

ICMI

Bulletin

of the
International Commission
on
Mathematical Instruction

No. 18

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Secretariat
Centre for Mathematics Education
University of Southampton
Southampton, SO9 5NH
England





The International Commission on Mathematical Instruction

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JUNE 1985

Editors: Keith Hirst and Geoffrey Howson
Centre for Mathematics Education
University of Southampton
Southampton, SO9 5NH
England

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de la Libération, 33405 Talence, France.

SIXTH INTERNATIONAL CONGRESS ON MATHEMATICAL EDUCATION
INTERNATIONAL PROGRAM COMMITTEE

The following have accepted invitations to serve on the IPC for ICME 6.

- A. Császár (Hungary), Chairman
János Bolyai Mathematical Society,
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- D. Broomes (Barbados) School of Education,
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Université de Grenoble I - BP 68,
3 8402 St. Martin d'Heres Cedex,
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Hongo,
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113 Japan.
- Shirley Hill (USA) 309 Education School,
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Kansas City,
Missouri, 66208,
USA.
- M.F. Newman (Australia) Mathematics, IAS,
Australian National University,
G.P.O. Box 4, Canberra 2601,
Australia.
- S.M. Nikol'skii (USSR) Steklov Mathematical Institute,
Ul. Vavilova 42,
Moscow 117966, GSP-1,
USSR.
- M. Pellerey (Italy) Istituto di Didattica,
Università Salesiana,
Piazza Ateneo Salesiano, 1,
I-00139 Roma,
Italy.

J. Szendrei (Hungary)

Szeged,
Aprilis 4,
Utja 6,
Hungary.

D.H. Wheeler (Canada)

Department of Mathematics,
Concordia University,
Loyola Campus,
7171 Sherbrooke Street West,
Montreal,
Quebec,
Canada. H4B 1R6

Ex officio - A.G. Howson

Centre for Mathematics Education,
The University,
Southampton,
England.
SO9 5NH

In connection with ICME 6 the Presidium of the János Bolyai
Mathematical Society has appointed a National Organizing Committee.
This has been divided into two sub-committees with the following
membership:

Advisory Board

Chairman: J. Szendrei
Secretary: T. Nemetz
S. Békefi
Á. Császár
A. Hajnal
L. Lovász
V.T. Sós
J. Surányi
G. Szász
B. Sz-Nagy
T. Varga

Operative Organizing Committee

Chairman: J. Szendrei
Secretary: T. Nemetz
B. Andrásfai
A.M. Bartal
K. Bognár
E.C. Neményi
Mrs. L. Duró
R. Freud
G. Hettyei
Mrs. S. Kántor
I. Reiman
J. Székely
I. Tatár
K. Tompa
J. Urbán

NATIONAL REPRESENTATIVES

We give below some amendments to the list of National Representatives printed in Bulletin No. 17.

- CUBA Professor Miguel Jimenez Pozo,
Facultad de Matematica, Universidad de la Habana,
Habana 4, CUBA.
- GHANA Dr. Sam O. Bortei-Doku, Department of Science
Education, University of Cape Coast,
Cape Coast, GHANA, West Africa.
- IRELAND Professor D. McQuillan, Royal Irish Academy,
Academy House, 19 Dawson Street, Dublin 2, IRELAND.
- U.S.A. Dr. Eileen Poiani, Saint Peter's College,
Jersey City, NJ 07306, U.S.A.

ICME 5 MEMBERSHIP

Errata

Some unfortunate errors crept into the first column of the statistics published in Bulletin 17. The data concerning membership should be amended as follows:

Austria	4
Greece	2
Guam	1
Hong Kong	5
India	6
Indonesia	3
Iran	13
Iraq	1
Israel	11
Italy	10
Ivory Coast	1
Jamaica	4
Japan	173
Kenya	1
Korea	1
Kuwait	1

A.G. Howson

THE 6TH INTER-AMERICAN CONFERENCE ON
MATHEMATICAL EDUCATION

This conference has been rescheduled to take place in Guadalajara, Mexico, from 23 through to 27 November, 1985.

The Conference President will be

PROFESSOR EMILIO LLUIS,
Instituto de Matemática - UNAM,
Ciudad Universitaria - Circuito Exterior,
Mexico, 18, D.F. - MEXICO.

Those interested in receiving the 1st announcement should write to him.

ICMI BANK ACCOUNTS

Please note the following amendments:

Dollar Account,	Barclays Bank International Southampton Branch Number 20-79-22 Account Number 38567217
Sterling Account,	Barclays Bank, Southampton University Branch Branch Number 20-79-32 Account Number 20514497

**ICMI Study : The Impact of Computers and Informatics
on Mathematics and its Teaching.**

A successful international symposium on this theme was held in Strasbourg, France from 25-30 March, 1985.

There were 68 participants representing 13 different countries: Australia, Belgium, Canada, Federal Republic of Germany, Finland, France, Italy, Ivory Coast, Japan, Malaysia, Netherlands, United Kingdom, United States of America.

The Proceedings of the meeting will be published later this year by the Cambridge University Press. These will contain a survey article which expands upon the discussion document circulated in 1984 (L'Enseignement Mathématique, 30, 1984, 159-172), and a selection of papers submitted to Strasbourg or written by invitation following the meeting.

A further selection of some forty papers will be produced in a volume of Supporting Papers by the IREM in Strasbourg. Copies of this volume can be ordered now from F.Pluinage, Département de Mathématiques, 7 rue R. Descartes, 67084 Strasbourg Cédex, France. The price is FF100.

Further details of both volumes will be given in the next Bulletin.

ICMI Study : School Mathematics in the 1990s

A discussion document prepared for this study is being published as a supplement to Bulletin 18. The document is being circulated prior to the mounting of an international seminar which it is planned to hold in Kuwait early in 1986.

The publication of this document has been assisted by a grant received from UNESCO. The meeting in Kuwait will be held under the patronage of the Kuwait Ministry of Education and the Foundation of the Advancement of Sciences. ICMI is most grateful to the Kuwaiti authorities for the financial and other assistance which they have offered in connection with this study.

DEVELOPMENTS IN MATHEMATICAL EDUCATION

Proceedings of the Second International Congress on Mathematical Education

Copies of the book are still available. It is published by Cambridge University Press (0 521 09803 3) and the current price in the United Kingdom is £7.50.

The book (paperback) is over 300 pages in length and contains important papers by such authors as George Polya, Jean Piaget, James Lighthill, Hans Freudenthal, David Hawkins, Hugh Philp, René Thom, Edith Biggs, Efraim Fischbein and Hassler Whitney.

PROCEEDINGS OF ICMI-ISME REGIONAL CONFERENCE ON MATHEMATICAL EDUCATION : TOKYO, OCTOBER, 1983

The Proceedings of this meeting, which took as its theme 'School Mathematics in and for Changing Societies', have now appeared. The volume of over 500 pages includes all the presented papers together with accounts of the discussions of the working groups.

The Proceedings are published by the Japan Society of Mathematical Education, 2-1-3, Zoshigaya, Toshima-ku, Tokyo, 171 Japan.

INFORMATICS AND THE TEACHING OF MATHEMATICS IN DEVELOPING COUNTRIES

An international meeting, Sponsored by the International Committee on Mathematics in Developing Countries and the Committee for Education of IFIP (International Federation for Information Processing) and supported by ICMI, will be held from August 26-30, 1985 in Yamoussoukro (Ivory Coast).

The Symposium will consider

- 1) Informatics and the teaching of mathematics in developed countries,
- 2) Informatics and the teaching of mathematics in developing countries,
- 3) Informatics, mathematics, education and society in developed countries,
- 4) Informatics, mathematics, education and society in developing countries,
- 5) What informatics for developing countries?

French and English will be two official languages of the Symposium for which there is no registration fee.

The Programme Committee of the Symposium includes representatives from developing and developed countries.

Address for contacts

Professor Dr. (Mrs.) J. GUIDY WANDJA
President; Programme Committee and President of ICOMIDC
Département de Mathématiques
Université Nationale
08 B.P. 217, ABIDJAN 08
IVORY COAST

TOWARDS MATHEMATICAL MATURITY: SOME EUROPEAN COMPARISONS

A monograph with this title has recently been produced by D.A. Quadling, who will be remembered as the author of the report 'Mathematics in the Senior High School' presented at ICME3 and reproduced in the UNESCO/ICMI volume New Trends in Mathematics Teaching IV. The author examines mathematics teaching in the senior classes of schools in seven European countries.

Copies can be obtained from the Publications Officer, Cambridge Institute of Education, Shaftesbury Rd., Cambridge, CB2 2EX, England. The price, £4.50, includes postage and packing. Overseas orders should be paid in sterling by Bankers' Draft drawn on a London bank.

INTERNATIONAL COMMISSION FOR THE STUDY AND
IMPROVEMENT OF MATHEMATICS TEACHING

The Commission has announced that their next international meeting will take place in:

LEIDEN (The Netherlands) from 4 to 10 August, 1985.

Its theme will be:

MATHEMATICS for ALL

..... in the computer age.

Proposed sub-themes:

1. Arithmetic and algebra.
2. Mathematical models.
3. Mathematical Reasoning.
4. Teacher Training.
5. Mathematics and Computer Education.

The theme and the sub-themes will be studied:

- in plenary sessions with addresses;
- in discussion groups, where projects, results of didactical studies, field observations may be presented (individually or by groups).

The aim is to arrive at proposals for resolutions to be submitted and approved in plenary sessions and to be published afterwards.

Working languages: French and English.

Further Information can be obtained from:

Vakgroep OW & OC,
c/o Mrs. E.J. Hanepen,
Tiberdreef 4,
3561 GG UTRECHT, The Netherlands.

INSTITUTIONS FOR MATHEMATICS EDUCATION

3. University of Georgia Department of Mathematics Education

The Department of Mathematics Education at the University of Georgia, Athens, Georgia, USA, was founded in 1966, at a time when federal support for mathematics and science education was high, and the University of Georgia was in the midst of its expansion from a liberal arts and vocational school of about 5000 students into a major research university enrolling some 25,000 students. The university was founded in 1785; it is the oldest state university in the United States, but it did not hold classes for the first few decades of its existence, and it was not much more than a large college until after the Second World War. Today, the university in Athens is the capstone of Georgia's university system, which contains 33 institutions. Athens is a small city of some 60,000 inhabitants located approximately 100 km northeast of Atlanta, Georgia's capital and largest city.

The College of Education was founded in 1908. It is one of the largest in the United States, with some 250 faculty members. The current Dean, Alphonse Buccino, is also a member of the Department of Mathematics Education.

The Department of Mathematics Education is the largest in the United States and probably one of the largest in the world, with eleven full-time and two affiliated faculty. The first head of the department was Professor Len Pikaart, who is now at Ohio University. The present Head, Professor James Wilson, came to Georgia in 1968 and has been Department Head since 1969. In addition to Professors Wilson and Buccino, the faculty members are Professors Thomas Cooney, Edward Davis, Larry Hatfield, Joseph Hooten, Jeremy Kilpatrick, Michael Mahaffey, William McKillip, Leslie Steffe, and Sigrid Wagner. The affiliated faculty are Professors Laurie Reyes, in Middle School Education, and George Stanic, in Elementary Education. In addition, one or two visiting faculty are typically in residence each term.

The Department has about 25 full-time doctoral students and 20 full-time masters degree students in residence each year. The instructional programs serve these students and a large number of part-time graduate students and undergraduate students who are preparing to become elementary, middle, or secondary school teachers.

With such a large faculty, it is not surprising that the Department is engaged in a great variety of research and service activities. The faculty are active in state and national organizations of mathematics teachers as officers, committee members, and program participants. Several faculty members are authors of textbooks in mathematics or mathematics education or have been consultants to publishers of tests or textbooks; some have served as editors of professional journals. The faculty have played major roles in activities sponsored by the College Board, the

National Assessment of Educational Progress, and the International Association for the Evaluation of Educational Achievement. They have participated in the last three International Congresses on Mathematical Education and in the work of the International Group for the Psychology of Mathematics Education, especially the North American Chapter.

The research interests of the faculty run the gamut of topics in mathematics education. They include curriculum development and evaluation, problem solving, the development of number concepts, children's counting strategies, the learning of algebra, computers in mathematics instruction, mathematical abilities, strategies of teaching, teachers' beliefs, and policy issues in mathematics education.

In the last decade, the international outlook of the department has grown substantially. Members of the faculty have travelled widely, attending meetings and visiting centers of mathematics education in other countries. The department has hosted international gatherings and has attracted an increasing number of students and visiting faculty from outside the USA. The welcome mat is always out.

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