INTERNATIONAL MATHEMATICAL UNION

Record of the Second General Assembly held on August 31 - September 1, 1954 at the Hague (Binnenhof).

AGENDA OF THE MEETING

1. Action on seating Delegates.
2. Action on questions concerning membership.
3. Appointment by the President of Working Committees.
4. Resolution to form Nominating Committee — Implementation of same.
5. Reception of Reports.
8. Proposals regarding Symposia.
10. Discussion of relations with ICSU and other Unions.
11. Topics suggested by the National Adhering Organizations.
13. Resolutions approving Reports.
14. Resolution on Congress — Next meeting of General Assembly.
15. Courtesy resolutions.

The initial session was opened at 9:30 by President M. H. Stone in the Binnenhof; later served as Chairmen of the various sessions Professors: D. H. Kloosterman, A. Denjoy, S. Iyanaga, H. Kneser, B. Jessen, W. V. D. Hodge.

1. Action on seating Delegates.

The following persons were present at the meeting as Delegates or invited participants.

A. DELEGATES.

ARGENTINA
Prof. A. Gonzales Dominguez

AUSTRALIA
Prof. K. E. Bullen

AUSTRIA
Prof. N. Hofreiter, W. Gröbner

BELGIUM
Prof. L. Godeaux, Fl. Bureau

CANADA
Prof. G. de B. Robinson, R. L. Jeffery, H. S. M. Coxeter (alternate)

DENMARK
Prof. N. E. Nørlund, W. Fenchel

FINLAND
Prof. P. J. Myrberg

FRANCE
Prof. A. Denjoy, J. Leray; A. Châtelet, Ch. Ehresmann, Ch. Pisot (alternates)
B. OTHER INVITED PARTICIPANTS.

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (UNESCO)  
Prof. P. Auger, F. Le Lionnais

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS (ICSU)  
Dr. R. Fraser (in a private capacity)

INTERNATIONAL UNION FOR THEORETICAL AND APPLIED MECHANICS (IUTAM)  
Prof. J. M. Burgers

INTERNATIONAL UNION FOR LOGIC, METHODOLOGY AND PHILOSOPHY OF THE SCIENCES (IUPS)  
Prof. A. Heyting

Credentials of the Delegates were found in order.
Invitations to join the Union were sent well in advance of the meeting to the following countries: Brazil, Bulgaria, Chile, China, Colombia, Czechoslovakia, Egypt, Eire, Hungary, Iran, Poland, Portugal, Rumania, Turkey, Union of South Africa, U. S. S. R., Uruguay, Venezuela. The invitations were accompanied by copies of all printed documents of the Union.
2. Action on questions concerning membership.

The Chairman, on behalf of the Executive Committee, recommended the acceptance of the following applications for membership in the Union:

**Iceland** (July 8, 1954)
- *Group:* one.

**Portugal** (August 4, 1954)
- *Nat. Adh. Org.:* Instituto de Alta Cultura.
- *Nat. Comm. for Math.:* not indicated.
- *Group:* one.

**Brazil** (August 13, 1954)
- *Group:* one.

The General Assembly voted unanimously in favor of these applications; Iceland and Brazil became regular members of the Union as of September 1, 1954; Portugal will become a regular member immediately after the communication to the Secretariat of the names of the Members of the National Committee for Mathematics.

As consequence of this vote the present membership of IMU is as follows (Groups are indicated in parenthesis after each name): Argentina (I), Australia (I), Austria (II), Belgium (III), Brazil (I), Canada (II), Cuba (I), Denmark (II), Finland (I), France (IV), Germany (IV), Great Britain (V), Greece (I), Iceland (I), India (III), Israel (II), Italy (IV), Japan (IV), Malaysia-Singapore (I), Mexico (I), Netherlands (II), Norway (I), Pakistan (II), Peru (I), Portugal (I), Spain (II), Sweden (II), Switzerland (II), U.S.A. (V), Yugoslavia (II).

The position of Peru was examined and Resolution no 1 (see Appendix) was adopted.

3. Appointment by the President of Working Committees.

On suggestion of the President the appointments of the following members of Working Committees were approved by the General Assembly:

a) *Drafting Committee*
- Hill, Chairman; Châtelet, Davenport

b) *Budget Committee*
- Bureau, Chairman; Bompiani, Chandrasekharan, Coxeter, Hofreiter.

4. Resolution to form Nominating Committee — Implementation of same.

Resolutions no 2 on elections in 1954, and no 3 on nomination of Commissions (see Appendix) were carried.

On the President's suggestion the following names were accepted by the Assembly for the Nominating Committee: Stone, Chairman; Iyanaga, Leray, Norlund, Terracini.
5. Reception of Reports.

No reports (besides those already printed) were presented.


Resolution n° 4 (see Appendix) on publication of IMU news was adopted. Chandrasekharan suggested also a large dissemination of IMU news in mathematical journals.


The Secretary explained the printed and distributed financial Report for 1952, 1953 the present financial situation of the Union (whose Emergency and Reserve Fund will be, at the end of the year, almost the double of what was to be expected on the basis of the estimates of the First General Assembly); the extra-expenditures connected with the increased membership and the preparation of this Assembly; the prospective new items of expenditure (President's expenses; contribution to ICSU; expenses for chartered accountants). On this basis the Executive Committee submitted to the Assembly a tentative budget for the years 1955-58 to be examined by the Budget Committee. In the final session the General Assembly unanimously approved the distribution of IMU income for the years 1955-58 suggested by the Budget Committee (see Appendix, Resolution 15).

During the discussion, Dr. Fraser hinted at the possibility of getting some financial help from UNESCO through ICSU for the preparation of a General Assembly.

President Stone observed that the margin between expenses and income in the years 1955-58 will become pretty narrow; while he did not favour increasing now the annual dues he indicated that as the Union becomes more active it will need to have a larger income from dues; and he commented that in the meantime the possibility of getting individual contributors should be explored.

8. Proposals regarding Symposia.

The text of the resolution on Symposia submitted to the Assembly by the Executive Committee was explained by Jessen. After an extensive discussion, in which Mac Lane, Anger, Stone, McShane, Cartwright, Chandrasekharan, Denjoy, Leray, Burgers, Fraser took part, the Resolution on General Rules for Colloquia (Appendix, n° 5) was unanimously adopted.


The printed Reports have already detailed the activities of the Executive Committee and of the Commissions.

On this basis, President Stone suggested discharging the Commission on Mathematical Symbols. After a discussion, in which Sansone, Stone, Denjoy, Hodge, Amira, Terracini, Severi, Kurepa took part, Resolution n° 6 (Appendix) was unanimously adopted.

On President Stone's suggestion the reorganization and consolidation of the Commissions on Abstracting and Reviewing and on Dissemination of Mathematical Knowledge in a single
Commission was examined by the Assembly and Resolution n° 7 (Appendix) was finally adopted unanimously.

President Stone then reports on the difficulties experienced by the International Commission for Mathematical Instruction (ICMI). In order to examine carefully the recommendations of the Executive Committee to the General Assembly a working Committee, composed of Stone, Chandrasekharan, Châtelet, Kurepa, Sansone, was appointed to report later to the Assembly. The Committee's suggestions were finally approved unanimously as in Resolution n° 8 (Appendix).

On a suggestion by Miss Cartwright the Assembly agreed to reverse the order of discussion of n° 10 and n° 11 of the Agenda.

11. Topics suggested by the National Adhering Organizations.

Kurepa discussed his proposal on the « Production of a film about the rôle of Mathematics and Mathematicians at the present time ». Signorini, Châtelet, Newman, Burgers, Stone raised questions about the usefulness, the feasibility and the cost of such a project. The General Assembly finally adopted Resolution n° 9 (Appendix).

Terracini asked the President for an official interpretation of the Statutes concerning the meaning of the term « General Assembly » when the delegates are not physically assembled. President Stone stated that practical considerations favored the working interpretation that the National Committees are deemed to constitute the General Assembly when the latter is not in session; he proposed that if there were no objection this working interpretation should remain effective until modified by an amendment to the Statutes. No objection was voiced.

10. Discussion of relations with ICSU and other Unions.

On the problem of the reorganization of the Unions into ICSU (von Muralt plan) the Assembly adopted unanimously Resolution n° 10 (Appendix).

As a consequence of some remarks by Dr. Fraser (ICSU) on the work of the Commissions, Resolution n° 11 (Appendix) was adopted.

Following a suggestion of President Stone, adopted in substance by the Assembly, the representatives of IMU to ICSU should be, as a rule, the President and the Secretary, with the power in the President to indicate other persons if necessary.

On the question of relations with other Unions, Burgers (IUTAM) stressed the importance of these relations: subjects of common interest to IMU and IUTAM (and other Unions, like IUPAP) could be the definition of symbols, the study of mathematical problems in calculating machines, non-linear differential equations; joint symposia on these subjects could be held. As a consequence Resolution n° 12 (Appendix) on a joint-Commission of IMU and IUTAM was unanimously adopted by the Assembly.

The situation of the International Union for Methodology and Philosophy of the Sciences (IUPS) was presented by Heyting. As IUPS has not been admitted to ICSU as an independent Union, it has been suggested by ICSU authorities that an agreement be made with the IMU so as to make it possible to have direct subventions from ICSU, President Stone
expressed to Prof. Heyting the assurance that the IMU expects to give continuing attention to the problem of establishing suitable cooperative arrangements with IUPS as well as other Unions and other organizations which have interests in common with IMU.

Jessen suggested that to make relations with other Unions more likely, attention of the National Adhering Organizations to IMU should be called to the fact that the National Committees for Mathematics should be representative of all branches of mathematics.

Severi reported on the present situation of the International Computing Center; Auger added information about the nations which have signed or ratified the convention establishing the Center; Papageoannu announced that Greece will soon ratify the convention. The Assembly adopted Resolution no 13 (Appendix).

At this point in the meeting Kloostermann expressed the thanks of the Organizing Committee of the International Congress in Amsterdam for the help received from UNESCO, ICSU and the Executive Committee of IMU; and suggested the appointment of a joint-Committee to determine the time and place of the next International Congress.

Resolution 14 (Appendix) was unanimously carried.


(1) President Stone reported to the Assembly the findings of the Nominating Committee. The following names for the Officers and elected Members of the Executive Committee were offered for the period January 1, 1955 - December 31, 1958.

President: H. Hopf; First Vice-President: A. Denjoy; Second Vice-President: W. V. D. Hodge; Secretary: E. Bompiani; Elected Members: K. Chandrasekharan, J. F. Koksmal, S. Mac Lane.

No other names were suggested to the Nominating Committee.

The General Assembly unanimously elected the slate proposed by the Nominating Committee.

(2) The representatives of IMU to ICSU will be the President and the Secretary; the Executive Committee may appoint substitutes for these representatives when necessary.

(3) The elections of the various Commissions for the period January 1, 1955 - December 31, 1958 gave the following unanimous results:

Commission on Mathematical Publications:
E. Hille, Chairman; B. A. Amira, W. Fenchel, members.

Commission on the Exchange of Mathematicians:
H. Davenport, Chairman; S. Iyanaga, J. R. Kline, members.

Commission for the World Directory of Mathematicians:
M. H. Stone, Chairman; P. Belgodere, E. Bompiani, W. V. D. Hodge, members.

International Commission for Mathematical Instruction:

The President recalled that in accordance with the Statutes each Commission may coopt additional members.
(4) At this point of the meeting and before leaving the chair, Hodge took the opportunity to thank President Stone for what he did for the Union both before its inception and during these three years of existence. Resuming the chair, President Stone addressed appropriate words of thanks to Professor Hodge, the Members of the Executive Committee and the Assembly for their cooperation. Dr. Fraser expressed his gratitude for having been invited to this Assembly and his satisfaction for the work done in this first interval of existence of the Union with its President and Secretary.

13. Resolutions approving Reports.

The Assembly approved the final drafting of the resolutions prepared by the Working Committees, Resolution n° 15 (Appendix) on the Budget for the period 1955-58, and Resolution n° 16 (Appendix) approving the printed Reports submitted to the Assembly by the Executive Committee.

14. Resolution on Congress — Next meeting of General Assembly.

The Assembly authorized the Executive Committee, by Resolution n° 17, to fix the time and place of the third General Assembly in connection with the next International Congress of Mathematicians.

15. Courtesy resolutions.

The Assembly approved Resolution n° 18 (Appendix) thanking Professors Kloosterman, Koksma, Loonstra, Zaanen for their cooperation in the preparation of the present Assembly; the Burgomaster and the Wethouders of the Hague, and the President Curator and Rector Magnificus of the Technical University of Delft for the receptions offered to the Delegates.

In addition the General Assembly sent telegrams of appreciation of their services and of good wishes to Professors Emile Borel and Erich Kamke, Vice-Presidents of the IMU, who could not attend the Assembly because of their physical condition (see Appendix).
APPENDIX

RESOLUTIONS OF THE SECOND GENERAL ASSEMBLY OF THE
INTERNATIONAL MATHEMATICAL UNION - THE HAGUE
August 31st - September 1st, 1954

1. Resolution on Peru

Resolved:
That in accordance with article 22 of the Statutes the name of Peru be removed from
the list of voting members of the IMU.

2. Resolution on elections in 1954

Resolved:
That nominations for the period 1955-1958 for:
1) the Officers of the Union,
2) the additional members of the Executive Committee,
3) the representatives of IMU to ICSU,
be prepared and submitted for action to this Assembly by a nominating Committee, consisting of the President ex-officio and four additional members elected by this Assembly on nomination of the Executive Committee. Proposals for the list of nominations may be made to the Nominating Committee by any member of the General Assembly. No name which has not been so proposed may later be put in nomination for the posts to be filled at these elections. Every name which has been so proposed should be reported by the Nominating Committee to the General Assembly.

3. Resolution on nomination of Commissions

Resolved:
That nominations for the Members and Chairmen of the various Commissions of IMU
be submitted by the President for election by the General Assembly.

4. Resolution on publication of IMU News

Resolved:
That there be appropriated annually over the period 1955-1958 a sum not exceeding $300 to be expended by the Secretary, on the advice of the Executive Committee, for the purpose of publishing and disseminating news of the activities of IMU and that this sum be accounted for separately.

5. Resolution on General rules for Colloquia

Resolved:
That the General Assembly adopt the following rules for organization of Colloquia;
1. A colloquium is thought of as a meeting of a limited number of invited participants who are either experts or promising younger scientists, working in a field of current mathematical activity. This definition does not preclude the presence of a small number of other interested persons.

2. The Executive Committee of the Union may take the initiative in the organization of a colloquium; but in general the Union will act as co-sponsor for colloquia suggested by the National Adhering Organizations or by interested groups of mathematicians. The Executive Committee decides which colloquia should be organized or supported by the Union and seeks to obtain the necessary funds. The aim will be to support at least one colloquium each year. From time to time the Union may participate in the organization of joint colloquia with other Unions.

3. Organizations or groups of mathematicians who desire the participation of the Union in the organization of a colloquium should send their proposals to the Secretary of the Union. The proposal must state the subject, the place and the intended date of the colloquium, and must include a preliminary budget indicating the support that may be expected from other sources and the support from the Union that will be needed for the successful organization of the colloquium. The support from the Union must be used exclusively for travelling and maintenance expenses of invited participants.

4. The Executive Committee will discuss the future program of colloquia each year on the basis of proposals received before February 1 (in 1954 before November 1). In setting up the program the Executive Committee will take into account the interest of the various subjects from the point of view of the actual state of science, the scientific circumstances in the countries in which the colloquium might take place, and what colloquia have taken place in recent years. The Executive Committee will aim at a rotation of aid among the principal geographical areas of mathematical activity, and among the various branches of mathematics. The Executive Committee will aim at generous support of the colloquia of which the Union acts as a co-sponsor.

5. When the Executive Committee takes the initiative for a colloquium it appoints an organizing Committee including at least one of its own members.

6. When the Union acts as a co-sponsor of a colloquium proposed by a National Adhering Organization or a local group, the Executive Committee will appoint one of its members and one or two other mathematicians to join the national or local Organizing Committee for the colloquium. These members are to participate in the scientific arrangements, and in particular in the selection of the invited participants for the meeting.

7. Information about colloquia to be organized or supported by the Union shall be suitably published and sent to the National Committees for Mathematics, which may call the attention of the organizing Committee to experts whose participation is considered desirable.

6. Resolution on discharging the Commission of Mathematical Symbols

Resolved:
That the Commission on a Directory of Mathematical Symbols be discharged.
7. Resolution on forming a new Commission on Scientific Publications

Resolved:
That the Commissions on Dissemination of Mathematical Knowledge and on Abstracting and Reviewing be consolidated into a single Commission on Scientific Publication, with the following terms of reference:

a) The Commission shall advise the Executive Committee and the General Assembly on all questions concerning scientific publication which may come before them;

b) The Commission shall study the desirability of a program of scientific publication under the auspices of IMU and shall report its conclusions to the Executive Committee and the General Assembly not later than December 31, 1956;

c) The Commission shall study problems of scientific publication in the field of Mathematics with a view to determining in what way, if any, IMU can contribute to their solution;

d) The Commission shall be authorized to arrange, with the approval of the Executive Committee, meetings of editors and other interested persons for the purpose of discussing specific problems of scientific publication in the field of Mathematics.

e) The Commission shall prepare a report reviewing the use of the principal mathematical symbols. It may establish contact with any international organization concerned with the use of mathematical symbols from the point of view of technical applications.

8. Resolution on the Commission for Mathematical Instruction

Resolved:
That the terms of reference and the constitution of the International Commission for Mathematical Instruction be clarified and determined as follows:

a) The Commission shall consist of ten members-at-large elected by the General Assembly on nomination of the President of IMU, and of two national delegates named by each of the National Committees for Mathematics as specified below;

b) The officers of the Commission shall consist of a President, a Secretary and two Vice-Presidents. The President shall be elected by the General Assembly on the nomination of the President of the IMU from the membership at large of the Commission;

c) The Executive Committee of the Commission shall consist of the Officers of the Commission together with three additional Members elected by the membership of the Commission;

d) During his lifetime Professor Fehr (Geneva) shall remain Honorary President of the Commission in recognition of his longtime interest in the cause of Mathematical education and his devoted services to it;

e) In all other respects the Commission shall make its own decisions as to its internal organization and rules of procedure;

f) Any National Adhering Organization wishing to support or encourage the work of the Commission may create, in agreement with its National Committee, a subcommittee to maintain liaison with the Commission in all matters pertinent to its affairs. The National Adhering Organization in question shall designate two members of the said subcommittee,
if created, to serve as delegated members of the Commission;


g) The Commission shall be charged with the conduct of the activities of IMU bearing on mathematical and scientific education, and shall take the initiative in inaugurating appropriate programs designed to further the sound development of mathematical education at all levels and to secure public appreciation of its importance;

h) The budget of the Commission shall be submitted to the Executive Committee of IMU and the General Assembly for approval at such times as may be determined by agreement between the Commission and the Executive Committee;

i) The Commission shall file an annual report of its activities with the Executive Committee of IMU and shall file a quadrennial report at each regular meeting of the General Assembly.

9. Resolution on the production of a film about the role of Mathematics and Mathematicians at the present time

Resolved:
That the proposal for the production of a film concerning the importance of mathematics be referred for further study to the Commission for Mathematical Instruction.

10. Resolution on relations with other Unions

Resolved:
That the General Assembly report to ICSU its view that the reorganization proposed by Professor von Muralt should not be undertaken without further study, designed inter alia to provide, in a more realistic and farsighted way, for the representation and coordination of the increasingly numerous and diverse mathematical activities in all branches of science.

11. Resolution on activities of Commissions

Resolved:
That every Commission, as constituted at the close of the present General Assembly, for the period 1955-58, be required to submit to the Executive Committee in time for its next meeting a detailed programme and a detailed budget for its activities during the year 1956.

12. Resolution on a Joint-Commission of IMU and IUTAM

This Assembly requests the Executive Committee to explore, in consultation with IUTAM, the desirability of making a proposal to ICSU to appoint a joint-Commission of the IMU and the IUTAM for carrying on specific activities of common interest; and to take appropriate action thereon.

13. Resolution on the International Computing Center

Resolved:
That the Executive Committee be requested to consider the relations between IMU
and the International Computing Center when it comes into legal existence, and to establish such relations as seem best to it.

14. Resolution on Joint-Committee for time and place of next Congress

Resolved:
That this Assembly delegate the President and the Secretary of the IMU and a third representative in the person of Professor Iyanaga to constitute together with the President and the Secretary of the International Congress of Mathematicians 1954 a Joint-Committee of the Union and the 1954 Congress charged with the duty of considering the time and place of the next International Congress of Mathematicians and reporting its recommendations thereon to the Plenary Session of the 1954 Congress on Thursday, September 9, 1954.

15. Resolution on the budget for 1955-58

1) The second General Assembly authorizes the following annual expenditure for 1955-58 against IMU funds:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>(I) secretarial help</td>
<td>$1,800</td>
</tr>
<tr>
<td>(II) office expenses</td>
<td>$600</td>
</tr>
<tr>
<td>(III) travelling expenses</td>
<td>$750</td>
</tr>
<tr>
<td>(IV) President's expenses</td>
<td>$250</td>
</tr>
<tr>
<td>(V) ICSU contribution (approximately)</td>
<td>$50</td>
</tr>
<tr>
<td>(VI) Publication and dissemination of IMU news</td>
<td>$300</td>
</tr>
<tr>
<td>(VII) Accountant's fee</td>
<td>$150</td>
</tr>
</tbody>
</table>

(VIII) Preparation of the General Assembly in 1958 $350

2) The Assembly authorizes the Executive Committee to reallocate any sums not used for the purpose designated, for use for one of the other purposes in the same year or in a later year during the period 1955-58.

3) The Assembly resolves that the sum of $500 allocated for office expenses for the current year be increased to $1,000 in order to meet expenses incurred in the preparations for the present Assembly.

16. Approval of the printed reports

This Assembly approves all the published reports of the Committees and Commissions of the IMU presented to this Assembly, with the modifications, if any, decided upon by the Assembly.

17. Motion on next General Assembly

This Assembly authorizes the Executive Committee to call the third General Assembly of the IMU at the same time and place as those decided upon the meetings of the next
International Congress of Mathematicians by the joint Committee of the IMU and the Congress already appointed by the Assembly.

18. Courtesy resolutions

Resolved:

That the Second General Assembly of the International Mathematical Union presents its hearty thanks to its hosts. In particular the Assembly wishes to express its gratitude to the following persons and organizations.

To Professors Kloostermann, Koksma, Loonstra and Zaanen for the excellent local arrangements.

To the Burgomaster and the Wethouders of the Hague for the gracious reception in the Town Hall.

To the Rector of the Technical University of Delft for his cordial hospitality.