

IMU

BULLETIN

OF THE

INTERNATIONAL MATHEMATICAL UNION

No. 2 September 1971

Secretariat

Box 41

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SWEDEN

INTERNATIONAL MATHEMATICAL UNION

Executive Committee

(1 January 1971 - 31 December 1974)

President: Professor K. Chandrasekharan

Vice-Presidents: Professor A. Adrian Albert

Academician L.S. Pontrjagin

Secretary: Professor Otto Frostman

Members: Professor M.F. Atiyah

Professor Y. Kawada

Professor N.H. Kuiper

Academician M. Nicolescu

Professor E. Vesentini

Past President: Professor H. Cartan

29th MEETING OF THE EXECUTIVE COMMITTEE

Hotel Storchen, Zurich, May 14 - 16, 1971

A G E N D A

1. Approval of the Agenda
2. Actions arising from the minutes of the last meeting
3. Scientific Activities
 - a) Review of current and projected activities
 - b) Discussion of possible new activities
 - c) Co-operations with other unions or special committees,
(Union of theoretical and applied mechanics, COSPAR, etc.)
 - d) The next International Congress of Mathematicians, Vancouver, Canada,
August 21 - 28, 1974
4. Educational Activities
 - a) ICMI b) ICSU Committee on the Teaching of Science
5. Documentation and Information
 - a) Co-operation between Reviewing Journals in Mathematics
 - b) Co-operation with other Sciences
6. Financial and Administrative matters
 - a) Review of the budget position for 1971, and financial allocations for 1971
 - b) Budget estimates for 1972
7. Relations with ICSU - UNESCO
 - a) Reorganization of ICSU and its possible effect on IMU
 - b) Resolution of ICSU on the Free Circulation of Scientists
 - c) Ways of helping the growth of mathematics in developing countries
(General Assembly Resolution)
8. Any other matters with the approval of the Chairman
(Proposal should be sent to the President with copy to the Secretary latest
April 30, 1971)

EXTRACT FROM THE MINUTES

All members of the Executive Committee were present at the meeting.

The agenda that had been sent out in advance was approved without change. The minutes of the 27th meeting held at Menton on August 27, 1970, and of the 28th meeting held at Nice on September 7, 1970, were formally approved and signed by the President. The financial report for 1970, already printed and distributed, was approved. The printed report to the National Adhering Organizations for 1970 was approved.

INTERNATIONAL COLLOQUIA AND CONFERENCES

The Executive Committee resolved to co-sponsor several International Colloquia and Conferences and to nominate IMU representatives on the Organizing Committees as follows:

International Colloquium on Number Theory in Moscow, September 14-18, 1971. IMU representatives: Professor K. Chandrasekharan and Professor E. Bombieri. (Decision already taken by mail vote).

International Colloquium on "Discrete subgroups of Lie groups and applications to moduli" in Bombay, January 1972. IMU representatives: Professor E. Vesentini and Professor A. Borel. (Decision already taken by mail vote).

International Symposium on the Geometry of Linear Spaces and Partial Differential Equations in Israel, June 1972. IMU representatives: Professor N.H. Kuiper and Professor L. Hörmander.

International Colloquium on Differential Topology in Strasbourg, June 1972. IMU representatives: Professor M.F. Atiyah and Professor V.A. Rohlin.

International Conference on "Manifolds and related topics in topology" in Tokyo, April 1973. IMU representatives: Professor M.F. Atiyah and Professor V. Poenaru.

Second International Conference on the Theory of Groups in Australia, August 1973. IMU representatives: Professor A.A. Albert and Professor J.G. Thompson.

The Executive Committee viewed with sympathy the proposal to have a **Symposium or Conference in Rumania** in 1973, and invited Professor M. Nicolescu, Professor M.F. Atiyah and Professor C. Foias, to advise the organizers on the formulation of a definite and coherent programme.

The Executive Committee further decided to give financial support, in the form of travel grants, to

Royal Irish Academy Summer School on Complex Function Theory, Cork, Ireland, July 19-24, 1971,

Third Prague Symposium on General Topology, Prague, August 30-September 4, 1971,

Third Congress of the Bulgarian Mathematicians in 1972.

UNION LECTURES

The Executive Committee of IMU has decided to invite, from time to time, a distinguished and active mathematician, of international standing, to give a set of four to six lectures, on important new developments in mathematics to which the lecturer himself, directly or indirectly, has made a contribution, and which deserve to be "surveyed" at some length, for the benefit of younger mathematicians as well as others. The lectures are intended to be on about the same level as the one-hour survey lectures given at the International Congress of Mathematicians, but fuller, in greater detail, and more often than once in four years, though perhaps not in the year of the International Congress. The lectures are to be given at mathematical centres where an interested and competent audience of younger mathematicians is easy to presuppose. It is intended that in order to disseminate the benefits of such "survey lectures", either the lecturer himself, or a member of his audience, will write them up for publication within six months, or so, of their delivery, and that arrangements will be made, if there is demand as well as justification, for their translation into another language. The Executive Committee has decided that the Union Lectures will, for the time being, be published in the *L'Enseignement Mathématique*. It is assumed that interested mathematical centres will make proposals for such lectures to the Union, and that the Executive Committee of IMU will be free to select a lecturer, or not, and designate him a Union Lecturer. It is expected that there will be not more than two such per year.

The business of organizing the lectures, paying for the lecturer's expenses, and preparing the lectures for publication, belongs to the mathematical centre that initiates the proposal. It is intended that the lectures should be announced some month in advance of their actual delivery (about six months, if possible) and so arranged, as to give the members of the audience an opportunity, if they so desire, to react, and to seek clarifications is necessary.

IMU's role is

- (i) to ensure such high standards in the choice of the lecturers as will lead people to consider it a distinction to be chosen a lecturer;

- (ii) to keep the whole of mathematics in view, to the extent that it is humanly possible, and to watch for important new developments which warrant a survey;
- (iii) to keep the lectures on an international plane free from nationalistic or political consideration;
- (iv) to give each lecturer an honorarium to be determined by the Executive Committee;
- (v) to ensure that the choice of centres for the delivery of such lectures is made with due regard not only to their excellence but to their geographical location (so that, for instance, the lectures are given at centres both in the East and in the West);
- (vi) and generally to further the advance of mathematical research and the dissemination of the results thereof (especially among all member-countries of the Union).

The first Union Lectures were given by Professor Wolfgang M. Schmidt on "Approximations to algebraic numbers" on February 1, 4, 8, 11 and 15, 1971, at the Institute for Advanced Study, Princeton, New Jersey, U.S.A., and jointly sponsored by the Institute. Union Lectures "On the Existence and regularity of solutions of linear differential equations" were given by Professor L. Hörmander on March 22, 25, 29 and April 1, 5, 1971, likewise at the Institute for Advanced Study, Princeton, New Jersey, U.S.A., and jointly sponsored by the Institute. These lectures are now in course of publication in the *L'Enseignement Mathématique*.

INTERNATIONAL CONGRESS OF MATHEMATICIANS IN VANCOUVER, August 21-28, 1974

The organization of the next International Congress of Mathematicians and the publication of its Proceedings were discussed, and a Consultative Committee was nominated. This committee shall work jointly with the Organizing Committee, appointed by the Canadian Mathematical Congress, and it was decided that a paper will be prepared for the guidance of the Consultative Committee, to be given to its Chairman.

INTERNATIONAL COMMISSION ON MATHEMATICAL INSTRUCTION (ICMI)

It was noted that the terms of reference of ICMI were complicated, and the President, the Secretary and the Past President, in consultation with the Chairman of ICMI, Professor M.J. Lighthill, were invited to review the terms. The Second International Congress on Mathematical Education will be held at the University of Exeter, U.K., in 1972.

DOCUMENTATION AND INFORMATION

Reviewing Journals

It was agreed that coordination between the activities of the three Mathematical Reviewing Journals should be maintained through the intermediary of IMU, as recommended by the ad hoc Committee which met in Nice. The proposal that a meeting of the Editors of the three Journals be convened in Moscow by the President next September, was accepted subject to the consent of the hosts. (Invitations were sent from Moscow in August to the Editors of Mathematical Reviews and Zentralblatt für Mathematik).

UNISIST Conference

The President said that he had been asked by ICSU to nominate an observer to the World Conference on Information Systems (UNISIST), due next October in Paris. (The President later nominated Professor R.V. Gamkrelidze, Moscow).

Centres of Information

The Executive Committee agreed to set up a Committee on Centres of Information, as resolved by the General Assembly at Menton. Existing Centres of Information, such as AMS, Bombay, Bucharest, Canberra, Montreal, Moscow, Paris, Tokyo, Warsaw, will be invited to keep in touch and get together under the Union's auspices. Professor B.H. Neumann, Canberra, should be invited to act as Convener of a group of representatives of these Centres. (Professor Neumann has accepted the invitation, and a questionnaire has already been distributed).

IMU Bulletin

The Executive Committee decided to publish the IMU Bulletin about three times a year and to discontinue the annual subsidy to the Austrian Mathematical Society, effective 1972. Members of the Executive Committee were invited to send suggestions to the Secretary of IMU on the contents and the distribution of the Bulletin.

ICSU - UNESCO RELATIONS

Future Structure of ICSU

The President explained the danger to IMU's position and voting power in ICSU that could arise from a proposed reorganization of the structure of ICSU. He had written to Professor M.J. Lighthill and talked to some other mathematicians about closer contacts with other Unions, in particular with the Union of Theoretical and Applied Mechanics (IUTAM). The possibility of arranging a symposium, jointly sponsored by IMU and IUTAM, had been discussed. The Executive Committee was in favour of pursuing this initiative.

UNESCO Resolution

The Executive Committee gave its unanimous and unreserved support to the action taken by the Officers of ICSU on a resolution concerning South Africa and Rhodesia, to protect the freedom of international non-governmental scientific organizations from any threat, implicit or explicit, that grants might be withheld by governmental bodies unless certain political requirements were met.

Developing Countries

The Executive Committee resolved to set up an International Group

- a) to assist the Executive Committee of IMU in advising other international organizations, governmental or non-governmental, on projects designed to encourage the growth of mathematics in the developing countries, and
- b) to suggest to the Executive Committee possible arrangements between existing research institutes and universities designed towards the same end.

The following members were nominated (with such possible additions or changes as might be made from time to time):

Chairman:	Professor A. Adrian Albert, Chicago, U.S.A.,
Secretary:	Professor N.H. Kuiper, IHES, Bures-sur-Yvette, France,
Member ex-officio:	Secretary of IMU,
Members:	Professors M.F. Atiyah, H. Cartan, B. Eckmann, S. Iyanaga, M.S. Narasimhan, E. Vesentini, Academicians M.V. Keldysh and M. Nicolescu.

BUDGET

The allocations for scientific purposes, so far made or foreseen, were as follows:

1971	Moscow Colloquium	\$	5.000
	Grant to Irish Summer School	\$	240
	Prague Symposium	\$	1.000
	IMU Lectures	\$	2.000
			<hr/>
		\$	8.240

1972	Bombay Colloquium	\$	5.000
	Israel Symposium	\$	3.500
	Strasbourg Colloquium	\$	2.000
	Bulgarian Congress	\$	2.000
	IMU Lectures	\$	2.000
			<hr/>
		\$	14.500
1973	Tokyo Conference	\$	7.000
	Australian Conference	\$	7.000
	IMU Lectures	\$	2.000
			<hr/>
		\$	16.000

It should be observed that provisions also must be made for allocations to the Exeter Congress on Mathematical Education in 1972, and to the Rumanian Conference in 1973.

The Executive Committee will meet again in Moscow, after the International Colloquium on Number Theory, September 14-18, 1971.

WORLD DIRECTORY OF MATHEMATICIANS

Due to the long time of preparation, the Directory isn't now quite up to date. This is unavoidable but, unfortunately, there are also other errors, caused by incompleteness and misunderstanding of the material provided by the National Committees. In particular, the Greek and Italian lists seem to have met with such errors. These lists should be completed as follows:

Greece:

Anastasiadis, J., Prof., Univ. of Thessaloniki, Thessaloniki, Greece
Apostolatos, Nicolaos, Prof., Univ. of Athens, Athens, Greece
Artemiadis, Nicolas, Prof., Southern Illinois Univ., Carbondale, Ill. U.S.A.
Contopoulos, G., Prof., Univ. of Thessaloniki, Thessaloniki, Greece
Ferendinou-Nikolacopoulou, Ioanna, Dr., Univ. of Athens, Athens, Greece
Foussianis, Christos, Prof., 5 Delijanni St., Kifissia, Athens, Greece
Glavas, Christos B., Dr., 51 Travlantoni St., Athens (625), Greece
Hainis, John, Prof., Nat. Technical Univ. of Athens, Athens, Greece
Kappos, Demetrios A., Prof., Univ. of Athens, Lykabettoy Street 29, Athens, Greece
Kazandzidis, George S., Prof., Univ. of Ioannina, Ioannina, Greece
Ladopoulos, P., Prof., National Tech. Univ., 53 Eptanissou St., Athens (803), Greece

Oeconomidis, Nicolas, Prof., Univ. of Thessaloniki, Thessaloniki, Greece
Pallas, Aristides, Prof., Hellenic Navy Academy, 58 Solomou St., Athens (102), Greece
Pantelides, George, Prof., Nat. Techn. Univ. of Athens, Athens, Greece
Papaioannou, Constantin P., Prof., Univ. of Athens, 22 G Iacovidou St., Athens (905)
Greece

Papapetrou, A., Institut Henri Poincaré, Paris 5, France
Pylarinos, O., Prof., Academy of Athens, 14 Anagnostopoulou St., Athens (136)
Greece

Stamatis, Evangelos, Dr., 3, Parshou Street, Athens (701), Greece
Stergiou, George, Prof., Hellenic Navy Academy, 4 Afeas Street, P. Psychicon, Athens,
Greece
Throumoulopoulos, L.E., Dr., 12 Apollones-Herodes Atticus St., Amarousion, Athens,
Greece

Tsangas, Gregory, Prof., Univ. of Patras. Patras, Greece
Tsitsas, Leon, Dr., Univ. of Athens, 57 Solonos Street, Athens (143), Greece
Vassiliou, Ph., Prof., Academy of Athens, Evans 23, Athens (909), Greece
Xanthakis, John, Prof., Academy of Athens, 14 Anagnostopoulou St., Athens (136)
Greece

Xiroudakis, George, Dr., Iraklion Kritis, Greece
Zervos, Spiros P., Prof., 21 Saint Demetrius Street, Psychico, Athens, Greece

Italy:

Andreoli, Giulio, Prof., Via Prov. per Marano, 33, 80126 Pianura, Napoli, Italy
Belardinelli, Giuseppe, Prof., Via A. Smareglia, 9, 20133 Milano, Italy
Biddau Martis, Silvia, Prof., Via Grazia Deledda, 6, 09100 Cagliari, Italy
Bompiani, Enrico, Prof., Via Verona, 22, 00161 Roma, Italy
Buzano, Piero, Prof., Corso Valdocco, 15 bis, 10122 Torino, Italy
Cabras, Angelina, Prof., Via Dante, 160, 09100 Cagliari, Italy
Calapso, Renato, Prof., Via Liberta, 481, 98100 Messina, Italy
Campedelli, Luigi, Prof., Via Crimea, 6, 50129 Firenze, Italy
Caruccio, Ettore, Prof., Via La Valle, 15, 10099 Torino, Italy
Cimmino, Gianfranco, Prof., Istituto Matematico, Piazza di P.S. Donato, 5,
40127 Bologna, Italy

Cinquini, Silvio, Prof., Corso Cairoli, 96, 27100 Pavia, Italy
Graffi, Dario, Prof., Via A. Murri, 9, 40137 Bologna, Italy
Manarini, Mario, Prof., Via Leandro Alberti, 1, 40137 Bologna, Italy
Natucci, Alpinolo, Prof., Corso Gianelli, 20/11, 16043 Chiavari, Genova, Italy
Ricci, Giovanni, Prof., Via Falloppio, 5, 20131 Milano, Italy
Scorza Dragoni, Giuseppe, Prof., Piazzetta Ippolito Nievo, 2, 35100 Padova, Italy
Segre, Beniamino, Prof., Via di Salé, 1, 00044 Frascati (Roma), Italy
Supino, Giulio, Prof., Via S. Domenico, 7, 40124 Bologna, Italy
Varoli, Giuseppe, Prof., Via D. Galimberti, 6, 40134 Bologna, Italy
Villa, Mario, Prof., Via G. Tagliacozzi, 5, 40141 Bologna, Italy
Viola, Tullio, Prof., Corso Re Umberto, 45, 10128 Torino, Italy
Zappa, Guido, Prof., Via Quintino Sella, 45, 50136 Firenze, Italy

SALEM PRIZE

The Salem prize for 1971 was awarded to Dr. Charles Fefferman, of the University of Chicago, for his work on Harmonic Analysis. The prize, established in 1968, is given every year to a young mathematician who is judged to have done an outstanding work on Fourier Series and related topics. The recipient was Dr. Nicholas Varopoulos in 1968, Dr. Richard Hunt in 1969 and Dr. Yves Meyer in 1970. The jury consisted in Professor A. Zygmund, Professor C. Pisot and Professor J.-P. Kahane.

CORRECTION

IMU Bulletin, No. 1, p. 14:

In the Budget, Schedule B, the authorized annual expenditure for the period 1971-1974 for scientific activities of the Union and its Commissions and Committees has been omitted. It should be US \$ 6.000.

REQUEST

The National Adhering Organizations of the International Mathematical Union are requested to provide the Secretariat of IMU with the names and addresses of the

Chairman of the National Committee for Mathematics,

Members " " " " " " " .

Information should reach the Secretariat as soon as possible and latest December 31, 1971.

ANNOUNCEMENTS

Applications for IMU LECTURES in 1972 should be sent to the Secretary before December 15, 1971.

The Executive Committee has decided to create an IMU FELLOWSHIP with a grant of \$ 2.000 a year for mathematicians from developing countries, working on a post-graduate level. The respective National Committees are invited to give their support. Applications should be sent to the Secretary of the Union before April 1, 1972.

Proceedings of the International Congress of Mathematicians 1970

will be published in a short time; sales through

Gauthier-Villars, Editeur
55, Quai des Grands-Augustins
75 - Paris 6^e, France

(at subscription price until November 1971).