-Aires, Secretary of Science and Technology, Latino-american Center of Mathematics and Informatics, Universities of Mar del Plata and of Buenos-Aires, Foundation of the Bourse of Buenos-Aires.
The local Organizing of ELAM V was chaired by Pr. H. Herrera.

On the opening session, after the welcome talks, an introductory lecture was given by Pr. Luis A. Santaló on "The meaning of Applied Mathematics".

During the eleven effective days of the meeting, an intensive scientific work was developed by the attendants to the School. Ten short courses were taught (mean length : six hours each), thirty one-hour lectures and sixteen twenty-minutes communications were delivered. The morning sessions were dedicated to the courses, while the afternoons were employed in lectures and short communication sessions.

The titles of the courses were :

    . Time series analysis   (Pr. C.W. Granger, Univ. of California)
    . Multivariate time series (Dr. D. Pierce, Fed. Reserve Board)
    . Robust estimators   (Pr. D. Martin, Univ. of Washington)
    . Multivariate data analysis (Pr. P. Fernández (IMPA and
                                        Pr. V. Yohai, Univ. of Buenos-Aires)
    . Quasi-Newton methods for unconstrained non linear problems
                                (Pr. J. Dennis, Jr. Rice University)
    . Lagrange multipliers and duality in nonlinear optimization
                                (Pr. R.T. Rockafellar, Un. of Washington)
    . Population dynamics   (Pr. D. Sanchez, Univ. of New Mexico)
    .Basic Probabilities   (Pr. N. FAVA, Univ. of Buenos Aires)
    . Brownian Motion,   (Pr. N. Jain, Univ. of Minessota)
    . Stochastic Process with independent increments (Dr. A. de
                                Acosta, IVIC).

c)- *Regional Workshop on Recent Advances in Finite Element Methods* _
    Applications in Mechanics and Engineering.
    Penang (Malaysia) November 10-17, 1980.

The above workshop was successfully conducted during the period of November 10-17, 1980 at the Universiti Sains Malaysia. A total of 25 participants took part in this workshop, of a high level. Most of them hold a Ph.D. degree from a British or American university; and found the workshop appropriate and relevant to their needs as a teacher and researcher.

Undoubtedly the workshop has succeeded in its main objective in enhancing and upgrading the knowledge, skill and enthusiasm in the participants. It also served well in spearheading interest and research in the area of Finite Element Methods which still remains, to a great part, an obscure though very useful and powerful skill in Numerical Analysis which form an integral part of many technological developments.

Mutual understanding and cooperation among nations can be achieved through many channels. Workshop of this nature surely has contributed in small ways towards a healthy cultural and educational exchange among citizens of Asian members and the more developed nations like France in this case. Such exchanges, spreading over a broad area and extending over a period ot time, certainly are conducive to the development of a framework which could blossom into more concrete cooperations in the area of technology, commerce and development of human potentials, of which we already have ample precedents to sustain our confidence.

Cooperation on technology and its developent demand more than one or two workshops. Oil field exploration activities, monitoring and simulation of water flow like in the Straits of Malacca or the development of other viable sources or energy other than oil, and many others are areas of common interest that demand constant effect over a prolong period of time before one could even expect any results. A follow-up of this workshop ought to have an objective clearly spelled out in a more refined area. We are suggesting here the possibility of Asean members having joint projects

with the more technologically developed nations in helping to solve
some urgently needed development priorities in Asean countries.

A financial support of US $ 2,500 was granted to the Organizing
Committee of this Workshop, through IMU/CDE under the same ICSU/UNESCO/IMU
contract nb. 251 083.

Detailed expenses under this contract are given in Appendix 2.

d) – *Workshop on Recent Advances in Mathematics and its Applications,*
Hong-Kong, June 16-21, 1980

This Workshop, sponsored by SEAMS, as the 5th SEAMS Biennial General
Meeting and Conference, has been the occasion for more than 160 mathema-
ticians from 17 countries to participate in this conference.

The following institutions helped in the financing and organizing
of the meeting :
UNESCO, IMU, Hong Kong Polytechnic, The Chinese University of Hong Kong,
The University of Hong Kong, Hong Kong Baptist College, the Hong Kong
Mathematical Society.
The Organizing Committee was chaired by Professor I. Tang, from
Hong Kong Polytechnic.

The scientific program covered topics related to Recent Advances
in Mathematics and its Applications, eleven invited lectures were delivered,
which are :

. Web Geometry   (Pr. S.S. Chern, Univ. of California, Berkeley),
. Finite Strip Method and its Applications (Pr. Y.K. Cheung, Univ.
                  of Hong Kong)
. Banach Algebra, Report on the 70's, Prospect for the 80's,
                  (Pr. J. Duncan, Univ. of Stirling)
. Some Trends in the Teaching of Algebra (Pr. P.J. Hilton, CWRU),
. Geometric Theory of Partial Differential Equations (Pr. L.K. Hua,
                  Academia Sinica),
. Survey of Jordan Structure Theory (Pr. N. Jacobson, Yale Univ.)
. Stochastic approximation with Applications to Regression & Control,
                  (Pr. T.L. Lai, Columbia University)
. Certain Cohomology Groups to Hermittian Symmetric Spaces and
  Unitary Representations (Pr. S. Murakami, Osaka Univ.)
. Nuclear Spaces and Generalized Al-Spaces (Drs. K.F. Ng and
                  Y.C. Wong, Chinese UXiv. of Hong KAng),
. On Transverse Foliation (Pr. I. Tamura, Univ. of Tokyo),
. Some Results in Linear Geometry (Pr. Y.C. Wong, Univ. of Hong Kong).

A financial support of US $ 2,000 was granted to the Organizing
Committee of this Conference, to help in travel expenses to foreign
participants.

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SCIENTIFIC ACTIVITIES IN 1981 :

The E.C. decided either by postal ballot or in its meeting of April 1981 in Paris to extend IMU sponsorship to the following meetings scheduled in 1981 :

1.- *Colloquium on Algebraic Geometry* : La Rābida (Spain) January 7 - 15, 1981.

This meeting was sponsored by the :
. Consejo Superior de Investigaciones Cientificas
. IMU
. The Universities of Madrid, Sevilla and Valladolid.

The Organizing Committee was composed by :
. Professor J.L. Vicente, President, and Professors P. Abellanas
  J.M. Aroca, R. Piedra and T. Sanchez Giralda, members.

27 papers were presented in general lectures or in seminar sessions ; the subjects of the main lectures were :

"Stable Reflexive Sheaves and Classification of Space Curves", R. Hartshorne,

"Local polar varieties and Whitney conditions", B. Teissier,

"A canonical Proof of resolution of singularities", S.S. Abhyankar,

"Resolution Games", by H. Hironaka.

This Colloquium was granted a financial support of US $ 3,000 by the Union, to help in travel expenses for foreign participants. Nine individual supports were thus granted.

2.- *International Mathematical Conference on Algebra* : Singapore, June 1-13, 1981.

The Singapore Mathematical Society held this International Conference in conjunction with the Department of Mathematics, National University of Singapore at the Kent Ridge Campus, from June 1st to June 13th, 1981.

The Conference was sponsored by UNESCO, IMU, the Mathematical Society of Japan and the S.E.A.M.S. It consisted of two Workshops during the period June 1-6, and of a General Conference (June 8-13).

Invited lectures were given in :

. Ring Theory and Homological Algebra,
. Probability Theory,
. Group Theory,
. Combinatorics,
. Number Theory,

together with special sessions for contributed papers. In addition to general adresses 30 contributed papers were presented at the general conference.
The invited speakers were : Professor D.L. Burkholder (USA), J.W.S. Cassels (U.K.), P. Erdös (Hungary), M. Fukushima (Japan), B. Hartley (U.K.), T. Hida (Japan), N. Iwahori (Japan), H. Matsumura (Japan), E.C. Milner (Canada), H. Nagao (Japan), M. Nagata (Japan), B.H. Neumann (Australia).
A total of 132 participants from 16 countries attended the meeting.

A financial contribution was granted to this Conference in the amount of US $ 2,000- for travel expenses of foreign participants.

The proceedings of the conference will be published by North_holland in 1982.

3. – *International Conference in Combinatorics* : Marseille-Luminy (France)
June 15-20, 1981.

This Conference has been held in France, at Marseille-Luminy from June 15 to 20, 1981, and is in the series of the one held at Orsay in July 1976.

The Scientific Committee , under C. Berge's chairmanship, was composed of Professors P. Camion, J.F. Maurras and F. Sterboul. The main topics were :

. Classical Graph Theory,
. Hypergraphs,
. Constructive and Algebraic Combinatorics (Design, Latin Squares etc..)
. Coding theory - Matroïdes,
. Various applications.

A large participation of about 250 people attended the Conference. This has been also the occasion of the inauguration of the new Mathematical Center of Luminy.

The main invited foreign speakers were : Professors Akyama (Japan), B. Bollobas (U.K.), Bondy (Canada), V.Chvatal (Canada), P. Erdös (Hungary), E. Johnson (USA), L. Lovász (Hungary), Marshal Hall (USA), W. Mader (BDR), A. Rosa (Canada) G.C. Rota (USA), H. Sachs (DDR), G. Sos (Hungary), C.Thomassen (Denmark), Zosvalski (USA).

95 communications were presented and will be published by North-Holland, under the title "Combinatorics and Mathematics" in the Series "Annals of Discrete Mathematics", C. Berge, M. Bresson, P. Camion, J.F. Maurras, F. Sterboul eds., in 1983.

The IMU granted a contribution of US $ 1,000 to help participation of foreign speakers to this Conference.

4. – *VIth International Conference on Mathematical Physics*. Berlin, August 11-20.

This Conference was held during 10 days in the period August 11-20, 1981, at the Freie Universität Berlin, to which IMU contributed in the amount of $ 3,000.

The Conference Committee was composed of :
Professors H. Araki, President of IAMP, J. Ehlers, L. Faddeev, E. Lieb, R. Schrader, R. Seiler, D.A. Uhlenbrock.

The main motives of the Conference Committee in composing the program was to give a broad view of current activities in Mathematical Physics. This Conference is in the series initialized in 1972 with the Moscow Conference, then Warsaw(1974), Kyoto (1975), Rome (1977), Lausanne (1979). The next conference will take place in Boulder, Colorado, USA, in 1983.

426 participants from 40 countries attended the meeting and 80 lectures were presented. Also 130 papers were contributed to the poster session. The main topics of General Plenary sessions were :

. Quantum Field Theory
. Statistical Mechanics
. Fluid Dynamics
. Foundations of Quantum Mechanics
. Functional Integration
. General Relativity
. Group Theory
. Gauge Theory
. Non-linear Analysis and Integrable Systems

The Proceedings will appear in the Springer Lecture Notes in Physics.

5. - *Vth Symposium on General Topology and its Relations to Modern Analysis and Algebra*. Prague, August 24-29, 1981.

The Fifth "Prague Topological Symposium" was held from August 24 to 29, 1981 at the Faculty of Electrical Engineering of the Czech Technical University in Prague. .

This Symposium has been organized by the Mathematical Institute of the Czechoslovak Academy of Sciences in cooperation with the Mathematical Institute of the SAV, Faculty of Mathematics and Physics of the Charles University, Faculty of Mathematics and Physics of the Comenius University and the Society of Czechoslovak Mathematicians and Physicists.

The Organizing Committee consisted of J. Novák as chairman, S. Schwarz and Z. Frolík as vice-chairmen and 22 other members.

This meeting provides a forum for the presentation and discussion of recent research results in general topology and its applications. Algebraic topology has not been included. This Symposium took place in the year of the 200th anniversary of birth of Bernard Bolzano, professor of Charles University in Prague, whose contribution towards the development of analysis and set theory is worldwide recognized and who also contributed to the formation of basic topological concepts. The main invited speakers were :
Professors R.D. Anderson, (USA), A.V. Arhangelskii (USSR), A. Casászár (Hung.) D. Demaria (Italy), E.K. van Douwen (USA), R. Engelking (Poland), V.V.Fedorcuk (USSR), D.F. Frmlin (U.K.) W. Gähler (DDR), H. Herrlich (BRD), I. Juhász (Hungary) E. Michael (USA), J. Mikusinski (Poland), J. van Mill (Netherlands), J. Nagata (Netherlands) S. Negropontis (Greece); R. Pol (Poland), Ju.M. Smirnov (USSR), B. Sapirovskii (USSR), H. Torunczyk (Poland), T.T West (Ireland).

The Union contributed to the support of this meeting with a financial contribution amounting to US $ 2,000. Professor Mikusinski was IMU representative.

6. - *Symposium on Dynamical Systems*. Rio-de-Janeiro, July 27-August 7, 1981.

This Symposium has been organized by the "Instituto de Matematica Pura e Aplicada" of the CNPq, with the support of the National Research Council, the Brazilian Mathematical Society and the Brazilian Academy of Sciences and main Universities. This has been a special event because IMPA's new building has been inaugurated on this occasion. Professor Jacob Palis Jr. was the chairman of the Organizing Committee.

This has been a high level meeting of international character.
The following topics were covered :

. Stability,
. Bifurcation,
. Differentiable Ergodic Theory,
. Holomorphic Fields,
. Mechanical Systems,
. Group Actions.

Among the participants, there were : Professors S. Smale, R. Thom, J. Hale, E.C. Zeeman, D. Ruelle, D. Sullivan, W. Thurston, M. Herman, C. Pugh, R. Williams, C. Conley, E. Zehnder, F. Takens, J.M. Paret, M. Shub, J. Franks, C. Robinson, S. Newhouse, A. Katok, A. Manning. Professors S.S. Chern and J.L. Lions were also invited. The IMU representatives were Professor J.L. Lions and S. Smale.
186 participants coming from 15 foreign countries attended the meeting together with brazilians coming from various states of the country and participants from Latin America.
A support of US $ 6,000- was given by the IMU to help foreign participants to come.

7. - _International Conference on Analytical Methods in Number Theory and Analysis._
Moscow, September 14-19, 1981.

This International Conference has been organized by the Academy of Sciences of the USSR at the Steklov Mathematical Institute.

The Organizing Committee included Academicians I.M. Vinogradov, chairman, V.A. Ambartzumjan, N.N. Bogolubov, G.I. Marchuk, L.S. Pontrjagin.

Three main sections were planned :

. Analytic number theory,
. Analysis,
. Algebraic number theory and Algebraic geometry.

Among invited speakers from foreign countries, there were : Professor Lelong, Morimoto, Komatzu, Mikusinski, Rao. Professors E. Bombieri and O. Lehto were IMU representatives and the Union extended a US $ 3,000 support, for foreign participants.

SCIENTIFIC ACTIVITIES OF THE C.D.E. :

Under ICSU Special grant, the Union contributed to help organizing two meetings in 1981, each of them granted with a financial support of US $ 3,000.

a) - _Seminar on Analysis and Geometry_ : Poços de Caldas (Brazil), July 1981

b) - _Summer School on Group Representations and its Applications_ :
Ibadan, (Nigeria) August 17 to September 11, 1981.

c) - _Second SEAMS Mathematical Workshop_ : Manila. This Workshop, first scheduled for 1981, will take place in May-June 1982.
From ICSU special grant a financial support of US.$ 3,000 will be granted.

OTHER SCIENTIFIC ACTIVITIES IN 1981 :

IMU Lectures :

In the IMU Lectures Series, the following conferences have been given since 1980 :

. Professor H. Furstenberg (University of Jerusalem) : IHES, Paris, France.
  "Les frontières de groupes et leurs applications".

. Professor W. Jaco :(Rice University, USA) : Institut de Mathématique,Geneva
                                                    Switzerland.
  "Variétés de dimension 3"

. Professor S.T. Yau :(University of Calif.): E.T.H. Zürich (Switzerland).
  "Non-linear Partial Differential Equations in Geometry".

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