

# INTERNATIONAL MATHEMATICAL UNION

## RECORD OF THE FIFTH GENERAL ASSEMBLY OF THE INTERNATIONAL MATHEMATICAL UNION

Dubna (USSR), August, 13—16, 1966

### A G E N D A

1. Opening of the Assembly.
2. Presidential Address.
3. Appointment of Committees:
  - (i) Nominating Committee;
  - (ii) Budget Committee;
  - (iii) Committee on Resolutions;
  - (iv) Tellers.
4. Commissions of the Union: reports and plans for future activities.
  - (a) ICMI;
  - (b) Exchange Commission.
5. Symposia: reports.
6. Financial Reports for 1962—1966. Budget for 1967—1970.
7. Relations with ICSU-UNESCO.
8. IMU and the International Congress of Mathematicians.
9. Change of Group of Adherence.
10. Elections:
  - (a) Executive Committee;
  - (b) Commissions.
11. Adoption of Reports.
12. Next meeting of the General Assembly.
13. Any other item with the permission of the President.

ICSU = International Council of Scientific Unions

ICMI = International Commission on Mathematical Instruction

## PARTICIPANTS

### (a) Executive Committee

President	—	Professor G. de Rham
Vice-President	—	Professor H. Cartan
Vice-President	—	Professor K. Kuratowski
Secretary	—	Professor K. Chandrasekharan
Members	—	Professor J. C. Burkill
	—	Professor F. Hirzebruch
	—	Professor M. A. Lavrentiev
	—	Professor B. Segre
Retiring President	—	Professor Rolf Nevanlinna

President de Rham was in the chair during the sessions of the General Assembly on August 13 and 15. The General Assembly went into Committee on August 14, and Professor Nevanlinna was in the chair during the session, at the request of the President.

### (b) Delegates:

Australia:	Professor T. G. Room
Austria:	Professor H. J. Stetter
Belgium:	Professor F. Bureau
	Professor L. Godeaux
Bulgaria:	Professor L. Ilief
Canada:	Professor H. S. M. Coxeter
	Professor N. S. Mendelsohn
Cuba:	Doctor C. S. Rehermann
Czechoslovakia.	Professor J. Novak
	Professor J. Nedoma
	Professor E. T. Poulsen
Denmark:	Professor K. Schröder
East Germany:	Professor R. Nevanlinna
Finland:	Professor O. Lehto
	Professor J. Dieudonné
France:	Professor A. Revuz
	Professor S. Mandelbrojt
	Professor R. de Possel
Germany:	Professor W. Franz
	Professor M. Barner
	Professor F. L. Bauer
Greece:	Professor C. P. Papaioannou
Hungary:	Professor P. Turán
	Professor K. Tandori
India:	Professor K. Balagangadharan
	Professor N. L. Ghosh
	Professor M. S. Narasimhan
Ireland:	Professor Timoney
Israel:	Professor A. Dvoretzky
	Professor S. Amitsur
Italy:	Professor D. Graffi
	Professor G. Ricci
	Professor G. Cimmino
	Professor B. Segre

Japan:	Professor Y. Akizuki Professor S. Iyanaga Professor K. Kawada Professor K. Yosida
Netherlands:	Professor H. Freudenthal Professor A. Heyting
North Korea:	Professor Han Heun kun
Norway:	Professor Viggo Brun
Pakistan:	Professor M. R. Siddiqi
Poland:	Professor K. Kuratowski Professor S. Turski
Rumania:	Professor G. C. Moisil Professor G. Vranceanu
Spain:	Professor P. Abellanas Professor A. Dou
Sweden:	Professor O. Frostman
Switzerland:	Professor R. Bader Professor H. Hopf Professor A. Huber
UK:	Professor J. C. Burkill Professor W. K. Hayman Professor Sir W. Hodge Professor E. A. Maxwell Professor R. A. Rankin
USA:	Professor R. H. Bing Professor S. Eilenberg Professor S. C. Kleene Professor E. R. Kolchin Professor C. B. Morrey
USSR:	Professor N. N. Bogoliubov Professor S. N. Merguelian Professor I. G. Petrouski Professor S. L. Sobolev Professor I. M. Vinogradov (alternate: Prof. Linnik)
Yugoslavia:	Professor V. Dajović Professor D. Kurepa
ICSU:	Professor K. Chandrasekharan
ICMI:	Professor A. Lichnerowicz

## II. President's Address

This is given in full, as an appendix.

## III. Appointment of Committees

The President nominated, and the General Assembly approved the appointment of the following Committees:

### *Nominating Committee:*

G. de Rham (Chairman), R. Nevanlinna, H. Hopf, J. C. Burkill, B. Segre, S. Iyanaga, S. Merguelian, R. H. Bing, W. Franz.

### *Budget Committee:*

Sir William Hodge (Chairman), K. Chandrasekharan, O. Frostman, S. Merguelian, C. B. Morrey Jr., K. Kuratowski.



*Resolutions Committee:*

J. Dieudonné (Chairman), S. Sobolev, E. A. Maxwell.

*Tellers:* O. Lehto (Chairman), A. Dvoretzky, A. Revuz.

The Nominating Committee was to receive nominations to the new Executive Committee, from the floor as well as from the present Executive Committee, till 7 p.m. on August 13, 1966, and to present a slate for election on August 15, 1966. The Budget Committee met at 3 p.m. on August 13, 1966.

## IV. Commissions of the Union

(a) *ICMI*

A report was presented by the President of ICMI, Professor A. Lichnerowicz. This was discussed in detail, and a recommendation was made that the new Executive Committee should study the question of creation of a permanent Secretariat for ICMI. (Resolution No. 4).

(b) *Exchange Commission*

The General Assembly decided to restrict the membership of the Commission to three, in order to increase its efficiency.

## V. Symposia and Conferences

Detailed reports on the following meetings were printed and circulated.

1963. 1. Instructional Conference on Mathematical Probability, Durham (UK), 28 March—11 April.  
2. International Mathematical Summer Course, Varenna (Italy), 31 May—8 June.  
3. Colloquium on Abelian Groups, Tihany (Hungary), 2—8 September.
1964. 4. International Colloquium on Differential Analysis, Bombay (India), 7—14 January.  
5. International Conference on Algebraic Topology, Manchester (UK), 6—17 April.  
6. Symposium on Global Differential Geometry, Bucarest (Rumania), 20 June—4 July.  
7. Conference on Classical Theory of Functions of one complex variable, London (UK), 6—12 September.
1965. 8. International Conference on the Theory of Groups, Canberra (Australia), 10—20 August.  
9. Instructional Conference on Algebraic Number Theory, Brighton (UK), 1—18 September.  
10. International Colloquium on Analytic Functions, Erevan (USSR), 4—16 September.  
11. International Colloquium on Algebraic Geometry, Madrid (Spain), 9—16 September.  
12. International Symposium on Algebraic Geometry, Rome (Italy), 30 September—5 October.

## VI. Budget

The Budget Committee recommended and the General Assembly approved the following budget for each of the years 1967—70, on the understanding that transfers are permitted from one item to another, and from one year to another, provided that no appropriation from Schedule B is allowed to augment the provision made in Schedule A.

*Schedule A.* Authorized annual expenditure for the period 1967—70.

	U.S. dollars
1. Secretarial help	
(a) IMU office	2500
(b) President	300
(c) ICMI	300
2. Office Expenses (incl. postage expenses)	600
3. Travel Expenses (E.C. and others)	2800
4. President's and Secretary's expenses	200
5. Contribution to ICSU (2 <sup>0</sup> / <sub>6</sub> of dues)	200
6. Publication and Dissemination of	
IMU News	300
7. Audit Fee	100
8. Contingencies	850
	<hr/>
	8.150

*Schedule B.* Authorized annual expenditure for the period 1967—70.

Scientific Activities of the Union and its Commissions and Committees (ICMI, Exchange, Colloquia, Symposia, Conferences, Summer Schools, Lectureships).

4000  

---

Total: 12.150

## VII. Relations with ICSU-UNESCO

Professor K. Chandrasekharan spoke on behalf of ICSU, and explained the possibilities that exist for cooperation between IMU, ICSU and UNESCO.

## VIII. International Congress of Mathematicians

1. It was resolved that the Fields Medal Committee be appointed by the Union, and its decision communicated to the Secretary of the Union who will obtain the medals from Canada, and that only the arrangements for the actual presentation be looked after by the Organizing Committee of the Congress.

2. It was resolved that the Scientific Programme of the Congress (the invited one-hour and half-hour addresses and the arrangement of the Programme) be decided upon by a Committee appointed by the Union, with 4 representatives of the Organizing Committee of the Congress, 4 representatives of the Executive Committee of the Union and, in addition, a Chairman appointed by the President of the Union.

3. It was resolved that the recommendation for the location of the 1974 Congress be made by a Committee appointed by the Union and having on it at least 2 representatives of the Organizing Committee of the 1970 Congress.



## IX. Change of Group of Adherence

The General Assembly approved the change of Australia's group of adherence from Group I to Group II, effective 1966.

## X. World Directory

The General Assembly resolved that the project of the World Directory should be continued under appropriate arrangements made by the Executive Committee.

## XI. Miscellaneous

All the reports presented to the General Assembly were adopted.

A resolution was adopted calling for the next General Assembly at about the same time and place as the next International Congress of Mathematicians.

A resolution was adopted expressing thanks to the Tata Institute for its cooperation.

## XII. Elections

### (a) *Executive Committee*

The following Executive Committee was elected by written ballot for the four year period beginning January 1, 1967.

President:	Professor H. Cartan
Vice Presidents:	— " — M. A. Lavrentiev
	— " — D. Montgomery
Secretary:	— " — O. Frostman
Members:	— " — M. F. Atiyah
	— " — K. Chandrasekharan
	— " — G. Hajós
	— " — G. Vesentini
	— " — K. Yosida
Retiring President:	— " — G. de Rham.

### (b) *Commissions*

ICMI (Ten Members at large):

	Professor H. Freudenthal (President)
	— " — Y. Akizuki
	— " — A. Lichnerowicz
	— " — E. Moise
	— " — J. Novak
	— " — G. Papy
	— " — A. Revuz
	— " — S. Sobolev
	— " — G. Steiner
	— " — B. Thwaites
Exchange Commission:	Professor F. Hirzebruch (Chairman)
	— " — S. Eilenberg
	— " — S. Merguelian

### XIII. Resolutions

#### Resolution 1

The General Assembly is in favour of a project directed by the Executive Committee towards improving the existing system of reviewing mathematical papers along the following lines:

The existing system of refereeing might be dovetailed with the system of reviewing. Referees of papers which are accepted by Journals may be invited by the Journals themselves to furnish a short review or preview on a voluntary basis. Such reviews may then be forwarded to any one or more of the reviewing Journals for use at their discretion. In no case should the review of the paper be published before the definitive form of the paper is ready for printing; in cases where the author modifies his paper substantially after its acceptance, the editor of the Journal should warn the referee who might wish to modify his review as a result.

#### Resolution 2

The General Assembly recommends that the Executive Committee collect complete information about existing national or regional mathematical competitions „Olympics“ (including an exhaustive list of problems, the rules of the competition, the system of grading, and the effects generally) and disseminate it among the member-countries of the Union.

#### Resolution 3

The General Assembly notes with satisfaction the high degree of co-operation that has prevailed between the Committees of the Union and the Organizing Committee of the Congress, and the great value inherent in such a cooperative international enterprise.

#### Resolution 4

Considering the importance, and the increasing complexity, of ICMI, the General Assembly recommends that the Executive Committee of the Union study the question of the creation of a permanent Secretariat for ICMI.

## APPENDIX

### President's Address

Ladies and Gentlemen,

I declare open the fifth General Assembly of the International Mathematical Union with a most cordial welcome to all the delegates. I am particularly happy to greet two of the past Presidents of the Union, Heinz Hopf and Rolf Nevanlinna. Marshall Stone, who was the first President of the Union, and Enrico Bompiani and Beno Eckmann who were Secretaries of the Union, have been unable to come. The International Council of Scientific Unions, whom we have invited to send a representative, is here represented by Professor Chandrasekharan who is our Secretary as well as the Secretary-General of ICSU, at the same time.



My first duty is to thank our hosts, the Academy of Sciences of the USSR, the University of Moscow, and all our Soviet mathematical Colleagues and friends who have spared no effort or time to prepare the Assembly and also the Congress which will open in three day's time. We are profoundly thankful to them.

Four years ago, at Saltsjöbaden, President Nevanlinna stated with satisfaction how our Union became firmly established, and its usefulness unquestioned. Today it has completed 16 years of its existence, and with the general development of mathematics, its importance, if anything, has increased.

During the last four years, we have admitted four new members: Turkey, East Germany, South Africa, and North Korea. The number of members has thus gone up from 37 to 41, and the Union includes almost all Countries where mathematical activity exists.

The first object of our Union, according to the Statutes, is to promote international cooperation in mathematics. To this end we have sponsored the organisation of international Conferences and Colloquia. There were three in 1963, four in 1964 and five in 1965, in the United Kingdom, Italy, Hungary, Spain, India, Rumania, Australia and in the Soviet Union. The subjects of the colloquia have covered a wide range: Analysis, Geometry, Number Theory, Algebra, Topology, Probability. The reports which have been distributed show the high scientific value of these meetings. I have had the privilege of participating in three of them, in Bombay, in Bucarest and in Erevan, and I am sure that all the participants were convinced, as I am, of the utility, and I should even say of the necessity for such meetings. In fact, in Mathematics, experiment cannot control theory; it is only by discussion with others that we can discern and correct our errors.

The initiative for these Colloquia rests in the local organizers. They make an application for a grant to the Executive Committee of the Union in principle at the beginning of the year preceding the year of the meeting. Our Committee gives financial aid suited to their needs and within our possibilities, and scientific aid in the form of two delegates who take part in the preparation of the programme and in the choice of the speakers, one of whom represents the Executive Committee.

For the year 1966, our funds have been reserved for the International Congress which will open in 3 day's time. We have offered a subvention intended largely to take care of the travel expenses of invited speakers and young mathematicians.

Following a procedure which was established at the time of the Stockholm Congress, and which will continue in the future, a Consultative Committee has been charged with the preparation of the scientific programme of the Congress, especially the list of one-hour and half-hour lectures. This Committee consists of 4 members designated by the Executive Committee, 4 other members designated by the Organizing Committee of the Congress, and a chairman appointed by the President of the Union. For the Moscow Congress this Committee consists of Professors R. Nevanlinna (Chairman), Borel, Choquet, Garding, Milnor, Linnik, Kolmogorov, Pontrjagin and Vekua. I am happy to say that the relations between our Executive Committee and the Organizing Committee of the Congress have been excellent throughout, through the liaison ensured by our Colleague and friend, Academician Lavrentiev.



Following again a procedure established in the past, we have constituted a Committee for the Fields Medals, and another Committee charged to recommend a plan for the location of the next Congress. Their conclusions will be presented to the Congress itself.

The International Commission on Mathematical Instruction, and the Commission on Exchange, have pursued their activity with strong interest, as can be seen from the printed report. Professor Lichnerowicz whom we have invited here and whom I have the pleasure of welcoming into our midst, will speak about ICMI in due course.

Thanks to the efforts of our Secretary Chandrasekharan and thanks to the work of every member of the Bureau constituted with the cooperation of the Tata Institute of Fundamental Research in Bombay and headed by Professor Balagangadharan, whom I have the pleasure to welcome here, the third Edition of the World Directory of Mathematicians has appeared. More complete than the preceding ones, it undoubtedly serves a valuable purpose. This publication, may I add, is not a commercial affair; it is a publication of the Union brought out by the unanimous decision of its members.

Our relations with ICSU are closer than ever, since our Secretary Professor Chandrasekharan after having been Vice-President for 3 years, has been elected Secretary-General at the beginning of this year at the ICSU General Assembly held in Bombay. That indicates well the confidence that all the international community have in him, and shows once more how one may rely on his utmost devotion. Each year we receive from ICSU and UNESCO a grant which is reserved for purely scientific activities, and which acts as a catalyst for the Colloquia I have mentioned. May I take this occasion to express to ICSU and to UNESCO our gratitude for this useful contribution?

In concluding these words of introduction, may I express the wish that our discussions and deliberations will be held in an atmosphere of frank and friendly serenity? May I appeal to the goodwill and spirit of understanding of everyone, for the greater good of our Union?

Herausgeber: Internationale Mathematische Union, Zürich  
Für den Inhalt verantwortlich: Prof. K. Chandrasekharan,  
Tata Institute of Fundamental Research, Bombay  
Schriftleitung: Prof. Dr. W. Wunderlich, Technische Hochschule Wien  
Druck: Albert Kaltschmid, Wien III, Kollergasse 17