INTERNATIONAL UNION OF THEORETICAL AND APPLIED MECHANICS

REPORT SEPTEMBER 1948

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REPORT TO THE EXECUTIVE COMMITTEE OF THE
INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS.
September 1948.

The International Union of Theoretical and Applied Mechanics, which had been founded at the meeting of the International Committee for the Congresses of Applied Mechanics at Paris in September 1946, was admitted as a member of the International Council of Scientific Unions by decision of the Executive Committee of ICSU in 1947.

During the period 1947—September 1948 two Committee meetings have been held for discussing matters referring to the organisation of the Union and to the VIIth International Congress of Applied Mechanics, held at the Imperial College, South Kensington, London, September 5—10, 1948. It was decided to elect provisional officers of the Union as follows:

- R. V. SOUTHWELL, London, acting president
- H. VILLAT, Paris, acting vice-president
- HUGHI L. DRYDEN, Washington, acting treasurer

with J. M. BURGERS, secretary, as decided already in September 1946 in Paris. These elections were to be valid until the Council meeting during the VIIth International Congress.

Proposals were made for extending the Council of the Union by the election of new members for Czechoslovakia, Italy and Poland; the proposals have been subjected to voting by correspondence and have obtained the required number of votes. The names of the new members are: B. HOSTINSKY, Brno; G. COLONNETTI, Roma; G. A. CROCCO, Roma; W. RUBINOWICZ, Warsaw.

As representatives of the Union in the Joint Committee on Rheology there have been elected CH. SADRON, Strasbourg, and K. O. PEDERSEN, Upsala.

A general assembly of the Council of the Intern. Union took place at South Kensington during the VIIth Congress. The following members of Council were present: F. H. VAN DEN DUNGEN, Bruxelles; P. Y. CHOU, Peiping; J. NIELSEN, Kopenhagen; J. PéRÈS, Paris; S. GOLDBEIN, Manchester; R. V. SOUTHWELL, London; G. I. TAYLOR, Cambridge; G. COLONNETTI, Roma; G. ARTURO CROCCO, Roma; C. B. BIEZENO, Delft; J. M. BURGERS, Delft; C. KONING, Amsterdam; H. SOLJERO, Oslo; M. T.
INTERNATIONAL UNION OF THEORETICAL AND APPLIED MECHANICS

2. A committee consisting of
J. PÉRES, Paris, chairman,
M. PICONE, Roma,
A. VAN WIJNGAARDEN, Amsterdam.
was appointed to consider the provision and activities of computing laboratories and to report to the Union before the meeting of the Bureau in 1949.

The Committee was given the power to co-opt other members.

(In future an International Union of Mathematics should be founded, this Committee may possibly develop into a “Joint Committee” with representatives from the two unions.)

3. A Committee was appointed consisting of
F. H. VAN DEN DUNGEN, Bruxelles, chairman,
TH. VON KARMAN, Pasadena, Cal.,
to collect and compare data on the internal damping of
(a) materials
(b) parts of structures
(c) complete structures
and to report to the Union before the meeting of the Bureau in 1949.

The Committee was given the power to co-opt other members.

4. A Committee was appointed consisting of
J. M. BURGERS, Delft,
TH. VON KARMAN, Pasadena, Cal.,
to enter into relation with the Intern. Astronomical Union for the planning of a joint symposium on problems of stability of rotational motion, turbulence, convection and wave motion in gaseous masses of astronomical dimensions, to be arranged in 1949 or 1950.

Provisional contacts with the Intern. Union of Astronomy have already been made, and great interest is shown from that side.

5. The statement of the Treasurer on the financial position of the Union was formally approved and is annexed to the report.

6. The budget of the Union for 1949 (already submitted to UNESCO) was approved.

7. It was decided that Committees should be left free to co-opt members from ex-enemy countries and to admit scientists from such countries to meetings arranged by them.

8. As delegates of the International Union to the meeting of the Executive Committee of ICUS at Brussels, 14/15 September 1948, were appointed:
J. M. BURGERS, Delft,
F. H. VAN DEN DUNGEN, Brussels.
By unanimous decision of the General Assembly they were instructed to oppose a proposal brought forward by the Royal Society of London that IUTAM be affiliated with an International Union of Mathematics, if one is founded.

The following scientists were elected as members of the General Assembly according to section IV, b) of the statutes, for the period 1948—1952:


As adhering organisations there were admitted:

International Committee for the Congresses of Applied Mechanics.
Representative: C. Koning, Amsterdam.

British National Committee for Theoretical and Applied Mechanics.
Representatives still to be appointed.

Hungarian Academy of Sciences (Magyar Tudományos Akadémia).
Representatives still to be appointed.

National Committees in Belgium and France (organisation still in progress).

The following officers of the Bureau of the Union were elected for the period 1948—1952:

President J. Péres
Vice-president R. V. Southwell
Secretary J. M. Burgers
Treasurer H. L. Dryden
Members G. Colonnetti
F. H. van den Dungen
H. Favre
H. Solberg.

The Bureau will meet in Paris, May 5 and 6, 1949.
REPORT OF THE TREASURER.
September 10, 1948.

Note: In transferring money from UNESCO or from the Secretariate of ICSU to IUTAM not always the same rates of exchange have been used. Moreover in some cases costs of transfer play a part. In the following statement it has been assumed that £ 1 = $ 4.035 = 10.70 dutch florins.

A. Unrestricted Funds.

Receipts
Interim subscription from Royal Society of London for 1947: £ 20 = f 214.00

Expenditures
Secretary’s Office until September 1, 1948:
Printing of Statutes and Stationery f 101.11
Postage, telegrams .. 189.28
Typing and mimeographing .. 71.59

f 361.98

Deficit .. 147.98 = $ 55.80

B. Restricted Funds.

Grant allocated by UNESCO for 1948:
A : Preparatory meeting London May 1948 $ 1200,—
B : General Assembly London, September 1948 .. 5000,—
C : Publication of the Report of the General Assembly .. 1000,—

$ 7200,—

Receipts
From UNESCO (direct)
to Washington account $ 1580.—
to London account £ 329.10.7 = .. 1329.65
to Paris account .. 50,—

Expenditures
Transportation expenses members of General Assembly:
May meeting, paid in London: £ 66.00
September meeting, paid in London: .. 339.15.0

£ 405.15.0 = $ 1637.20
paid in U.S.A.

£ 1480.00

Statement of Balances:
Washington account $ 100.00
London account £ 168.11.3 = .. 680.15
Paris account .. 50.00

$ 830.15

The London bank account contains in addition £ 203.4.4 = $ 819.98, which at the date of Sept. 10 was still belonging to ICSU **).

The sums received from UNESCO, either directly or indirectly, refer to items “A” and “B” of the grant. Payment of the costs of printing of this report will be asked out of item “C” ***).

(*) These two sums totaling £ 448 have been received from ICSU. The first mentioned sum has become available to IUTAM through payments made by UNESCO out of the IUTAM grant.

(**) The payments mentioned in the preceding footnote have been carried out in the course of October 1948, so that this sum now is available for IUTAM.

(***)) In November 1948 a sum of $ 200 has been paid to the secretary out of item “C” of the grant, while the outstanding sums of all items have been transmitted by UNESCO to the Washington account, so that the full grant has now been received (added December 1, 1948).
The following grant-in-aid has been requested from UNESCO for 1949:

1. Travelling expenses for two meetings of the Bureau of the Union.
2. For the publication of a report of IUTAM $1200
3. For the work of the Committee to consider the provision and activities of computing laboratories $2500
4. For a colloquium on turbulence in gaseous masses of astronomical dimensions, to be organised in cooperation with the International Union for Astronomy:
   - travelling expenses $3000
   - publications $1500

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**STATUTS DE L'UNION INTERNATIONALE DE MECANIQUE THEORIQUE ET APPLIQUEE.**

**Préambule.**

Afin de contribuer plus efficacement au développement de la science de la mécanique, le Comité International des Congrès de Mécanique Appliquée avait décidé, lors de sa réunion à Paris en septembre 1916, de fonder une organisation permanente portant le nom d'"Union Internationale de Mécanique Théorique et Appliquée".

Cette Union a été admise dans le Conseil International des Unions Scientifiques par décision du Comité Exécutif de ce Conseil en 1947.

Dans les réunions tenues à Londres en septembre 1948, il a été décidé que le Comité International continuera, en tant que corps indépendant de l'Union, à organiser, comme par le passé, les Congrès Internationaux de Mécanique Appliquée et que ce Comité aura le Statut d'une organisation adhérente à l'Union.

**I.**

L'Union Internationale de Mécanique Théorique et Appliquée a pour buts:

(a) de former un lien entre des personnes et des organisations nationales ou internationales s'occupant de recherches scientifiques (théoriques ou expérimentales) dans le domaine de la mécanique ou des sciences connexes;

(b) de coopérer, sur sa demande, avec le Comité International des Congrès de Mécanique Appliquée, et d'organiser d'autres réunions internationales sur des sujets du domaine de la mécanique théorique ou appliquée;

(c) de prendre toutes autres initiatives propres à contribuer au développement scientifique de la mécanique théorique ou appliquée.

**II.**

L'organe actif de l'Union Internationale de Mécanique Théorique et Appliquée est son Assemblée Générale.

L'Assemblée Générale a pouvoir de décision pour toutes les questions
INTERNATIONAL UNION OF THEORETICAL AND APPLIED MECHANICS

Dans l'intervalle entre les réunions de l'Assemblée Générale le vote peut avoir lieu par correspondance sur propositions faites par le Bureau (article VII): dans ce cas une décision ne sera valable que si le nombre des personnes participant au vote est au moins les 2/3 du nombre total des membres de l'Assemblée Générale.

VI.

Les réunions de l'Assemblée Générale auront lieu aux moments fixés par le Bureau ou sur demande de 10 membres au moins de l'Assemblée Générale.

VII.

Afin de maintenir son activité dans l'intervalle entre les réunions de l'Assemblée Générale, celle-ci nomme un Bureau composé: d'un président,

du président sortant, vice-président,
d'un secrétaire,
d'un trésorier,
et de quatre autres membres de l'Assemblée Générale.

Les membres du Bureau sont élus pour une période de 4 ans et sont rééligibles.

Le Bureau doit se réunir au moins une fois par an. Tout membre du Bureau peut, en en prévenant par lettre le secrétaire, se faire remplacer par un autre membre de l'Assemblée Générale, s'il lui est impossible de prendre part à une réunion.

Le rôle du secrétaire est d'assurer les liaisons permanentes pour tout sujet intéressant l'Union, y compris les relations avec les organisations adhérentes ou étrangères à l'Union.

Le siège légal de l'Union est la résidence du secrétaire.

VIII.

Les moyens financiers de l'Union proviennent:

(a) des souscriptions annuelles des organisations adhérentes;
(b) des dons ou subventions.

Le Bureau de l'Union établit un budget pour chaque année et administre les finances. Il doit soumettre un rapport financier annuel aux membres de l'Assemblée Générale.

IX.

Le nombre de représentants d'une organisation adhérente et le montant de la souscription annuelle à payer par cette organisation seront réglés
The objects of the International Union of Theoretical and Applied Mechanics are:

(a) to form a link between persons and national or international organisations engaged in scientific work (theoretical or experimental) in mechanics or in related sciences;

(b) to cooperate with the International Committee for the Congresses of Applied Mechanics when requested, and to organise other international meetings for subjects falling within the field of theoretical and applied mechanics;

(c) to engage in other activities meant to promote development of mechanics, both theoretical and applied, as a branch of science.

II.

The active organ of the International Union of Theoretical and Applied Mechanics is its General Assembly.

The General Assembly has power to decide all questions affecting the Union, including alteration of the statutes. On specified questions it may delegate this power to appropriate bodies.

The composition of the General Assembly is regulated in Art. IV.

III.

Organisations occupied in scientific work in theoretical or applied mechanics (or national unions of such organisations) can be admitted by the General Assembly as adhering organisations of the International Union.

Each adhering organisation shall have representatives in the General Assembly of the International Union, and pay an annual subscription to the Union in accordance with Article IX.

IV.

The General Assembly of the International Union of Theoretical and Applied Mechanics is composed of:

(a) representatives of the organisations adhering to the Union;

(b) members elected by the General Assembly of the Union, who shall be persons actually engaged in scientific work in mechanics or in related sciences;

(c) if so decided by the General Assembly, representatives of Committees.

The number of elected members of the General Assembly of the same nationality in general should not exceed five. Exceptions can be made only
by decision of the General Assembly. The term of each elected member shall be determined by the General Assembly at the time of his election.

The General Assembly shall provide for an adequate representation of countries where important research is carried out in theoretical or applied mechanics, but where a national organisation does not yet exist.

V.

When voting is necessary every member of the General Assembly shall dispose of one vote. Any member who may be unable to attend a meeting may by a letter to the secretary constitute another member of the General Assembly as his proxy.

For ordinary decisions and for elections a simple majority of the votes brought forward is required. For an alteration of the statutes the majority required is 2/3 of the votes brought forward.

Between meetings of the General Assembly voting may be carried out by correspondence upon proposals made by the Bureau (section VII); in this case decisions will be valid only provided the number of persons taking part in the vote is not less than 2/3 of the total membership of the General Assembly.

VI.

Meetings of the General Assembly will take place at times decided by the Bureau (section VII) or on request of at least 10 members of the General Assembly.

VII.

In order to carry out work between the meetings of the General Assembly, the latter appoints a Bureau, consisting of

- a president
- the retiring president, who shall serve as vice-president
- a secretary
- a treasurer
- and four other members of the General Assembly.

The members of the Bureau will be elected for a period of 4 years and will be eligible for re-election.

The Bureau will meet at least every year. A member of the Bureau who is prevented from attending a meeting may by a letter to the secretary designate another member of the General Assembly to replace him.

The function of the secretary will be to act as a permanent centre for matters affecting the Union, including relations with adhering or outside organisations.

VIII.

The financial means of the Union are formed by:

(a) the annual subscriptions of the adhering organisations:
(b) gifts and grants.

The Bureau of the Union shall draft a budget for each coming year, and shall administrate the finances. The Bureau shall submit an annual financial report to the members of the General Assembly.

IX.

The number of representatives of an adhering organisation and the amount of the annual subscription to be paid by that organisation will be regulated according to one of the following categories, as proposed by the adhering organisation and after approval of the General Assembly of the Union:

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<th>Number of Representatives</th>
<th>Units of Annual Subscription</th>
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<td>I</td>
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The amount of the unit annual subscription will be $50 U.S.A. or its equivalent in local currency at the date of payment.

X.

In all its decisions the General Assembly shall be guided by the tradition of free and international scientific cooperation which has been developed in the International Congresses for Applied Mechanics.

XI.

The French text of the statutes (of which the above is a translation) shall be considered to be the authoritative text.
COMPOSITION OF THE GENERAL ASSEMBLY OF IUTAM.
October 1st, 1948.

a) Representatives from adhering organisations:
International Committee for the Congresses of Applied Mechanics:
C. Koning, Director Nationaal Luchtvaartlaboratorium, Sloterweg 145, Amsterdam-W.

British National Committee for Theoretical and Applied Mechanics:
representatives still to be appointed.

Hungarian Academy of Sciences (Magyar Tudományos Akadémia):
representatives still to be appointed.

National Committees in Belgium and France:
organisation still in progress.

b) Members elected by the General Assembly for the period 1948—1952:
Belgium: L. Baes, 38, rue Emile Boulliot, Ixelles, Bruxelles.


China: P. Y. Chou, National Tsing Hua University, Peiping.

Czechoslovakia: B. Hostinský, Kotlářská 2, Brno.

Denmark: J. Nielsen, Gjørlingsvej 12, Hellerup, København.

France: A. Caquot, 1, rue Beethoven, Paris XVI.
J. Péres, 95, Boulevard St. Michel, Paris V.
H. Villat, 47, Boulevard Auguste Blanqui, Paris XIII.

Great Britain: S. Goldstein, 11, Rathen Road, Withington, Manchester.
R. V. Southwell, 9, Latbury Road, Oxford.
G. I. Taylor, Farmfield, Huntingdon Road, Cambridge.

Italy: G. Colonnetti, Presidente del Consiglio Nazionale delle Ricerche, 7, Piazzalle delle Scienze, Roma.
G. Arturo Crocco, Via Alessandro Torselli 25, Roma.

J. M. Burgers, van Houtenstraat 1, Delft.

Norway: H. Solberg, Norwegian Academy of Sciences, Drammensveien 78, Oslo.
H. U. Sverdrup, Director Norsk Polarinstitutt, Observatoriegt 1, Oslo.

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Poland: M. T. Huber, Politechnika Gdańska, Limanowskiego 7, Gdańsk, Wrzeszcz.
W. Rudinowicz, Hoza 74, m. 4, Warszawa.

Sweden: W. Weibull, Aktiebolaget Bofors, Bofors.


U.S.A.: H. L. Dryden, Director of Aeronautical Research, National Advisory Committee for Aeronautics, 1724 First Street N.W., Washington 25, D.C.
J. C. Hunsaker, Department of Aeronautical Engineering, Massachusetts Institute of Technology, Cambridge 39, Mass.
Th. von Karman, Director Dan. Guggenheim Aeron. Laboratory, California Institute of Technology, Pasadena, Cal.
R. von Mises, Graduate School of Engineering, Harvard University, Cambridge, Mass.
S. P. Timoshenko, School of Engineering, Stanford University, Palo Alto, Cal.

E. L. Nicolai, Polytechnical Institute, Lesnoy, Leningrad.

Representatives of the Union on the Joint Committee on Rheology of the I.C.S.U.:
Ch. Sadron, Centre d’Etudes de Physique Macromoléculaire, Institut de Physique, 3, rue de l’Université, Strasbourg.
K. O. Pedersen, Fysikalisk-Kemiska Institutionen, University of Upsala, Sweden.

Composition of the Bureau of the International Union, see p. 6.
Address of the Secretariat: van Houtenstraat 1, Delft (Holland).