

**INTERNATIONAL MATHEMATICAL NEWS**  
**NOUVELLES MATHÉMATIQUES INTERNATIONALES**  
**INTERNATIONALE MATHEMATISCHE NACHRICHTEN**

Herausgegeben von der  
ÖSTERREICHISCHEN MATHEMATISCHEN GESELLSCHAFT

**18. Jahrgang**

**Wien - Mai 1964**

**Nr. 77**

**BULLETIN OF THE  
INTERNATIONAL MATHEMATICAL UNION**

**ANNUAL REPORT OF THE EXECUTIVE COMMITTEE**

**January 1 to December 31, 1962**

The Executive Committee's report covering the period January 1 to June 1, 1962 formed part of the report presented to the Fourth General Assembly of the Union at Saltsjöbaden, August 11—13, 1962. The present report gives a resumé of the Union's activities from June 1 to December 31, 1962.

**A. Action taken on the decisions of the 16th meeting of the Executive Committee, Rome, April 24—26, 1962**

(i) As a result of a vote (conducted by postal ballot), the Union unanimously decided to adopt the Executive Committee's recommendation that the category of membership of Finland in the Union be changed from Group I to Group II.

(ii) By another unanimous vote (by postal ballot), the Union decided to allocate \$ 4,000,— from out of its own funds to the International Congress of Mathematicians, Stockholm, August 15—22, 1962.

**B. Seventeenth meeting of the Executive Committee, Saltsjöbaden, August 8—9, 1962**

The meeting was attended by all members of the Executive Committee except Professor Koksma. It was devoted mainly to finalizing the arrangements for the meeting of the General Assembly. A summary of the other decisions taken by the Committee follows.

(i) The financial statement for 1961 was adopted with minor textual corrections.

(ii) It was decided to support the Colloquium on Abelian Groups, Hungary, 1963, and the Italian Summer Research Centre on Abstract Differential Equations, 1963.

(iii) The Executive Committee decided to recommend to the members of the Union that the application received from Turkey for admission as a member of the Union in Group I be accepted.

(iv) The Executive Committee decided that, in absence of further information, the applications for membership in the Union received from South Africa, North Korea, and East Germany be kept pending.

### **C. Fourth General Assembly of the International Mathematical Union, Saltsjöbaden, August 11—13, 1962**

A full record of the proceedings of the General Assembly has been printed and mailed to the members already.

### **D. International Congress of Mathematicians, Stockholm, August 15—23, 1962**

A short account of the proceedings of the Congress has been prepared and mailed to the members already.

### **E. Action taken on the decisions of the 17th meeting of the Executive Committee, Saltsjöbaden, August 8—9, 1962**

By a unanimous vote of the members of the Union, Turkey has been admitted as a member of the Union in Group I, effective January 1, 1963.

### **Errata to the Report of the Executive Committee to the Fourth General Assembly**

Page 4, list of delegates of National Sub-Commissions, ICMI, add

Czechoslovakia	— Professor M. Fiedler
Ireland	— Professor Rev. J. McConnell
Spain	— Professor P. Abellanas
Switzerland	— Professor M. Rueff.

Professor A. Gloden from Luxemburg is a co-opted member.

Page 10, International Colloquium on Linear Spaces, Jerusalem, 1960.

The last sentence in paragraph 3 should read: The Proceedings of the Colloquium have been published separately.

*Professor K. Chandrasekharan  
Secretary  
International Mathematical Union.*

# ANNUAL REPORT OF THE EXECUTIVE COMMITTEE

## January 1 to December 31, 1963

### A. Membership

The following 38 countries were members of the Union in 1963:

- Group I: Argentina, Australia, Brazil, Bulgaria, China-Taiwan, Cuba, Greece, Iceland, Ireland, Malaya-Singapore, Mexico, Norway, Portugal, Turkey;
- Group II: Austria, Denmark, Finland, Israel, Pakistan, Rumania, Spain, Sweden, Yugoslavia;
- Group III: Belgium, Canada, Czechoslovakia, Hungary, India, the Netherlands, Switzerland;
- Group IV: France, Germany, Italy, Japan, Poland;
- Group V: Great Britain, U.S.A., and U.S.S.R.

This membership corresponded to a total voting strength of 88, and an annual income from membership dues of \$ 9,975.60 (equivalent to 102 units).

In the course of the year, the Union decided, on the basis of the outcome of a postal ballot, to admit South Africa, East Germany and North Korea as members in Group I. The admission of these countries will become effective as soon as their National Committees have been approved by the members of the Union, in conformity with the Statutes.

### B. Scientific Activities

I. *Colloquia and Symposia*: In the course of the year the Union co-sponsored and supported the following: (i) Instructional Conference on Mathematical Probability (U. K.), (ii) Colloquium on Abelian Groups (Hungary), and (iii) International Mathematical Summer Centre (Italy).

(i) The *Instructional Conference on Mathematical Probability* was held in Durham, England, from 28 March to 11 April 1963. It was organized by the London Mathematical Society and the Royal Statistical Society and supported financially by the Royal Society, the National Science Foundation, U. S. A., the Scientific Affairs Division of NATO, the Department of Scientific and Industrial Research, U. K., and the International Mathematical Union. There were 153 participants in all: 1 from Australia, 13 from Denmark, 2 from Eire, 10 from Germany, 2 from Hungary, 4 from Netherlands, 1 from Poland, 1 from South Africa, 6 from Sweden, 1 from Switzerland, 106 from U. K., and 6 from the U. S. A.

The conference commenced with twelve introductory lectures covering the elements of measure theory and the foundations of probability theory by Professor P. Billingsley, Dr. D. A. Edwards, Professor D. G. Kendall, Mr. J. F. C. Kingman, and Dr. S. J. Taylor. These were followed by the three main courses as follows:

- Professor P. Billingsley: Information theory and Ergodic theory (7 lectures);
- Professor M. Kac: Brownian motion and Potential theory (5 lectures);
- Professor G. E. H. Reuter: Markov chains (7 lectures).

The main programme was supplemented by a number of additional lectures surveying applications and research topics, as follows:

Professor Z. Ciesielski: On Gaussian processes.

Dr. J. Cigler: Sums of random variables with values in a compact group.

Professor D. R. Cox: Some applications of probability theory to industrial problems.

Dr. I. Csizsar: An inequality concerning probability measures observed through a channel.

Professor P. Erdős: Applications of probability theory to analysis and number theory.

Professor D. V. Lindley: Collections of probability measures.

Professor C. A. Rogers: A stochastic process connected with continued fractions.

Professor P. Whittle: Second-order processes and spectral theory.

(ii) The *Colloquium on Abelian Groups*, Tihany, Hungary, was held on September 2—8, 1963. It was organized by the Hungarian Academy of Sciences and the Bolyai János Mathematical Society, and supported by the International Mathematical Union. The representatives of the Union on the Organizing Committee were Professor B. Segre and Professor S. MacLane. There were 48 participants in all: Canada 2, Czechoslovakia 1, France 1, Germany 2, Great Britain 3, Holland 2, Hungary 14, Italy 2, Japan 1, Poland 4, Sudan 1, U. S. A. 10, and U. S. S. R. 5. — The programme contained 28 talks of 20—40 minutes each. These were held in five morning and three afternoon sessions. The speakers were: Maranda (Canada), Fuchs (Hungary), Loonstra (Holland), Nunke (U. S. A.), Walker (U. S. A.), Balcerzyk (Poland), Pierce (U. S. A.), Beaumont (U. S. A.), Honda (Japan), Kulikov (U. S. S. R.), Irwin (U. S. A.), Hulanicki (Poland), Krull (Germany), Pogány (Hungary), Corner (Great Britain), Sasiada (Poland), Lyapin (U. S. S. R.), Sands (Great Britain), Rotman (U. S. A.), Khabbaz (U. S. A.), Kargaplov (U. S. S. R.), Haimo (U. S. A.), Fried (Hungary), Mrs. Walker (U. S. A.), Charles (France), de Groot (Holland), Kertész (Hungary), and Dlab (Sudan).

The Proceedings of the Colloquium will be published shortly.

(iii) The *International Mathematical Summer Centre*, Italy, held a session on Abstract Differential Equations at Varenna from 31 May to 8 June, 1963. This was supported by grants from the Italian National Research Council, the Italian Ministry of Public Instruction, the Scientific Affairs Division of NATO and the International Mathematical Union. Professor G. de Rham and Professor B. Segre were the representatives of the Union on the Organizing Committee.

The session comprehended four six-hour courses given by Professors: T. Kato of the University of California, J. L. Lions of the University of Paris, L. Nirenberg of the New York University, R. S. Phillips of the Stanford University.

Professor T. Kato: Semi groups and temporally inhomogeneous equations.

Professor J. L. Lions: Equations différentielles opérationnelles dans les espaces de Hilbert.

Professor L. Nirenberg: Ordinary differential equations in Banach spaces.

Professor R. S. Phillips: Semi groups of contraction operators.

In addition to these four courses seminars were held on the following topics:

G. C. Rota (Massachusetts Institut of Technology): A limit theorem for the time dependent evolution equation.

L. Amerio (Politecnico of Milan): Almost periodic differential equations in Hilbert spaces.

S. Zaidman (Politecnico of Milan): Bounded or almost periodic solutions of Poisson equation.

The session was attended by the following mathematicians: P. P. Abbati Maescotti, G. C. Barozzi and A. Cavallucci of the University of Bologna; U. Richard of the Calculation Centre of the National Committee on Nuclear Energy in Bologna; G. Malgarini, G. Prouse, M. L. Ricci, C. Vaghi, A. Vasconi of the Polytechnic of Milan; G. Andreassi, F. Chersi, D. Dal Maso, L. de Simon, G. Prodi, R. Tauzer, G. Torelli of the University of Trieste; J. P. Aubin, D. Sternheimer, W. Strauss, Vo-Khac Khoan of the Institut H. Poincaré; P. C. Baayen of the Mathematisch Centrum of Amsterdam; G. C. Lekkerkerker of the University of Amsterdam; C. Baiocchi, G. Geymonat, E. Magenes of the University of Pavia; G. Björck of the University of Stockholm; S. Campanato, A. Chiffi, E. de Giorgi, U. Mosco of the University of Pisa; R. Conti of the University of Florence; J. Etienne, H. G. Garnir, P. Leonard of the Université de Liège; B. Fishel of the University of London; A. Gloden of the Athénée du Luxembourg; P. Grisvard and D. Huet of the Université de Nancy; G. Grubb of the Aarhus Universitet; F. Guglielmino and G. Pulvirenti of the University of Catania; A. M. Geuidi Zuanni, A. Malferrari, M. Pagni, C. Vinti of the University of Modena; M. G. Jannuzzi, R. Musmeci, G. Luzzatto of the University of Genova; Kai Lai Chung of the Stanford University; P. Kree of the Université de Reims; G. C. Legattos of the University of Athens; A. Valle of the University of Madrid; L. Waelbroeck of the Université Libre de Bruxelles; F. Wuytack of the Université de l'Etat de Gand; Professors A. A. Nikol'skii and V. V. Rumiantzev of the Institute of Mechanics of the Academy of Sciences of the U. S. S. R.

II. Exchange Programme: IMU Lectureships. IMU Lectureships under the Exchange Programme were granted to Japan, Canada and Germany. The Lecturers were: Professor D. Mumford (Harvard University), Professor K. Kuratowski (University of Warsaw), and Professor L. J. Mordell (Cambridge University).

(i) *Japan*: Professor D. Mumford visited Japan in April—June, 1963. He gave lectures on his researches in algebraic geometry in the Universities of Tokyo, Kyoto, Tokyo University of Education, and in the Meetings of the Mathematical Society of Japan and of the Association for the Advancement of Mathematics organized by Professor Akizuki. These lectures were attended by some 15 to 150 people (this last case in the Annual Meeting of the Mathematical Society of Japan in Kyoto on May 26). The lectures with smaller number of attendants were most carefully followed and some lecture notes (in Japanese) are now being prepared.

(ii) *Canada*: Prof. K. Kuratowski arrived in Canada on August 8. At Saskatoon he delivered a series of lectures on the topic "Semicontinuity in Topology" to the ninth biennial seminar of the Canadian Mathematical Congress. About 100 mathematicians from Canada and the United States were in attendance during the period August 10 to August 31, 1963. In addition, Professor Kuratowski took part in various colloquium lectures and was exceedingly helpful to the large group of younger mathematicians at the seminar.

At the conclusion of the seminar the biennial meeting of the Canadian Mathematical Congress was held from September 2—4. At the congress Professor Kuratowski gave a lecture on "Mathematics in Poland".

(iii) *Germany*: Professor L. J. Mordell was in Germany from November 19 to December 20, 1963. He visited the following universities: Berlin, Bonn, Mainz, Freiburg, Wien, Würzburg, Göttingen, Münster, Kiel, and Hamburg. He lectured at various centres on number theory, in particular Diophantine equations.

III. International Commission on Mathematical Instruction (ICMI): The Executive Committee of ICMI was constituted as follows: Professor A. Ličnérówicz (President), Professor E. Moise and Professor S. Straszewicz (Vice-Presidents), M. A. Delessert (Secretary), Professors Y. Akizuki, H. Behnke and H. Freudenthal (Members). Professor A. Glóden and Professor J. Karamata were co-opted as members of the Commission. The Commission considered in detail its programme of work for the session 1963—1966, in particular in the International Congress 1966. The Commission also recommended to the Executive Committee of the Union the signing of a contract with UNESCO for the purpose of carrying out a sample survey on the teaching of mathematics in universities.

### C. Meetings of the Executive Committee

The Eighteenth meeting of the Executive Committee was held at Lausanne, April 2—3, 1963. All the members were present. In addition to making the budget allocations for the year, the Committee arrived at the following decisions:

(i) It was decided that Professor A. van Wijngaarden be appointed IMU's representative on COSPAR in place of Professor B. Rosser.

(ii) It was decided to conduct a postal ballot on the question of the admission of North Korea, South Africa and East Germany as members of IMU in Group I.

(iii) It was decided to support the following colloquia in 1964: (1) Symposium on Algebraic Topology, Manchester (U. K.), (2) Colloquium on Differential Analysis, Bombay (India), and (3) Colloquium on Differential Geometry, Bucarest (Rumania).

(iv) Five representatives of the Union were designated to serve on the Consultative Committee of the International Congress, 1966.

### D. Relations with ICSU/UNESCO

The Tenth General Assembly of ICSU met in Vienna on November 22—29, 1963. It accepted the recommendations of the Committee on Future Structure for the reorganization of ICSU and adopted new statutes and rules of procedure. As a result, the Bureau and the Executive Board were abolished, to be replaced by an Executive Committee consisting of the President, Past-President, Secretary-General and Treasurer, and 14 representatives of the Unions and 10 representatives of the National Members, including 4 Vice-Presidents, two from each of these groups. When new unions are admitted as members of ICSU, some grouping of the unions was suggested in order to keep the number of union representatives on the Executive Committee at 14.

The following Executive Committee was elected by the General Assembly:

#### Officers

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Dr. H. W. Thompson  
St. John's College  
Oxford, England

##### *Past-President*

Prof. S. Hörstadius  
Zoologiska Institutionen  
Uppsala, Sweden

##### *Vice-President*

Dr. J. M. Harrison  
Geological Survey of Canada  
Ottawa, Canada

Prof. K. Chandrasekharan  
Tata Institute of Fundamental  
Research  
Colaba  
Bombay 5-BR, India

##### *Secretary-General*

Prof. D. Blaskovic  
Virological Institute  
Bratislava, Czechoslovakia

##### *Treasurer*

Ing. Gén. G. R. Laclavère  
136 bis, Rue de Grenelle  
Paris VII, France

##### *Vice-President*

Dr. Harrison Brown  
Foreign Secretary  
National Academy of Sciences  
2101 Constitution Avenue  
Washington 25, D. C., USA

Prof. I. Malecki  
Deputy Secretary General  
Polish Academy of Sciences  
Palace of Culture and Sciences  
Warsaw, Poland

#### National Representatives

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Dr. Harrison Brown  
Foreign Secretary  
National Academy of Sciences  
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Prof. Y. Fujioka  
Science Council of Japan  
Ueno Park  
Tokyo, Japan

Dr. R. V. Garcia  
Facultad de Ciencias Exactas  
y Naturales  
Universidad de Buenos Aires  
Peru 272  
Buenos Aires, Argentina

Prof. I. Malecki  
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Polish Academy of Sciences  
Palace of Culture and Sciences  
Warsaw, Poland

Dr. D. F. Martyn  
Chief Scientist  
CSIRO Upper Atmosphere Section  
Camden, N. S. W.  
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Dr. J. T. Wilson  
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University of Toronto  
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Dr. J. Yanney-Wilson  
Secretary  
Ghana Academy of Sciences  
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## Union Representatives

IAU	Mr. D. H. Sadler Royal Greenwich Observatory Herstmonceux Castle Hailsham, Sussex England	IUCR	Prof. J. D. Bernal Department of Physics Birkbeck College Malet Street London, W. C. 1, England
IUGG	Dr. J. Kaplan Department of Physics University of California Los Angeles 24, Cal., USA	IUTAM	Prof. M. Roy 55, Boulevard Malesherbes Paris 8e, France
IUPAC	Prof. W. Klemm Hindenburgplatz 55 Münster, Westfalen Germany	IUHPS	Prof. R. Taton 64, Rue Gay-Lussac Paris 5e, France
URSI	Dr. R. L. Smith-Rose 21 Tumblewood Road Banstead, Surrey England	IMU	Prof. K. Chandrasekharan Tata Institute of Fundamental Research Colaba, Bombay 5-BR, India
IUPAP	Sir Gordon Sutherland National Physical Laboratory Teddington, Middlesex England	IUPS	Dr. J. W. Duyff Physiologisch Laboratorium Rijksuniversiteit te Leiden Wessenaarseweg 62 Leiden, Netherlands
IUBS	Prof. C. H. Waddington Institute of Animal Genetics West Mains Road Edinburgh 9, Scotland	IUB	Prof. M. Florin Laboratoire de Biochimie Université de Liège 17, Place Delcour Liège, Belgium
IGU	Prof. H. Boesch Geographisches Institut der Universität Freiestraße 30 Zürich 31, Switzerland	IUGS	Dr. J. M. Harrison Geological Survey of Canada Ottawa, Canada

The first meeting of the new Executive Committee took place on November 28, 1963.

It was decided that the annual subventions from ICSU to the Unions could be on a fixed percentage basis for the next two years. IMU has been allotted 5 per cent, which works out to \$ 8,750.—.

## E. Financial Report

The Financial Statement for 1963 is presented separately.

*Professor K. Chandrasekharan*  
*Secretary*  
*International Mathematical Union.*

*End of the Bulletin of the International Mathematical Union.*