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INTERNATIONAL MATHEMATICAL UNION**

**Report of the Executive Committee to the
National Adhering Organizations**

Covering the period from June 1, 1956 to May 31, 1958

Preliminary remarks: This report covers the activities of IMU during the indicated period and gives the Financial Reports for the period of January 1, 1956 to December 31, 1956 and of January 1, 1957 to December 31, 1957.

A — ORGANIZATIONAL

1. As communicated in our last *Report* (covering the period of April 21, 1955 to May 31, 1956), the Polish Academy of Sciences applied for membership in the Union (Group IV). This application was unanimously accepted by all voting members (57 votes of the total of 64) and the membership of Poland in our Union became effective on July 15, 1956. The National Adhering Organization is the Polish Academy of Sciences, Warsaw, Poland.

2. As communicated in the above mentioned *Report*, the Academy of Sciences of the U.S.S.R. has applied for membership in the Union (Group V). This application was unanimously accepted by all voting members (59 votes of the total of 64) and the membership of the U.S.S.R. in our Union became effective on March 1, 1957. The National Adhering Organization is the Académie des Sciences de l'U.R.S.S., Moscow, Russia.

3. Applications for membership in the Union have been received by:
Bulgarische Akademie der Wissenschaften, Sofia, Group I, dated January 22, 1957,
Československá Akademie Ved, Praha, Group III, dated January 26, 1957,
Bolyai János Matematikai Társulat, Budapest, Group III, dated August 6, 1956.

These applications were unanimously accepted by all voting members (Bulgaria: 54 votes of the total of 73; Czechoslovakia: 54 votes of the total of 73; Hungary: 54 votes of the total of 73). Therefore, the respective memberships became effective on May 21, 1957. The National Adhering Organizations are:

Bulgarische Akademie der Wissenschaften, Sofia, Bulgaria.
 Ceskoslovenská Akademie Ved, Praha, Czechoslovakia.
 János Bolyai Mathematical Society, Budapest, Hungary.

4. On October 28, 1957, the Institut de Mathématique de l'Académie des Sciences de la R.P.R., Bucarest, Rumania, applied for membership in the Union (Group II). This application was unanimously accepted by all voting members (59 votes of the total of 80) and the membership of Rumania in our Union became effective on March 1, 1958. The National Adhering Organization is the Institut de Mathématique de l'Académie des Sciences de la R.P.R., Bucarest, Rumania.

The list of members on May 31, 1958, was as follows (the number in brackets indicating the group):

Argentina (I)	India (III)
Australia (I)	Israel (II)
Austria (II)	Italy (IV)
Belgium (III)	Japan (IV)
Brazil (I)	Malaya-Singapore (I)
Bulgaria (I)	Mexico (I)
Canada (II)	Netherlands (II)
Cuba (I)	Norway (I)
Czechoslovakia (III)	Pakistan (II)
Denmark (II)	Poland (IV)
Eire (I)	Portugal (I)
Finland (I)	Rumania (II)
France (IV)	Spain (II)
Germany (IV)	Sweden (II)
Great Britain (V)	Switzerland (II)
Greece (I)	U.S.A. (V)
Hungary (III)	U.S.S.R. (V)
Iceland (I)	Yugoslavia (II)

Having regard to the groups of adherence and the number of unit contributions as shown in the table

Groups	I	II	III	IV	V
Units	1	2	3	5	8

the present memberships correspond to 82 votes and to 96 units (i.e. to an annual income of \$ 6,259.20).

B — ACTIVITIES OF THE COMMISSIONS

1. World Directory of Mathematicians

The lists of mathematicians according to countries previously established (see Report of the Executive Committee to the National Adhering Organizations, April 21, 1955 to May 31, 1956) were sent to Professor Stone, Chicago, for final revision. The revision was entrusted to a panel working under the guidance of Professor Stone with the assistance of many mathematicians

and with the financial help of the USA National Academy of Science — National Research Council. Early in 1957 the revised lists were sent to Butterworths Publications Ltd., London. From there they were submitted to all National Committees for Mathematics of the adhering countries of IMU, and questionnaires were dispatched to all mathematicians named in these lists. As the response to the questionnaires seemed unsatisfactory to Butterworths, they indicated that they would prefer not to publish the Directory in the form originally planned. Therefore, a new solution had to be found.

Thanks to the efforts of Professor *Chandrasekharan*, Bombay, it was possible to print the Directory in Bombay, with the cooperation of the Tata Institute of Fundamental Research. The final editing and the task of bringing the lists and addresses up-to-date were accomplished under the supervision of Professor *Chandrasekharan* and with the assistance of mathematicians in Bombay and all over the world. The Directory came out on May 15, 1958 and will be sold at a price of \$ 1.— or a little more. It has to be considered as a first and only partially complete edition; it is planned that the cooperation with the Tata Institute of Fundamental Research should continue in order to establish a permanent service in view of future editions.

A complete report giving an account of the work done by the different collaborators and of the principles applied in revising the lists, and also of the financial help granted by IMU and other institutions will be presented to the General Assembly of IMU at St. Andrews.

2. Commission on the Exchange of Mathematicians

The Commission now consists of: Professor *H. Davenport* (Chairman) London; Professor *M. Brelot*, Paris; Professor *B. Eckmann*, Zürich; Professor *S. Iyanaga*, Tokyo; Professor *A. Pteijel*, Lund; Professor *B. Segre*, Rome; Professor *Begle*, Yale; Professor *W. Wunderlich*, Vienna.

The principal activity of the Commission has been the inauguration and operation of an Information Service for mathematicians visiting Europe or travelling in Europe. Publicity was given to the scheme in I.M.N., in the Notices of the American Mathematical Society and elsewhere. The information (supplied by the mathematician himself or with his authority) has been duplicated by the office of I.M.N. in Vienna and has been circulated to National Committees and to any individual or organization wishing to receive it. The mailing list at present contains 42 addresses.

The response to the scheme (which was intended partly to provide guidance as to the possibility of one on a larger scale) has been disappointing. From November 1955 to April 1958, only 13 items have been received and circulated. The conclusion appears to be that most mathematicians have sufficient contact with their colleagues in other countries to be able to make their own plans in advance.

The announcement of the service was supplemented by a list of the members of the Commission, and a statement that members would be prepared to advise mathematicians who propose to visit their countries, and to advise young mathematicians of the opportunities for advanced study and research in their countries. Several inquiries have been received and answered.

Further activities of the Commission were discussed and initiated by the Executive Committee upon recommendations of a Sub-Committee appointed especially for that purpose (Committee on Promotion and Development) in collaboration with the Commission. For further details see Section D of this Report.

3. Commission on Scientific Publications

The Commission now consists of Professors *R. P. Boas* (Chairman), *B. A. Amirá*, *W. Fenchel*, *G. Sansone*, *J. F. Koksmá*.

The possibilities of the publication of annual volumes containing expository articles on topics of current interest have been investigated. The Academic Press, New York, expressed interest in this project, without financial help from IMU. Following a suggestion of Professor *Chandrasekharan*, the feasibility of a journal sponsored by IMU, containing reports on colloquia and similar topics is further discussed. Professor *Koksmá* has drawn the attention of the Commission to the importance of documentation of mathematical literature. Professor *Koksmá*, with the assistance of other mathematicians, will submit to the Commission a report on the possibility of the IMU's supporting revision of the Universal Decimal Classification for Mathematics.

4. International Commission of Mathematical Instruction

President:

Vice-Presidents:

Secretary:

Further members of the E.C. of ICMI:

Members of ICMI:

Prof. H. Behnke, Münster
Prof. Djuro Kurepa, Zagreb
Prof. Marshall H. Stone, Chicago
Julien Desforge, Bourg-la-Reine
Prof. Ram Behari, Delhi
Prof. E. A. Maxwell, Cambridge
Dr. K. Piene, Oslo
Prof. Yasno Akizuki, Kyoto
Prof. Piero Buzano, Torino
Prof. H. Behnke, Münster
Prof. Ram Behari, Delhi
Prof. P.-J. Dubreil, Paris
Prof. J.C.H. Gerretsen, Groningen
Prof. Jeffery, Ontario
Prof. Diuro Kurepa, Zagreb
Prof. E.A. Maxwell, Cambridge
Prof. Marshall H. Stone, Chicago

At present ICMI has national Sub-Commissions in the following 24 countries: Argentina, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Great Britain, Greece, Hungary, India, Israel, Italy, Japan, Luxembourg, Netherlands, Poland, Portugal, Sweden, Switzerland, U.S.A., Yugoslavia.

During the period covered by the present Report, there have been 3 Meetings of the Executive Committee of ICMI. The first one in Paris, December 29, 1956, the second one in Brussels, July 3, 1957, and the third one in Münster, May 28, 1958. In the first and second Meetings the following items were discussed:

(1) Participation of ICMI at the International Congress in Edinburgh 1958. ICMI will participate in the Section on Education as it did in Amsterdam 1954. The program of a great part of that section is prepared by ICMI in close cooperation with the Organizing Committee of the Congress.

(2) Project of an exhibition of mathematical textbooks in connection with the Congress in Edinburgh.

(3) Project of a symposium of ICMI to be held on July 1 and 2, 1957 in Brussels.

(4) Questions concerning difficulties in recruiting mathematical teachers of all levels in various countries; a questionnaire shall be distributed at the end of 1957.

(5) New national Sub-Commissions of ICMI.

(6) Cooperation between ICMI and the periodical "L'Enseignement Mathématique", the official organ of ICMI.

The third Meeting dealt with the final preparation of the participation at the International Congress 1958 and with the answers to the questionnaires on the recruiting of mathematical teachers.

The second Meeting was preceded by a symposium of ICMI, held on July 1 and 2, 1957, in Brussels. The following lectures were given: a) Prof. *Behnke*: "Le développement de l'enseignement mathématique dans l'université allemande dans le 19ième siècle"; b) Prof. *Freudenthal*: "L'initiation à la géométrie"; c) Prof. *Gerretsen*: "Le continu géométrique et l'initiation à l'arithmétique"; d) Prof. *Maxwell*: "L'enseignement de la géométrie en Angleterre"; e) Prof. *Kurepa*: "Les ensembles et la géométrie élémentaire"; f) Prof. *Ilic-Dajovitch*: "Sur la réalisation de l'enseignement géométrique moderne"; g) Prof. *Fehr*: "L'enseignement de la géométrie aux enfants de 11-16 ans".

The draft for new Statutes of ICMI is being prepared by a Commission consisting of Prof. *Behnke*, Chairman, Prof. *Hopf*, Prof. *Koksma*, Prof. *Stone* and Prof. *Desforge*.

C — COLLOQUIA, CONFERENCES

During the period covered by this report, IMU acted as co-sponsor for two Colloquia on different mathematical fields.

1. International Colloquium on the Theory of Functions Helsinki, Finland, August 12—18, 1957

(Report by Prof. O. Lehto)

(1) The Colloquium was sponsored by the Finnish Academy of Sciences and by the International Mathematical Union. The Organizing Committee consisted of: Professors *R. Nevanlinna* (Chairman), *P.-J. Myrberg*, *O. Lehto*, *H. Hopf*, *A. Pfluger*. The Colloquium was attended by 103 ordinary and 25 associate members, representing the following 18 countries: Austria, Finland, France, Germany, Great Britain, Hungary, Israel, Japan, Netherlands, Norway, Poland, Rumania, Sweden, Switzerland, Turkey, U.S.A., U.S.S.R. and Yugoslavia. The details concerning participants appear from the following list of members:

- L. Ahlfors, Cambridge, Mass., USA
- B. Amirà, Jerusalem, Israel
- R. Bader, Neuchâtel, Switzerland
- F. Bagemihl, Notre Dame, Indiana, USA
- P. Belinskij, Lwow, USSR
- M. Biernacki, Lublin, Poland
- A. Bizhadshe, Moscow, USSR
- W. Blaschke, Hamburg, Germany
- M. Brelot, Paris, France
- A. Broman, Göteborg, Sweden
- N.G. de Bruijn, Amsterdam, Netherlands
- L. Carleson, Uppsala, Sweden
- Mary L. Cartwright, Cambridge, England
- Z. Charzynski, Łódź, Poland
- E.F. Collingwood, Alnwick, Northumberland, England
- I. Daniljuk, Moscow, USSR
- A. Denjoy, Paris, France

A. Dinghas, Berlin, Germany
 W.F. Donoghue Jr., Lawrence, Kansas, USA
 J. Dufresnoy, Bordeaux, France
 D. Dugué, Paris, France
 M. Dzrbashjan, Erivan, USSR
 G. Elfving, Helsinki, Finland
 K. Endl, Giessen, Germany
 B. Epstein, Philadelphia, Pennsylvania, USA
 P. Erdős, Birmingham, England (Hungary)
 O. Frostman, Djursholm, Sweden
 W. Fuchs, Ithaca, New York, USA
 A.O. Gelfond, Moscow, USSR
 H. Grunsky, Mainz, Germany
 H.G. Haefeli, Boston, Mass., USA
 G. af Hällström, Turku, Finland
 W.K. Hayman, London, England
 M. Hervé, Nancy, France
 E. Hölder, Leipzig, Germany
 H. Hornich, Vienna, Austria
 A. Huber, Zurich, Switzerland
 F. Huckemann, Giessen, Germany
 G. Julia, Paris, France
 Y. Juve, Helsinki, Finland
 Suzan Kahramaner, Istanbul, Turkey
 E. Kaila, Helsinki, Finland
 W. Kaplan, Ann Arbor, Michigan, USA
 B. Kjellberg, Stockholm, Sweden
 H. Kneser, Tübingen, Germany,
 T. Kövari, London, England
 H. Künzi, Zurich, Switzerland
 M.A. Lavrentieff, Moscow, USSR
 M.M. Lavrentieff, Moscow, USSR
 O. Lehto, Helsinki, Finland
 F. Leja, Kraków, Poland
 P. Lelong, Paris, France
 A.J. Lohwater, Ann Arbor, Michigan, USA
 O. Lokki, Helsinki, Finland
 I-S. Louhivaara, Helsinki, Finland
 A.J. Macintyre, Aberdeen, Scotland
 W. Maier, Jena, Germany
 S. Mandelbrojt, Paris, France
 A. Markushevich, Moscow, USSR
 S. Mergeljan, Erivan, USSR
 P. Montel, Paris, France
 L. Myrberg, Helsinki, Finland
 P.J. Myrberg, Helsinki, Finland
 E. Netanyahu, Haifa, Israel
 F. Nevanlinna, Helsinki, Finland
 R. Nevanlinna, Helsinki, Finland
 M. Ohtsuka, Nagoya, Japan
 V. Paatero, Helsinki, Finland
 M. Parreau, Lille, France
 H. Petersson, Münster, Germany
 A. Pfluger, Zurich, Switzerland
 G. Piranian, Ann Arbor, Mich., USA
 R. de Possel, Alger, Algérie

K. Pöschl, Munich, Germany
 M. Radojčić, Beograd, Yugoslavia
 R.A. Rankin, Glasgow, Scotland
 A. Read, St. Andrews, Scotland
 A. Rényi, Budapest, Hungary
 Catherine Rényi, Budapest, Hungary
 H. Röhrli, Munich, Germany
 P.C. Rosenbloom, Minneapolis, Minnesota, USA
 H. Royden, Stanford, California, USA
 L. Sario, Los Angeles, California, USA
 H. Schmidt, Würzburg, Germany
 Mari-Hélène Schwartz, Paris, France
 P. Seibert, Würzburg, Germany
 W. Seidel, Notre Dame, Indiana, USA
 H. Selberg, Stockholm, Sweden
 B.V. Shabat, Moscow, USSR
 A. Shaginjan, Erivan, USSR
 F. Sommer, Münster, Germany
 W. Sörensen, Neuchâtel, Switzerland
 S. Stoilow, Bucarest, Rumania
 K. Strebel, Fribourg, Switzerland
 O. Tammi, Helsinki, Finland
 N. Terzioglu, Istanbul, Turkey
 H. Tietz, Münster, Germany
 L. Ullemar, Stockholm, Sweden
 C. Uluçay, Ankara, Turkey
 N.P. Vekua, Moscow, USSR
 K.I. Virtanen, Helsinki, Finland
 J.D. Weston, Newcastle-upon-Tyne, England
 H. Wittich, Karlsruhe, Germany

(2) The scientific program consisted of 10 one hour addresses, given by invitation of the Organizing Committee, and of 65 thirty-minute lectures. In six of the longer lectures, surveys were given on various parts of function theory. Owing to the great number of lectures, two had to be given simultaneously, except for the survey talks. Of the lectures, 31 were given in German, 27 in English and 17 in French. The details of the Program were as follows:

Monday, August 12

Opening session. Addresses by the Chairman of the Organizing Committee, Professor *R. Nevanlinna*, and by the First Vice-President of the I.M.U., Professor *A. Denjoy*.

L. Ahlfors, The method of orthogonal decomposition for open Riemann surfaces, first lecture (by invitation of the Organizing Committee)

H. Grunsky, Zur konformen Abbildung unendlich vielfach zusammenhängender Gebiete

G. Haefeli, Konformitätsbedingungen bei vier-dimensionalen Abbildungen

B. Shabat, On maps defined by solutions of systems of partial differential equations

H. Kneser, Abzählbarkeit und analytische Struktur

Seminar, Section I

H. Wittich, Über konforme Abbildungen (Survey lecture by invitation of the Organizing Committee)

H. Künzi, Über quasikonforme Abbildungen (Survey lecture by invitation of the Organizing Committee)

Discussion, Chairman *L. Ahlfors*

- A. V. Bizhadshé*, Sur certains problèmes pour les équations du type mixte
M. M. Lavrentieff, Uniqueness and stability of analytic functions

Tuesday, August 13

- L. Ahlfors*, The method of orthogonal decomposition on open Riemann surfaces, Second lecture (By invitation of the Organizing Committee)
A. Huber, Über die Anwendung funktionentheoretischer Methoden in der Flächentheorie
M. A. Lavrentieff, Sur quelques problèmes de la théorie de la représentation quasiconforme
P. Seibert, Typus und topologische Randstruktur einfach-zusammenhängender Riemannscher Flächen
R. Nevanlinna, Über fastkonforme Abbildungen
A. Read, An extremal problem on Riemann surfaces
F. Sommer, Probleme der komplexen Differentialgeometrie
L. Sario, Strong and weak boundary components
S. Stoilow, Sur la théorie topologique des surfaces de recouvrement riemannien
M-H. Schwartz, Défauts algébriques et transcendants relatifs à un couple de dimensions
P. Lelong, La notion d'aire pour les variétés analytiques complexes et ses applications
H. Röhrli, Über das Riemannsche Modulproblem

Seminar, Section II

- H. Royden*, Riemann surfaces (Survey lecture by invitation of the Organizing Committee)

Discussion, Chairman *A. Pfluger*

- L. Myrberg*, Über meromorphe Funktionen und Kovarianten auf Riemannschen Flächen
M. Parreau, Sur les lignes de Green des surfaces de Riemann
I. N. Vekua, Über die verallgemeinerte Riemann-Hilbertsche Randwertaufgabe

Wednesday, August 14

- L. Ahlfors*, The method of orthogonal decomposition for open Riemann surfaces, Third lecture (by invitation of the Organizing Committee)
W. Blaschke, Anwendung höherer komplexer Zahlen in der Kinematik

Seminar, Section III

- A. Pfluger*, Über analytische und harmonische Differentiale und Integrale auf Riemannschen Flächen (Survey lecture by invitation of the Organizing Committee)

Discussion, Chairman *H. Kneser*

- R. Bader*, Sur le problème de Cousin pour une surface de Riemann non compacte

Thursday, August 15

- W. K. Hayman*, Bounds for the large coefficients of univalent functions
I. I. Daniĭjuk, Über das System der partiellen linearen Differentialgleichungen erster Ordnung auf Riemannschen Flächen
A. Rényi, Some remarks on univalent functions
H. Tietz, Funktionen mit Cauchyscher Integraldarstellung auf nicht kompakten Gebieten Riemannscher Flächen

- H. Hornich*, Zur Struktur der schlichten Funktionen
M. Radojčić, Über die Weierstrassche Produktentwicklung analytischer Funktionen auf Riemannschen Flächen
N. Terzioglu, Über schlichte Funktionen
K. Endl, Zum Dirichletschen Problem auf den Greenschen Linien
Z. Charzynski, Über die algebraischen schlichten Funktionen
M. Brelot, Sur l'allure à la frontière des fonctions harmoniques, potentielles ou holomorphes
P. Erdős, Extremal properties of polynomials
P. Montel, Les valeurs algébriques des fonctions analytiques
M. Biernacki, Sur les moyennes et sur les extréma de modules
A. Dinghas, Wachstumsprobleme harmonischer und subharmonischer Funktionen

Seminar, Section IV

- L. Ahlfors*, Extremal problems related to analytic functions and conformal mapping (Survey lecture by invitation of the Organizing Committee)

Discussion, Chairman *A. Denjoy*

Sightseeing

Friday, August 16

- A. L. Shaginian*, Über den Picardschen Satz
S. Mandelbrojt, Problème généralisé de Watson et ses applications
M. Hervé, Valeurs exceptionnelles d'une fonction méromorphe au voisinage d'un ensemble singulier de capacité nulle
A. J. Macintyre, An overconvergence theorem of G. Bourion and its application to the coefficients of certain power series
E. F. Collingwood, Cluster sets and prime ends
J. Dufresnoy, Le problème des coefficients pour certaines fonctions méromorphes dans le cercle unité
A. J. Lohwater, Cluster sets of analytic functions
C. Rényi, Über einige Fragen, die mit Lückensätzen verknüpft sind
F. Huckemann, Über den Defekt von mittelbaren Randstellen auf beschränktartigen Riemannschen Flächen
W. Maier, Von den Lambertschen Reihen
W. Fuchs, On meromorphic functions with high total deficiency
A. Denjoy, La fonction de Minkowski considérée dans le plan complexe
K. Pöschl, Über die Wachstumsordnungen der ganzen transzendenten Lösungen linearer Differentialgleichungen
W. Kaplan, Zeros of analytic functions and the moment problem

Seminar, Section V

- O. Lehto*, Distribution of values and singularities of analytic functions (Survey lecture by invitation of the Organizing Committee)

Discussion, Chairman *L. Carleson*

- C. Uluçay*, Bloch functions of the third kind and the constant A
P. C. Rosenbloom, The inequalities of Ehrenpreis, Malgrange and Hörmander

Saturday, August 17

- H. Petersson*, Abelsche Differentiale, Poincarésche Reihen und Metrisierung (by invitation of the Organizing Committee)
S. Mergeljan, On some problems of the theory of approximation
R. Rankin, The differential equation associated with the uniformization of certain algebraic curves
D. Dugué, Théorie des fonctions et calcul des probabilités

- A. O. Gelfond, Some processes of interpolation of analytic functions
 N. G. de Bruijn, Function theory in Banach Algebras
 P. Epstein, An extremal problem with infinitely many interpolation conditions
 M. Biernacki, Sur les travaux de la théorie des fonctions en Pologne
 G. Piranian, Construction of functions with prescribed boundary behavior
 M. Ohtsuka, Capacity of product sets
 S. Bergman, Applications of function-theoretical methods in the study of harmonic functions and vectors of three variables (read by B. Epstein)
 F. Leja, Points extrémaux des ensembles et leur application dans la théorie des fonctions
 W. Donoghue, On the exponential representation of analytic functions with positive imaginary part in the upper half-plane
 G. af Hällström, Übertragung eines Satzkomplexes von Weierstrass und Dinghas auf beliebige Randmengen der Kapazität Null
- Closing Session

Sunday, August 18

Reception by the City of Helsinki for the members of the Colloquium and the Scandinavian Congress of Mathematicians.

2. International Colloquium on Finite Groups, Tübingen (Germany), August 18—24, 1957

(Summarized and translated from a report by Prof. E. Kamke and Prof. H. Wielandt)

(1) *Organization.* This Colloquium was organized by the Deutsche Mathematiker-Vereinigung and the International Mathematical Union. The Organizing Committee consisted of: Professors Baer-Frankfurt, Kamke-Tübingen (as Secretary), MacLane-Chicago, van der Waerden-Zürich, Wielandt-Tübingen (as Chairman), and for part of the time Kneser-Tübingen.

(2) *Finance.* The Colloquium was sponsored by the International Mathematical Union, the Bundes-Innenministerium and the Kulturministerium in Stuttgart. Some of the participants received contributions from institutions in their respective countries; in particular, through the efforts of Prof. MacLane, American funds were made available for travelling expenses of several participants from the USA.

(3) *Participants.* The final list includes 47 participants (21 lecturers and 26 further participants) from 12 countries:

Australia:	T. G. Room, Sydney
Belgium:	J. Tits, Brussels
Germany:	J. André, Braunschweig
	R. Baer, Frankfurt am Main
	W. Gaschütz, Kiel
	O. Grün, Würzburg
	B. Huppert, Tübingen
	W. Kappe, Berlin
	F. Kasch, Heidelberg
	M. Kneser, Heidelberg
	R. Kochendörffer, Rostock
	H. Kupisch, Heidelberg
	F. W. Levi, Berlin
	J. Mennicke, Kiel

	H.-J. Nastold, Heidelberg
	J. Neubüser, Kiel
	G. Pickert, Tübingen
	P. Roquette, Hamburg
	F. Rühls, Rostock
	O. Tamaschke, Tübingen
	H. Wielandt, Tübingen
	E. Witt, Hamburg
Great Britain:	R. Armstrong, Cambridge
	N. Blackburn, Cambridge
	A. M. Duguid, Cambridge
	K. Gruenberg, London
	G. Higman, Oxford
	K. Hirsch, London
	B. H. Neumann, Manchester
	H. Neumann, Hull
	D. L. Taunt, Cambridge
France:	M. Lazard, Poitiers
Netherlands:	J. de Groot, Amsterdam
	F. Loonstra, den Haag
Italy:	M. Curzio, Naples
	G. Zacher, Padua
	G. Zappa, Florence
Japan:	N. Itô, Sapporo
Austria:	W. Nöbauer, Vienna
Switzerland:	G. Vincent, Lausanne
	B. L. van der Waerden, Zurich
Hungary:	L. Rédei, Szeged
U.S.A.:	R. Brauer, Cambridge, Mass.
	W. E. Deskins, East Lansing
	M. Hall, Columbus
	R. C. Lyndon, Ann Arbor
	J. Tate, New York

All of the invited participants received a contribution towards living expenses in Tübingen, some of them also towards their travel expenses.

Although the lecturers were selected quite some time in advance, the Organizing Committee had to face a few last minute changes. For instance, some foreign mathematicians, whose presence was considered quite important, were unable to come because of visa difficulties. Others decided to participate in the Colloquium only a few weeks before it took place; some even came without prior notice.

(4) *Subjects of lectures.*

The Organizing Committee suggested two survey lectures as an introduction into interesting domains, one on modular representations (*Brauer*), the other on simple linear groups (*Tits*); the other topics were chosen by the lecturers. This resulted in a not complete, but extremely colorful picture of the problems dealt with at the present time. There were 21 lectures pertaining to the following topics: The structure of finite groups (*Blackburn*, *Rédei*, *Wielandt*, *Zappa*), as well as its connection with infinite groups (*Grün*, *Hirsch*, *Neumann*) and with associative rings (*Nöbauer*) or Lie rings (*Lyndon*); the Burnside conjecture (*Hall*); asymptotic results on the number of groups of a given order (*Higman*); linear groups (*Tits*, *Witt*);

group extensions and cohomology (*Gaschütz, Kochendörffer, Lazard*); modular representations of finite groups and related algebras (*Brauer, Gruenberg*); axiomatic considerations (*Levi*).

(5) *Detailed program of meetings.*

Monday, August 19

Opening Session

Brauer: Über die Darstellungen der Gruppen endlicher Ordnung

Levi: Darstellung der Komposition in einer Gruppe als Relation

Lyndon: Adjunction of elements to groups and associated rings

Kochendörffer: Über die Fortsetzung von Faktorensystemen

Tuesday, August 20

Gruenberg: The norm of a group algebra and its generalisation

Neumann: Ansteigende vollinvariante und Frattinireihen

Zappa: Automorphismes sans éléments unis dans les groupes finis

Sightseeing Tour

Huppert: Normalteiler mehrfach transitiver Permutationsgruppen

Gaschütz: Kohomologietheorie in Darstellungsmoduln endlicher Gruppen

Discussion: Modulare Darstellungen

Wednesday, August 21

Lazard: Über die Kohomologie der nilpotenten torsionsfreien Gruppen

Hirsch: Die endlichen Faktoren der Kompositionsreihen polyzyklischer Gruppen

Witt: Über metrische Räume und orthogonale Gruppen

Discussion: Beziehungen zwischen Lie-Ringen und Gruppen

Excursion to Bebenhausen

Thursday, August 22

Tits: Die Chevalleyschen Gruppen

Grün: Gruppen, die ihre eigene Kommutatorgruppe sind, als Faktorgruppen freier Gruppen

Discussion: Endliche Geometrien und Permutationsgruppen

Rédei: Über die zweistufig nichtkommutativen endlichen Gruppen

Sightseeing Tour

Higman: Enumeration of p -groups and allied problems

Nöbauer: Endliche Gruppen, die man aus Polynomringen erhalten kann.

Friday, August 23

Hall: Solution of the Burnside problem for exponent six

Blackburn: Über metazyklische p -Gruppen

Diskussion über beliebige Fragen aus dem Teilnehmerkreis

Itô: Über primitive auflösbare Permutationsgruppen

Wielandt: Sylowgruppen und Kompositionsreihen

Saturday, August 24

Bus Excursion to Traifelberg

Remarks: In the opening session the participants were welcomed by Professor *Kamke* on behalf of the Dean of the University of Tübingen, and by Professor *Wielandt* on behalf of the two Organizations sponsoring the Colloquium. Lectures started with Professor *Bauer's* survey of the theory of modular representations. In view of the great importance of the topic, 80 minutes were allowed for this lecture. The other lectures (30 minutes) were distributed over three sessions daily. This arrangement provided enough time for various discussions between the two morning-sessions and

after the afternoon-sessions. At the suggestions of some participants there were four discussion meetings of one hour each, the first three topics referring to the theory of modular representations, the theory of Lie rings in connection with groups of exponent p , and the relation between finite geometries and permutation groups; the last was reserved for asking questions of general interest and proved to be especially stimulating.

(6) *Results.*

It was no doubt a risk to emphasize the topic of *finite groups* in an international Colloquium on the theory of groups, 30 years ago research in this field seemed to be completely stopped by unsurmountable difficulties and most specialists turned to the new field of the structure theory of infinite groups. The success of this Colloquium, however, confirmed the hopes of the initiators that thanks to the work of *Brauer, Ph. Hall* and others, a whole series of fascinating problems can be attacked by new methods. Judging from opinions of participants, one may express the hope that the personal contacts made during the Colloquium and the stimulating lectures will contribute to the revival of the theory of finite groups.

D — EXECUTIVE COMMITTEE OF IMU AND RELATIONS WITH ICSU AND UNESCO

1. 7th Meeting of the Executive Committee in Zurich, April 12/13, 1957

The Meeting was attended by all members of the Executive Committee and by Professor *Bompiani*, former Secretary, as invited participant.

Besides the usual items of the Agenda (finances, administration), the discussions dealt to a large extent with the possibilities of new scientific activities of IMU and with the financial assistance of IMU to the International Congress of Mathematicians, Edinburgh 1958. Among the topics discussed and the resolutions adopted the following should be mentioned here:

(1) The *Commission for the World Directory of Mathematicians* is re-elected as follows: Professors *Hodge* (Chairman), *Koksma*, *Scott*, *Dieudonné*, *Eckmann* (ex officio). The Chairman of the Commission is authorized to contribute to the publication costs from IMU funds up to \$ 750.— and to spend up to \$ 100.— as possible administrative expenses of the Commission. The Executive Committee expressed its sincere thanks to Professor *Stone* for the most valuable help he has given to the World Directory project even after his retirement from the Chairmanship of the Commission, and to the National Research Council of the U.S.A. for its activity and financial help.

(2) *Exchange of Mathematicians* and further activities. It is resolved to appoint a Committee on Promotion and Development (as a Sub-Committee of the Executive Committee) consisting of Professors *MacLane*, Chairman, *Hopf* (ex officio), *Koksma*, *Bompiani* and *Kuratowski*. The Committee will report in time for the General Assembly of IMU 1958 on its study of plans for new activities. These plans shall include, among others, an IMU lecturers program and a program of special grants to National Committees. In order to get preliminary experience on the possibilities of these plans, it is resolved that a trial program of grants to IMU lecturers shall immediately be initiated. This trial program is to be announced to all Adhering Organizations and published in the Bulletin of the Interna-

tional Mathematical Union (see I.M.N. No. 51/52, August 1957). Upon receipt of applications from our National Adhering Organizations, lecturers will be chosen by a Sub-Committee of the Commission on Exchange, consisting of Professors *Davenport*, Chairman, *Hopf*, *Eckmann* and a fourth member. For the costs of the program, the sum of \$ 1,050.— can be taken from IMU's "Contingencies" fund.

(3) *Symposia 1957*. The allocation granted by IMU to the International Colloquium on the Theory of Functions, Helsinki, 1957, is increased by an additional \$ 1,000.—. As for the International Colloquium on Finite Groups, Tübingen, 1957, the allocation can be increased by \$ 500.— if necessary.

(4) The Executive Committee appoints Professors *Denjoy* and *Koksma* as delegates to the *ICSU Executive Board Meeting* in Brussels, June 27/29, 1957.

(5) *International Congress 1958 in Edinburgh*. The Organizing Committee of the Congress has submitted to IMU a request for financial contribution. It is resolved that the total subvention granted by IMU to the Congress will amount to \$ 12,000.—. The sum of \$ 5,000.— for publication of the Congress proceedings is included in this amount, but will not be paid before 1959. From the remaining \$ 7,000.—, \$ 1,000.— are granted as a contribution to organizational expenses of the Congress and \$ 6,000.— for travel expenses of invited lecturers; these \$ 7,000.— will be paid in 1958. Although the UNESCO contribution to IMU granted for 1958 was \$ 2,500.— less than the amount originally requested, the total subvention granted by IMU to the Congress corresponds exactly to the sum requested by the Congress. If necessary, the contribution of IMU to the Congress will be taken partly from IMU's own funds.

(6) *Auditor of IMU*. Professor *P. Nolji*, Director of the Retirement System of the City of Zurich and Professor at the Eidgenössische Technische Hochschule, is approved by the Executive Committee as auditor of IMU (the institution of chartered accountant does not exist in Switzerland). The auditor appointed by the Executive Committee, signing the financial statement, assumes full responsibility.

(7) *International Congress 1962*. In accordance with the practice established at the International Congress 1954, a Joint Committee consisting of representatives of the Organizing Committee of the International Congress 1958 and of representatives of IMU shall be appointed to discuss the location of the International Congress 1962, and to prepare the proposition to be presented to the Congress in Edinburgh 1958. Representatives of IMU are: Professors *Hopf*, *MacLane* and *Chandrasekharan*. It is resolved that an announcement on this Committee is published in the I. M. News and is sent by circular letter to the Adhering Organizations of IMU. Deadline for applications will be: February 15, 1958.

(8) *Revision of Statutes of IMU*. It is resolved that the Executive Committee shall prepare in time for the next General Assembly a draft of various changes of the present Statutes and By-Laws of the Union.

2. 8th Meeting of the Executive Committee in Zurich, October 15, 1957

The Meeting was attended by all members of the Executive Committee except Professors *Hodge* and *Koksma*, who were unable to attend. Again, Professor *Bompiani* was invited to attend the Meeting. A selection from the list of resolutions and the topics discussed at that Meeting is given below.

(1) *World Directory*. As mentioned in the report on the activity of the Commission for the World Directory (see Section B—1, of this Report), the response to the questionnaires sent to all mathematicians named in the lists, as revised by Professor Stone, seemed very unsatisfactory to Butterworths. This Publishing Firm has therefore indicated that they are not inclined to publish the Directory in the originally planned form and that they would suggest another solution in the form of a vari-typed edition. The Executive Committee is not in favor of such a proposition. It is resolved that IMU should pay half of the costs for mailing the questionnaires and end business with Butterworths. It is hoped that a new solution can be found to bring out the Directory as originally planned before the next General Assembly of IMU.

(2) *International Commission for Mathematical Instruction*.

a. The Commission for the revision of Statutes of ICMI will present a proposition of new Statutes of ICMI, better adapted to the actual present situation and to the existing organizations than the old Statutes.

b. A subvention of \$ 200.— for 1957 und 1958 each is granted to the periodical "Enseignement Mathématique" for the publication of all reports and circular letters of ICMI.

(3) *Committee on Promotion and Development*. It is resolved to continue the trial program for IMU lecturers on the original basis for the academic year 1958—59. Possible applications have already been announced, but the time was too short for realising this project during the year 1957—58. The Committee will establish new plans for IMU fellowships which should enable young mathematicians to pursue studies and research in the big mathematical centers.

(4) *General Assembly of ICSU, Washington, October 1958*, and ICSU Executive Board Meeting. The delegates of IMU will be: the President and the Secretary of IMU (with possible changes later on).

(5) The Reports on the International Colloquia 1958 in Helsinki and in Tübingen are presented to the Executive Committee. Both Colloquia were very successful and the grants of IMU have been used to pay travel expenses to a great number of lecturers and other invited participants.

(6) *Colloquia 1959*. Applications from Poland and the Netherlands for International Colloquia in 1959 are announced.

3. 9th Meeting of the Executive Committee in London, April 14/15, 1958

The Meeting was attended by all members of the Executive Committee except Professors *Chandrasekharan* and *MacLane*. Professor *Bompiani* attended the Meeting as invited participant. A selection from the list of resolutions and the topics discussed at that Meeting is given below:

(1) *World Directory*. During the period between the 8th and the 9th Meeting of the Executive Committee, new plans for bringing out the World Directory have been established by Professor *Chandrasekharan* in Bombay with the cooperation of the Tata Institute of Fundamental Research; these plans have been approved by the Executive Committee. A report on the work in that connection is presented to the Executive Committee. Professor *Chandrasekharan* is appointed Editor of the Directory. It is hoped that the cooperation with the Tata Institute will continue in the future in view of later editions, and that the Directory will receive sufficient support from all mathematicians to justify such future editions.

(2) *Symposia 1959*. Two applications have been received: one from Poland and one from the Netherlands. The Executive Committee fully approves both projects. It is resolved to allocate from UNESCO funds

\$ 3,000.— for the Colloquium in Poland and \$ 2,000.— for the Colloquium in Holland. The details are as follows:

- a. International Colloquium on Foundations of Mathematics, October 1959, in Warsaw, Poland. Chairman: Professor *Mostowski*. As delegates of IMU in the Organizing Committee are proposed: Professors *MacLane* and *Heyting*.
- b. International Colloquium on Algebraic and Topological Foundations of Geometry, 1959, in Utrecht, Holland. Chairman: Professor *Freudenthal*. Delegates of IMU in the Organizing Committee: Professors *Hopf* and *Koksma*.

(3) *Committee for Promotion and Development*. Applications in connection with the trial program for IMU lecturers have been received by Poland, Bulgaria and Israel. The projects outlined by institutions in these countries with the approval of the respective National Committees for Mathematics have been discussed by the Sub-Committee of the Commission of Exchange (see Section *D—1*, of this Report) and are recommended for acceptance. The Executive Committee resolves to allocate the necessary travel funds.

(4) *Change of IMU Statutes*. A draft of the necessary changes of the Statutes and By-Laws of IMU is discussed in full detail. It is resolved that this draft be submitted to all Adhering Organizations of IMU for discussion at the General Assembly with the recommendation of the Executive Committee for acceptance.

(5) *Preparation of the General Assembly of IMU, August 1958*. The Agenda of the Assembly is established. It shall be dispatched to all National Adhering Organizations and to all delegates three months before the Assembly.

4. Meeting of the Executive Board of ICSU, Bagnères-de-Bigorre, June 16—19, 1956

The Executive Board of ICSU consists of the Bureau of ICSU and of representatives of the scientific members of ICSU (unions). There are no representatives of the national members of ICSU (countries). Chairman of the Meeting was *Dr. L. V. Berkner*, President of ICSU.

Professors *Koksma* and *MacLane* attended the Meeting as delegates of IMU.

A small selection from the long list of resolutions adopted and topics discussed at that Meeting is given below.

(1) *Proposed Symposium on the Organization of International Science 1958*. It is resolved not to hold such a Symposium, as this would be premature.

(2) *International Laboratories*. It is resolved to grant subventions to the International Laboratories exclusively for concrete special purposes. Applications for recognition as International Laboratories have been received from the Observatoire du Pic du Midi and from the Hubrecht Laboratory, Utrecht.

(3) *International Geophysical Year 1957—58*. The following resolutions are adopted: UNESCO will be requested to allocate \$ 25,000.— for 1957 and \$ 25,000.— for 1958 in the UNESCO budget 1957—58 to approve the allocation from funds available to ICSU of \$ 15,000.— for 1957, and to approve the tentative budget for 1956—59 subject to success in raising the necessary funds. (1956 expenses \$ 59,500.—, income \$ 54,000.—; 1957 and 1958 expenses \$ 92,000.— each, income \$ 72,500.— each; 1959 expenses \$ 89,000.—, income \$ 72,500.—.)

(4) *ICSU Abstracting Board*. Detailed and interesting report on the procedure of abstracting in the field of chemistry. The activities of the Abstracting Board will be extended to biology.

(5) *Annual dues of the Union to ICSU*. It is resolved that the annual dues will be raised from the present level of 1% to 2% of the Unions' income from membership dues. The new annual dues will be applied as from November 1, 1956.

5. Meeting of the Executive Board of ICSU, Brussels, June 27—29, 1957

Chairman of the Meeting was Dr. *L. V. Berkner*, President of ICSU. Professors *Denjoy* and *Koksmá* attended the Meeting as representatives of IMU. Professor *Eckmann* was present at some of the Meetings as observer. Again, this Report is restricted to a small selection of resolutions adopted and topics discussed.

(1) *New directives for UNESCO subventions*. The following points are of special importance:

a. The Unions have the right of an unlimited transfer to the next year of all money that has been left but might have been used in a certain year.

b. The proportion of hard to soft currency, in which payment of the allocation is made to the Unions, is not fixed in advance. Applications for payments in hard currency can be made by the Unions, but must be accompanied by a statement of the reasons therefor.

c. As UNESCO now has a bi-annual budget, the skeleton request for allocations to the Unions in 1959 and 1960 must reach the Bureau before December 15, 1957. (These requests have been submitted, see Sections E and F of the present report.)

(2) *ICSU Review*. The recommendation of the Bureau to publish a quarterly ICSU Review is adopted. The Review will contain communications on ICSU and Union activities and articles of general scientific interest.

(3) *New rules for Joint Commissions*. In view of possible joint activities of IMU with other Unions in the fields of history and foundations, physics, electronics etc., the rules for joint commissions might be of interest to IMU. Joint commissions may be established on the proposal of at least one of the interested Unions. Such proposals must define precisely the program to be undertaken (preparation, organization and publication of the results of symposia on topics falling within scientific domains which are the concern of more than one Union). On approval of the program, the Executive Board of ICSU will designate a parent Union responsible for the activities of the Commission. Several rules are presented for the duration of joint commissions for coopted members, for meetings and expenses, for subventions by ICSU and for reports.

(4) *Central Accounting System of ICSU*. Some of the member unions of ICSU take part in the System of Central Accounting. This System is completely voluntary. IMU has decided not to join this System.

(5) *International Conference on Calculating Machines*. The conference which is proposed upon the initiative of the USA Joint Computer Committee, will probably take place in 1959 in Rome, Paris or Geneva. Several Unions of ICSU are interested in participating in that conference.

(6) *Allocation of UNESCO subventions for 1958*. After discussion of a Report by the IMU representatives, an increase of the allocation to IMU

from \$ 9,500.— to \$ 10,500.— is proposed to the Bureau (this increase was granted by the Bureau after the Meeting).

(7) *International Geographical Union*. This Union has applied for admission to the status of a General Union (General Unions are entitled to have two delegates at the Executive Board of ICSU). The Executive Board is in favor of the application.

6. New Location of ICSU Secretariat

On December 1, 1957, the ICSU Secretariat has established a new residence:
 Paleis Noordeinde
 The Hague
 Netherlands

E — FINANCIAL REPORT for the period of January 1, 1956 to December 31, 1956

1. Income in 1956

The two income sources are: a) dues paid by member nations;
 b) UNESCO contribution.

a) In 1956 dues were paid at the

Chase Manhattan Bank: Austria, Brazil, Canada, Cuba, Eire (for 1955 and 1956), Finland (for 1955 and 1956), Great Britain, Japan, Norway, Pakistan (for 1955), Switzerland, United States, Yugoslavia totaling \$ 2,477.70

Crédit Suisse: Denmark, France, Germany, Greece, India, Poland, totaling Swiss Francs 5,217.40 which at the rate of exchange \$ 1 = Swiss Francs 4.28 equal \$ 1,219.02

Banca Nazionale del Lavoro: Australia, Belgium, Brazil, India, Israel (for 1956 and one half of dues for 1957), Sweden, Portugal, totaling Italian Lire 569.504 which at the rate of exchange \$ 1 = It. Lire 625 equal \$ 911.21

Total income from membership dues in 1956 \$ 4,607.93

At the end of December 1956 the dues of the following nations were still outstanding: Argentina, Iceland, Italy, Malaya-Singapore, Mexico, Netherlands, Pakistan, and Spain, for a total amount of \$ 978.—. (However, all these countries have remitted the outstanding amounts in 1957 or 1958).

b) UNESCO contribution through ICSU for 1956 in the various categories was as follows:

C.2 — Publications	\$ 1,500.—
C.3 — Executive Committee and Commissions	\$ 4,000.—
C.4 — Symposia	\$ 3,000.—
	\$ 8,500.—
Total	\$ 8,500.—
less balance returned to ICSU for 1955	\$ 256.80
	\$ 8,243.20

c) Interest on bank accounts:

<i>Crédit Suisse</i> : Swiss Francs 55.35 which at the rate of exchange \$ 1 = Swiss Francs 4.28 equal	\$ 12.93
<i>Banca Nazionale del Lavoro</i> : Italian Lire 6,257 which at the rate of exchange \$ 1 = It. Lire 625 equal	\$ 10.—
Total	\$ 22.93

The approximate *total income* received in 1956 is:

a) Membership dues	\$ 4,607.93
b) UNESCO contribution	\$ 8,243.20
c) Interest on bank accounts	\$ 22.93
Total	\$ 12,874.06

2. Expenditures in 1956

The following expenses were met in 1956 under the different categories of the IMU-Budget:

I) *Secretarial help for 1956:*

Italian Lire 284,546 approx. equivalent to	\$ 455.25
Swiss Francs 2,240 approx. equivalent to	\$ 523.34
Total	\$ 978.59

II) *Mail, Office and Bank expenditures:*

Italian Lire 59,606 approx. equivalent to	\$ 95.37
Swiss Francs 2,096.83 approx. equivalent to	\$ 489.91
\$ 14.11	\$ 14.11
Total	\$ 599.39

III) *Travel Expenses:*

Various (ICSU, Members of Executive Committee etc.)	\$ 135.49
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IV) *President's expenses:*

Swiss Francs 40.— approx. equivalent to	\$ 9.35
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<i>Total Expenses IMU:</i>	I \$ 978.59
	II \$ 599.39
	III \$ 135.49
	IV \$ 9.35
Total	\$ 1,722.82

Actual expenditures in 1956 compared with the amounts authorized by the Second General Assembly for that year:

Items	Authorized	Actual Expenditures	Balance
Secretarial help	\$ 1,800.—	\$ 978.59	\$ 821.41
Office expenses	600.—	599.39	—.61

Travelling expenses	750.—	135.49	614.51
President's expenses	250.—	9.35	241.65
ICSU contribution	50.—	—	50.—
Publication and diss. of IMU News	300.—	—	300.—
Accountant's fee	150.—	—	150.—
Contingencies	500.—	—	500.—
Preparation for General Assembly in 1958	350.—	—	350.—

(Membership contribution due to ICSU for 1956, amounting to two per cent of dues received, (\$ 92.16) has been paid in 1957)

The expenditures in 1956 against UNESCO contribution were as follows:

C.2 — International Mathematical News	\$ 300.—
C.3 — South Asian Conference on Mathematical Education in Bombay, Feb. 22—28, 1956	\$ 1,000.—
— Fifth meeting of the Executive Comm. of IMU in Paris, May 3—4, 1956	\$ 589.—
— Sixth meeting of the Executive Comm. of IMU in Paris, May 24, 1956	\$ 316.—
— Meeting of ICMI in Münster, May 27, 1956	\$ 730.—
— Meeting of ICMI in Paris, Dec. 29, 1956	\$ 320.—
— International Colloquium on Zeta Functions in Bombay, Feb. 14—21, 1956	\$ 3,000.—
Total	\$ 6,255.—

Transfer of \$ 2,200 of UNESCO contribution 1956, for use in 1957, has been granted.

<i>Total Income 1956</i>	\$ 12,874.06
<i>Total Expenses occurred in 1956:</i>	

IMU Budget	\$ 1,722.82	
ICSU	\$ 6,255.—	\$ 7,977.82

Active Balance in 1956 approximately	\$ 4,896.24
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3. Financial Statement for the period January 1 to December 31, 1956

	Actual Currencies Carried			
	Dollars	Swiss Francs	Italian Lire	French Francs
<i>Opening Statement</i>				
Net Assets and Liabilities on December 31, 1955	9,142.35	—	819,514	1,534
— Assets	521.60	—	—	—
+ Liabilities	—	—	—	—
Bank balance and cash on hand on December 31, 1955	8,620.75	—	819,514	1,534

Receipts

Dues for 1956	2,216.90	5,217.40	406,743	— —
Dues for 1955	260.80	— —	162,761	— —
UNESCO contribution	6,000.—	9,589.78		
Transferred from Rome to Zurich		5,993.—		
Interest on bank account		55.35	6,257	
Returned by Prof. Behnke			6,950	
<i>Totals</i>	<u>8,477.70</u>	<u>20,855.53</u>	<u>582,711</u>	

Expenditures

UNESCO expenditures C.2	300.—			
UNESCO expenditures C.3	1,796.—	4,504.15	67,798	
UNESCO expenditures C.4	3,000.—			
Travelling expenses chargeable to IMU		447.20	19,375	
President's expenses		40.—		
Secretarial Help		2,240.—	284,546	
Mail and Office expenses		2,066.75	58,629	
Bank service expenditures	14.11	30.08	977	
Reimbursement to ICSU (Prof. Behnke)	11.—			
Transferred from Rome to Zurich			970,900	
<i>Totals</i>	<u>5,121.11</u>	<u>9,328.18</u>	<u>1,402,225</u>	

Closing Statement

Bank balance and cash on hand on December 31, 1955	8,620.74	— —	819,514	1,534
+ Receipts	8,477.70	20,855.53	582,711	— —
	<u>17,098.44</u>	<u>20,855.53</u>	<u>1,402,225</u>	<u>1,534</u>
- Expenditures	5,121.10	9,328.18	1,402,225	— —
Balance on December 31, 1956	<u>11,977.34</u>	<u>11,527.35</u>	<u>— —</u>	<u>1,534</u>

Bank balance and cash on hand on December 31, 1956	11,977.34	11,527.35	— —	1,534
+ Assets	521.60	1,933.20	— —	— —
- Liabilities	— —	— —	— —	— —
Net Assets and Liabilities on December 31, 1956	<u>12,498.94</u>	<u>13,460.55</u>	<u>— —</u>	<u>1,534</u>

The undersigned Auditor of the International Mathematical Union has checked the preceding accounts and found them correct, to the best of his information.

Professor *P. Nolfi*, Director,
Retirement System of the City of Zurich

The Secretary of IMU
signed *B. Eckmann*

Zurich (Switzerland), March 5, 1957

4. Financial UNESCO grant for 1957 and requests for 1958

The following allocations for 1957 have been granted by the ICSU Executive Board (Bagnères-de-Bigorre, June 1956):

C.2 — Publications	\$ 1,000.—
C.3 — Executive Committee and Commissions	\$ 2,500.—
C.4 — Symposia	\$ 2,700.—
	\$ 6,200.—

The Secretary General of ICSU in his letter of February 1, 1957 informed this office that UNESCO has authorized the payment of the preceding subvention.

The following requests have been forwarded to ICSU for 1958:

C.2 — Publications	\$ 6,000.—
C.3 — Executive Committee and Commissions	\$ 5,000.—
General Assembly of IMU	\$ 1,000.—
Organization of the International Congress in Edinburgh	\$ 1,000.—
C.4 — Symposia	\$ 6,000.—
Total	\$ 19,000.—

In his circular letter of January 25, 1957 the Secretary General of ICSU informed this office of the provisional allocation of the UNESCO subvention for 1958, as proposed by the Sixteenth Meeting of the Bureau, New Delhi, January 8—10, 1957, as follows:

C.1 — Organization of the Int. Congress in Edinburgh	\$ 500.—
C.2 — Publications	\$ 1,000.—
C.3 — Executive Committee and Commissions	\$ 3,000.—
General Assembly of IMU	\$ 1,000.—
C.4 — Symposia	\$ 4,000.—
Total	\$ 9,500.—

The request of IMU under Publications has been reduced from \$ 6,000 to \$ 1,000 following a suggestion of Professor *Hodge* that the \$ 5,000 earmarked for the publication of the Congress Proceedings should be brought forward to 1959. An additional sum of \$ 1,000.— under C.3 has been granted in June 1957, so that the total UNESCO grant for 1958 amounts to \$ 10,500.—

F — FINANCIAL REPORT for the period of January 1, 1957
to December 1, 1957

1. Income in 1957

The two income sources are: a) dues paid by member nations;
b) UNESCO contribution.

a) in 1957 dues were paid at the

Chase Manhattan Bank: Austria, Cuba, Ireland, Japan, Malaya-Singapore
(for 1956), Spain (for 1956), United States

totaling \$ 1,306.80

Credit Suisse: Argentina (for 1956), Australia, Belgium,
Bulgaria, Denmark, Germany, Great Britain, Iceland (for
1956), India, Israel, Italy (for 1956 and 1957), Nether-
land (for 1956 and 1957), Poland, Portugal, Spain, Sweden,
Switzerland, U.S.S.R

totaling Swiss Francs 17,090.15, which at the
rate of exchange of \$ 1 = Swiss Francs 4.28
equal

\$ 3,993.—

Société Générale: France, French Francs 114,100.—

which at the rate of exchange of

\$ 1 = French Francs 350 equal

\$ 326.—

Total income from membership dues in 1957 \$ 5,625.80

At the end of December 1957 the dues of the following nations were
still outstanding: Argentina, Brazil, Canada, Czechoslovakia, Finland, Greece,
Hungary, Malaya-Singapore, Mexico, Norway, Pakistan and Yugoslavia, for
a total amount of \$ 1,304.—. (However, in the beginning of 1958, all of the
above stated countries, with the exception of Argentina and Brazil have
remitted their outstanding dues.)

b) UNESCO contribution through ICSU for 1957 in the various categories
was as follows:

C.2 — Publications	\$ 1,000.—
C.3 — Executive Committee and Commissions	\$ 2,500.—
C.4 — Symposia	\$ 2,700.—
	<hr/>
	\$ 6,200.—
plus transfers from 1956:	
C.2 — Publications	\$ 1,200.—
C.3 — Executive Committee and Commissions	\$ 1,650.—
	<hr/>
Total	\$ 9,050.—

c) Interest on bank accounts and various:

Crédit Suisse: Swiss Francs 105.60 which at the rate
of exchange of \$ 1 = Swiss Francs 4.28 equal

\$ 24.67

from former IMU Office in Rome

\$ 125.—

\$ 149.67

The approximate *total income* received in 1957 is:

a) Membership dues	\$ 5,625.80
b) UNESCO contribution	\$ 6,200.—
c) Interest on bank account etc.	\$ 149.67
Total	<u>\$ 11,975.47</u>

2. Expenditures in 1957

The following expenses were met in 1957 under the different categories of the IMU-Budget:

I) <i>Secretarial help for 1957</i>	\$ 1,296.69
Swiss Francs 5,549.80	
II) <i>Mail, office and bank expenses</i>	\$ 411.—
III) <i>Travel Expenses</i>	
Delegate Coll. Helsinki	\$ 250.—
Delegate Coll. Tübingen	\$ 50.—
EC Meeting, Oct. 15, 1957 (part of expenses)	\$ 188.—
Various (ICSU, ICMI etc.)	<u>\$ 176.91</u>
	\$ 664.91
IV) <i>President's Expenses</i>	\$ 73.51
V) <i>ICSU Contribution 1956</i>	\$ 89.97
(Membership contribution due to ICSU for 1957, amounting to 2% of dues received = \$ 112.51 will be paid in 1958)	
VI) <i>Publication and Dissemination of IMU News</i> Information Service, Exchange of Mathematicians	\$ 25.—
VII) <i>Accountant's Fee</i>	\$ 70.09
IX) <i>Contingencies</i> Expenses in connection with World Directory	\$ 81.50
 <i>Total Expenses IMU:</i>	
	I) \$ 1,296.69
	II) \$ 411.—
	III) \$ 664.91
	IV) \$ 73.51
	V) \$ 89.97
	VI) \$ 25.—
	VII) \$ 70.09
	IX) <u>\$ 81.50</u>
	<u>\$ 2,712.67</u>

Actual expenditures in 1957, compared with the amounts authorized by the Second General Assembly for that year:

<i>Items</i>	<i>Authorized</i>	<i>Actual Expenditures</i>	<i>Balance</i>
I) Secretarial Help	\$ 1,800.—	\$ 1,296.69	\$ 503.31
II) Office Expenses	\$ 600.—	\$ 411.—	\$ 189.—
III) Travel Expenses	\$ 750.—	\$ 664.91	\$ 85.09
IV) President's Expenses	\$ 250.—	\$ 73.51	\$ 176.49
V) ICSU Contribution	\$ 50.—	\$ 89.97	\$ —39.97
VI) Publication and Dissemination of IMU News	\$ 300.—	\$ 25.—	\$ 275.—
VII) Accountant's Fee	\$ 150.—	\$ 70.09	\$ 79.91
VIII) Preparation for General Assembly 1958	\$ 350.—	\$ —.—	\$ 350.—
IX) Contingencies	\$ 500.—	\$ 81.50	\$ 418.50

The expenditures in 1957 against UNESCO contribution were as follows:

C.2 — International Mathematical News 1957	\$ 300.—		
— Enseignement Mathématique 1957	\$ 200.—		\$ 500.—
C.3 — ICMI Meeting Paris 1956	\$ 45.—		
— 7th Meeting of the Executive Committee, April, Zurich	\$ 747.07		
— ICMI Meeting Brussels, July	\$ 1,000.—		
— 8th Meeting of the Executive Committee, October, Zurich (part of expenses)	\$ 272.—		\$ 2,064.07
C.4 — Symposia Tübingen and Helsinki			\$ 4,534.50
Total			\$ 7,098.57
<i>Total Income 1957</i>		\$ 11,975.74	
<i>Total Expenses 1957</i>			
IMU Budget	\$ 2,712.67		
ICSU	\$ 7,098.57	\$ 9,811.24	
<i>Active Balance in 1957 approximately</i>			\$ 2,164.50

3. Financial Statement for the period of January 1 to December 31, 1957

	Actual Dollars	Currencies Swiss Francs	Carried Belg. Francs	French Francs
<i>Opening Statement</i>				
Net Assets and Liabilities on December 31, 1956	12,498.94	13,460.55		1,534.—
— Assets	521.60	1,933.20		— — —
+ Liabilities	— — —	— — —		— — —
Bank balance and cash on hand on Dec. 31, 1956	11,977.34	11,527.35		1,534.—

Receipts

a) Dues and Contributions:				
Dues for 1957	1,111.20	14,578.65		
Dues for 1956	195.60	2,511.50		114,100.—
UNESCO Contribution	— —	12,825.35	159,808.—	
Interest on bank account		202.35		
b) Transfers:				
From former a/c. in Rome		534.65		
From Brussels to Zurich		8,989.75		
c) Refunds:				
Coll. Helsinki (ICSU C.4)	100.—			
Coll. Tübingen (ICSU C.4)		1,792.60		
E. C. Meeting Oct. 57 (IMU III)		256.—		
<i>Totals</i>	<u>1,406.80</u>	<u>41,690.85</u>	<u>159,808.—</u>	<u>114,100.—</u>

Expenditures

UNESCO Expenditures C.2	500.—			
UNESCO Expenditures C.3	571.—	6,405.50		
UNESCO Expenditures C.4	4,050.—	4,288.75		
Secretarial Help		5,549.80		
Office + Mail Expenses	65.84	1,477.50		
Travel Expenses IMU	393.50	1,413.10		
Presidents Expenses		190.—		
ICSU Contribution 1956	89.97			
Publ. + Diss. of IMU News	25.—			
Accountant's Fee		300.—		
Contingencies	10.—	306.05		
Bank service expenditures	3.90	50.25		
Transfer Brussels to Zurich			105,000.—	
<i>Totals</i>	<u>5,709.21</u>	<u>19,980.95</u>	<u>105,000.—</u>	

Closing Statement

Bank balance and cash on hand				
on December 31, 1956	11,977.34	11,527.35	— —	1,534.—
+ Receipts	1,406.80	41,690.85	159,808.—	114,100.—
	<u>13,384.14</u>	<u>53,218.20</u>	<u>159,808.—</u>	<u>115,634.—</u>
— Expenditures	5,709.21	19,980.95	105,000.—	— —
Balance on December 31, 1957	7,674.93	33,237.25	54,808.—	115,634.—

Bank balance and cash on hand				
on December 31, 1957	7,674.93	33,237.25	54,808.—	115,634.—
+ Assets	326.—	4,464.90	— —	— —
	<u>8,000.93</u>	<u>37,702.15</u>	<u>54,808.—</u>	<u>115,634.—</u>
— Liabilities	— —	— —	— —	— —
Net Assets and Liabilities				
on December 31, 1957	8,000.93	37,702.15	54,808.—	115,634.—

The undersigned Auditor of the International Mathematical Union has checked the preceding accounts and found them correct to the best of his information.

Prof. *P. Nolfi*, Director,
Retirement System of the
City of Zurich

The Secretary of IMU
Prof. *B. Eckmann*

Zurich (Switzerland), March 1958.

4. Financial UNESCO grant for 1958 and requests for 1959

The following allocations for 1958 have been granted by the ICSU Executive Board (Brussels, June 1957):

C.1 — Organizational	\$ 500.—
C.2 — Publications	\$ 1,000.—
C.3 — Commissions	\$ 5,000.—
C.4 — Symposia	\$ 4,000.—
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	\$ 10,500.—

The Secretary General of ICSU in his letter of January 29, 1958, informed this Office that UNESCO has authorized the payment of the preceding subvention.

The following requests have been forwarded to ICSU for 1959:

C.2 — Publications	\$ 6,000.—
C.3 — Commissions	\$ 1,500.—
— Exchange (Lecturers + Fellowship Program)	\$ 4,500.—
C.4 — Symposia	\$ 6,000.—
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	\$ 18,000.—

In its Meeting in The Hague, March 1958, the Bureau of ICSU has proposed the following provisional allocation of the UNESCO subvention for 1959 to our Union:

C.2 — Publications	\$ 4,000.—
C.3 — Commissions and Exchange	\$ 3,500.—
C.4 — Symposia	\$ 3,500.—
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	\$ 11,000.—

End of the Bulletin of the International Mathematical Union.