

IMU

**BULLETIN OF THE
INTERNATIONAL MATHEMATICAL UNION**

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Secretariat:

*Institute for Advanced Study
Einstein Drive
Princeton, New Jersey 08540, USA*

*imu@ias.edu
<http://www.mathunion.org>*

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List of Abbreviations

CDE	Commission on Development and Exchanges
CEIC	Committee on Electronic Information and Communication
ICHM	(Joint) International Commission on the History of Mathematics
ICMI	International Commission on Mathematical Instruction
ICSU	International Council for Science
IUHPS	International Union of the History and Philosophy of Science

INTERNATIONAL MATHEMATICAL UNION

Executive Committee

January 1, 1999 – December 31, 2002

President:	Jacob Palis	(Brazil)
Vice-Presidents:	Simon Donaldson Shigefumi Mori	(United Kingdom) (Japan)
Secretary:	Phillip Griffiths	(USA)
Members:	Vladimir Arnold Jean-Michel Bismut Björn Engquist Martin Grötschel M.S. Raghunathan	(Russia) (France) (Sweden) (Germany) (India)
Past President:	David Mumford	(USA)

Members of the Union

The following 65 countries were members of IMU as of January 1, 2001:

- Group I:** Armenia, Bulgaria, Cameroon, Croatia, Cuba, Egypt, Estonia, Greece, Hong Kong, Iceland, Ivory Coast, Kazakhstan, Democratic Republic of Korea, Latvia, Lithuania, New Zealand, Nigeria, Peru, Philippines, Portugal, Romania, Saudi Arabia, Singapore, Slovenia, Tunisia, Turkey, Uruguay, Venezuela, Vietnam.
- Group II:** Argentina, Austria, Chile, Czech Republic, Denmark, Finland, Georgia, Iran, Ireland, Republic of Korea, Mexico, Norway, Slovak Republic, South Africa, Ukraine, Yugoslavia.
- Group III:** Australia, Belgium, Brazil, Hungary, India, Poland, Spain.
- Group IV:** Netherlands, Sweden, Switzerland.
- Group V:** Canada, China, France, Germany, Israel, Italy, Japan, Russia, United Kingdom, United States.

Group	I	II	III	IV	V
Number of Votes	1	2	3	4	5
Dues Unit Contributions	1	2	4	7	10

Meeting of the Executive Committee of IMU

The Executive Committee of IMU met May 14-15, 2001, in Princeton, New Jersey, U.S.A. Among the items discussed by the Executive Committee were the following:

The Committee on Electronic Information and Communication (CEIC) presented an intermediate report and plans to present a final report in Beijing, China, at ICM 2002. It discussed the development of electronic information as it impacts the international mathematical community.

- The Committee has a goal to make all mathematical literature available to the public through the Internet, a goal that will not only benefit the mathematical community but will benefit mathematicians as well.
- The Committee presented the document “Call to all mathematicians” that states “open access to the mathematical literature is an important goal.” The EC endorsed the document, and it was sent to the Committee for Mathematics and Adhering Organizations.
- The CEIC presented a 10-page document that can guide authors through the publishing process. The EC endorsed an “Executive Summary” of the document. It was sent to the Committee for Mathematics and Adhering Organizations.

Preparations were outlined by the Local Organizing Committee (LOC) for the International Congress of Mathematicians 2002, to be held in Beijing, China, August 20-28.

- The Congress will be opened by President Jiang Zemin on August 20, in the Great Hall of the People in Tiananmen Square.
 - The LOC is organizing universities from all over China to take part in ICM 2002. Satellite conferences are being held in Hong Kong, Japan, Lhasa (Tibet), Russia, Singapore, South Korea, and other sites.
 - The registration fee is US \$240 before April 30, 2002 and US \$280 after May 1, 2002. It was agreed that a special rate of US \$100 before April 30, 2002 and US \$150 after May 1, 2002 be applied to graduate students.
 - All attendees are encouraged to visit the ICM 2002 website to pre-register, <http://www.icm2002.org.cn>.
-
- A Travel Grants Committee was appointed to select recipients of travel grants to ICM 2002 in three areas: 1) young mathematicians, aged 35 or younger at the time of the Congress, 2) young and senior mathematicians from Eastern Europe, and 3) senior mathematicians from Latin America and Africa.
 - Olavi Nevanlinna, president of International Council for Industrial and Applied Mathematics (ICIAM), discussed the cooperation of IMU and stressed the importance of applications of mathematics in the IMU congresses. IMU and ICIAM approved a proposal to have an IMU representative to ICIAM, and vice versa. It was also suggested that some collaboration take place between ICIAM and IMU on mathematical education, for instance in developing countries.

- The EC agreed on a new prize for applications of mathematics proposed by the German Mathematical Society, consisting of a monetary prize and a golden medal to be awarded every four years, commencing in 2006.
- The EC approved the initiative of the Norwegian Mathematical Society to propose to the Norwegian Parliament the creation of an annual “Abel Prize” to be awarded to mathematicians without an age limit. The prize would be administered by the Norwegian Academy of Sciences.
- The International Commission on Mathematical Instruction (ICMI) indicated that they would like an IMU representative present at their meetings. It was agreed that the IMU EC member who is geographically closest to the location will attend the meeting.
- Site bids for ICM 2006 were discussed. A site will be recommended to the General Assembly.
- It was agreed that the World Directory of Mathematicians 2002 would be published in book format and would not be available electronically.

Procedures for the Election of the Executive Committee of IMU – 2002

- 1.** Not less than a year before the meeting of the GA, the EC shall request proposals for the membership of the EC from the Committee for Mathematics, to be considered before the spring EC meeting prior to the Assembly. The candidate's CV and a brief description of activities should accompany the suggestions, as should assurance of the candidate's willingness to serve if elected.
- 2.** The EC shall then form its own slate. The slate should be mailed to the National Committees at least four months before the GA, together with background on the candidates, their fields and countries/geographic areas.
- 3.** After the slate drawn by the EC is known, the Committee for Mathematics can make further proposals of names specifically for the offices of President, Secretary, Vice-President, and Members-at-Large. These proposals shall reach the Secretary not less than two months before the GA. The same information as in (1) and (2) concerning the nominees, including their willingness to serve if elected, should be provided.
- 4.** The Secretary will send the Committee for Mathematics a list of all names proposed, as well as candidates' CV's, before the GA. The Committee for Mathematics is asked to cooperate in having their delegates to the GA fully informed.
- 5.** On the first day of the meeting, the General Assembly shall appoint a Nominating Committee (NC) consisting of:
 - a) the President of IMU (chairman),
 - b) all Past Presidents who are present (ex-officio),
 - c) eight further delegates.(Election to (c) shall be from names either proposed by the President or proposed and seconded from the floor, and shall be by show of hands unless the meeting decides otherwise.)
- 6.** The NC shall propose a slate drawn from the slate of the EC and the names in (1) and (3) and shall make it known to the meeting. No person shall be a candidate for more than one office.
- 7.** Further nominations can be made from the floor after the slate of the NC has been declared, provided that they are drawn from names previously offered by the Committee for Mathematics as in items (1) and (3), signed by at least ten delegates, and convey the same information as in (2) and (3) above.
- 8.** The General Assembly shall then elect the new President, Vice-President, Secretary, and Members-at-Large by written ballots from the EC and NC slates as well as the list of nominations from the floor (unless a candidate withdraws), but no others. A vote shall be invalid if more names are marked in any category than the number of places to be filled (i.e., one each for President and Secretary, two for Vice-Presidents and five for Members-at-Large).

9. A candidate for President or Secretary may be elected only if unopposed or if he or she obtains a majority of the votes cast. If the first ballot is indecisive, there shall be a second ballot. In the ballots for the Vice-Presidents and Members-at-Large, the two or five candidates, respectively, who obtain the largest numbers of votes shall be elected. In the event of a tie, the President shall decide.

[Note: Statute (9) provides (inter alia) that: “each delegation shall be free to cast the votes to which it is entitled either as a unit or divided in such a manner as it may determine.”]

Procedures for the Election of the Executive Committee of ICMI

The rules for the election of the Executive Committee of ICMI are similar to those for the election of the Executive Committee of IMU with the same Nominating Committee.

The EC of IMU shall request proposals for the membership of the EC of ICMI from the National Committees for Mathematics and will conduct extensive consultations with the existing Executive Committee of ICMI before proposing slates to the Nominating Committee.

No person can be a candidate for more than one office.

Procedures for the Election of CDE

The rules for the election of the Commission on Development and Exchanges are similar to those for the election of the Executive Committees of IMU and ICMI with the same Nominating Committee.

The EC of IMU shall request proposals for the membership of CDE from the Committee for Mathematics and will conduct extensive consultations with the existing CDE before proposing slates to the Nominating Committee.

No person can be a candidate for more than one office.

Procedures for the Election of ICHM

The rules for the election of the two IMU members of the Executive Committee of ICHM are similar to those for the election of the Executive Committees of IMU, CDE and ICMI, with the same Nominating Committee.

The EC of IMU shall request proposals for the membership of the two IMU members from the Committee for Mathematics and will conduct extensive consultations with the existing ICHM before proposing slates to the Nominating Committee.

Conferences Supported by IMU – 2001

- MATHEMATICAL PROBLEMS OF NONLINEAR DYNAMICS
Nizhny Novgorod, Russia, July 2-6, 2001
Organizer: L. Shilnikov
IMU Representative: Jacob Palis
- NINTH PRAGUE TOPOLOGICAL SYMPOSIUM
Prague, Czech Republic, August 20-25, 2001
Organizer: Josef Štěpán
IMU Representative: Simon Donaldson
- WORKSHOP ON MATHEMATICAL PHYSICS
Mambucaba, Rio de Janeiro, Brazil, August 19-25, 2001
Organizer: Vladas Sidoravicius
IMU Representative: Jacob Palis

IMU offered its imprimatur, but no financial support, for the following conferences in 2001:

- INTERNATIONAL CONFERENCE ON COMPLEX ANALYSIS AND THE
IXth ROMANIAN-FINNISH SEMINAR
Brasov, Romania, August 27-31, 2001
Organizer: Cabiria Andreian Cazacu
- SECOND INTERNATIONAL CONFERENCE “HARMONIC ANALYSIS AND
APPROXIMATIONS”
Yerevan, Armenia, September 11-18, 2001
Organizer: Mamikon Ginovian
- GEOMETRIE AU VINGTIEME SIECLE: 1930-2000
Paris, France, September 24-29, 2001
Organizer: Dominique Flament

Conferences Supported by IMU - 2002

- RAMANUJAN INTERNATIONAL SYMPOSIUM, “KAC-MOODY LIE ALGEBRAS AND APPLICATIONS”
Chennai, India, January 28–31, 2002
Organizer: N. Sthanumoorthy
IMU Representative: M. Raghunathan
- 200th ANNIVERSARY OF THE BIRTH OF ABEL
Oslo, Norway, June 2-8, 2002
Organizer: N. Sthanumoorthy
IMU Representative: P. Griffiths

IMU offered its imprimatur, but no financial support, for the following conference in 2002:

- INTERNATIONAL CONFERENCE DEDICATED TO THE MEMORY OF J.L. LIONS
Paris, France, July 1-5, 2002
Organizer: Jean-Pierre Puel

INTERNATIONAL CONGRESS OF MATHEMATICIANS 2002 (ICM 2002)

Report prepared by Zhi-Ming Ma, Chairman of the Local Organizing Committee, April 4, 2002
(Detailed information can be found on the ICM 2002 website: <http://www.icm2002.org.cn>.)

The ICM 2002 Local Organizing Committee sends Circular Letters (CL) via e-mail to all individuals on the ICM 2002 mailing list, approximately 8000 people.

1. ICM 2002 Local Organizing Committee (LOC)

The ICM 2002 Local Organizing Committee is expanding as the Congress approaches. The Chairman of LOC is the President of Chinese Mathematical Society (CMS), Professor Ma, Zhi-Ming. Professor Chang, Kung Ching, ex-President of CMS, is the ex-Chairman of LOC. The General Secretary of LOC is Professor Yuan, Ya-xiang, Chair for the Scientific Sub-Committee is Professor Ding, Weiyue and Professor Li, Ta-tsien is the Chair for LOC of the General Assembly in Shanghai. The ICM 2002 website contains the complete list of LOC members.

Secretariat of ICM 2002 address:

Secretariat Office, ICM 2002
Room 711,
Academy of Mathematics and System Sciences
Chinese Academy of Sciences
1A Zhong Guang Cun South 4th Street
Beijing 100080, China
Telephone: +86-10-6256-0649, Fax: +86-10-6261-8223
E:mail: icmsec@beijing.icm2002.org.cn

2. Opening Ceremony and Closing Ceremony

The opening ceremony will be held in the Great Hall of the People at 3:00 p.m. on Tuesday, August 20, 2002. Welcome speeches will be delivered by the President of China, IMU president, the president and honorary president of the Congress, Deputy Prime Minister of the Chinese Government, the Minister of Science and Technology, the President of NNSF of China, and the Mayor of Beijing. The Fields Medals and the Nevanlinna Prize will be awarded.

After the opening session, there will be addresses on the work of the Fields Medal and the Nevanlinna Prize recipients.

The closing ceremony, following the final two Plenary Lectures, is scheduled for Wednesday, August 28, at 4:00 p.m. in the main lecture hall of the Beijing International Convention Center (BICC).

3. Scientific Program

3.1 Plenary and Invited Lectures, Panel Discussions.

At the recommendation of the ICM 2002 Program Committee appointed by IMU, the Organizing Committee has invited 20 mathematicians to give one-hour Plenary Lectures, 168 mathematicians to give 45-minute lectures, and eight mathematicians to give talks in two panel discussion sessions of Section 18 (Mathematics Education and Popularization of Mathematics); the names of the Plenary and invited speakers and panel members can be found in the website of ICM 2002: <http://www.icm2002.org.cn/A/general.htm>.

3.2 Short Communication and Posters

Since the beginning of 2002, abstracts for Short Communications and Posters can be submitted electronically on line, by e-mail or by mail. The deadline for submission of abstracts is May 1, 2002. Abstracts are being checked for proper content by the Local Scientific Committee before authors are being informed about acceptance.

Organized Sessions of Short Communications can be submitted by Ordinary Members of the Congress. Such sessions and their organizers will be included in the final program after a review and consent by the Local Scientific Committee. All participants of these organized sessions have to submit an abstract for their Short Communications.

During the Congress, it will also be possible to organize informal mathematical seminars on site. Participants who want to organize informal seminars should contact the Secretariat Office of ICM 2002. If the request is received before May 1, 2002, the sessions will also be announced in the final program.

3.3 Section of Special Activities

Special sessions will be organized during the Congress. To date, the following activities are being planned:

Special Session organized by the Association for Women in Mathematics (AWM).

Special Session organized by the IMU Committee on Electronic Information and Communication (CEIC).

Special Session organized by the Organizing Committee of International Council of Industrial and Applied Mathematics 2003 (ICIAM 2003).

Special symposium organized by the International Commission on History of Mathematics (ICHM).

Special meeting of directors of institutes organized by the International Mathematical Sciences Institutes (IMSI).

Any sub-committee of IMU or other organizations that would like to organize a special session should contact the general secretary (Prof Ya-xiang Yuan) at yyx@lsec.cc.ac.cn.

4. Other Events for the General Public

A small number of lectures of non-technical nature will be arranged. These lectures are intended for the general public, and they will highlight the important ways in which mathematics and mathematical ways of thinking are having an important impact on everyday life. The International Congress also provides other opportunities to inform the general public about some of the recent developments and future challenges of mathematics.

5. Satellite Conferences.

The number of satellite conferences (up to April 2, 2002) is 46. A list of all the satellite conferences can be found at <http://www.icm2002.org.cn/satellite/index.htm>.

6. Registration

There are two ways to register for ICM 2002. One can register electronically at the following registration site: <http://www.icm2002.org.cn/I/Register.htm>. Alternatively, one may complete the registration form and return it to the CICCST (Mr. Liu Feng, CICCST, 86 Xueyuan Nan Road, Beijing 100081, China).

If a participant requires an invitation letter for obtaining financial support or a visa, please contact: icmagent@beijing.icm2002.org.cn.

7. Sponsoring and Finance

The Total Budget of ICM 2002 will be approximately US \$2 million. About US \$400,000 has been reserved for the support programs.

The most important sponsors of ICM 2002 are the Ministry of Finance of PRC, the Ministry of Science and Technology of PRC, the Ministry of Education of PRC, the National Natural Science Foundation of China, the Chinese Academy of Sciences, the Beijing Municipal Government, and the China Association for Science and Technology.

8. Support of Mathematicians from Eastern Europe and from Developing Countries

IMU and LOC are making strong efforts to ensure ICM 2002 participation of mathematicians from developing countries. In particular, IMU and LOC have established three support programs:

- Young Mathematicians from Developing Countries aged 35 or younger at the time of the Congress
- Young and Senior Mathematicians from Eastern Europe
- Senior mathematicians from Latin America and Africa

Details about the support programs can be found in the Circular Letters (CL-3, CL-10, CL-11, CL-13) and on the ICM 2002 website.

9. Social Program

After the opening ceremony, a complimentary dinner will be offered to all participants and registered accompanying persons. The dinner will be served in the Banquet Hall of the Great Hall of the People. An ICM 2002 party will take place in the evening of August 26, 2002.

On the evening of August 25, 2002, a show of Beijing Opera will be arranged at Chang'an Theater. The show contains three dramatic selections from the popular complete plays.

Besides the official (non complimentary) tourist program operated by China Travel Service Head Office, Footloose tours will be offered to special museums, parks and shopping streets. The tours are free of charge, except for possible entrance fees and transportation costs. These tours will be announced shortly before the Congress by means of Circular Letters and posted on the ICM 2002 website.

10. Public Relations

To promote ICM 2002 and mathematics in general, LOC has taken several actions:

- A press conference was held in the Great Hall of the People on August 16, 2001, to mark the one-year countdown to ICM 2002; most newspapers in China reported on ICM 2002.
- Two half-hour programs about mathematics filmed by CCTV were aired in CCTV.
- Two 45-minute TV programs about the history of mathematics are being produced. The programs will be aired on TV during or after the Congress.
- Dialogue with Fields Medalists will also be aired on CCTV during the Congress.

11. Local Arrangements

11.1 Professional Congress Organization Company

The ICM 2002 Organizing Committee has selected the China International Conference Center for Science and Technology (CICCST) as the company to support the ICM 2002 organization. CICCST will handle the registrations, run the accommodation service, and provide tourist advice.

11.2 Volunteers

Over 300 volunteers from Peking University, Tsinghua University, and other universities will be available during the conference. The volunteers will be mathematics students and graduate students. They will provide help at the Congress Venue and at the Congress designated hotels.

11.3 Public E-Mail Service

During the Congress, a public e-mail service will be available to Ordinary Members of ICM 2002. Daily from 9:00 a.m. to 8:00 p.m., a mail server and client computers will be offered in the Congress Venue.

12. Publications

12.1. Announcements and Posters

Since September 2001, approximately 10,000 copies of the First Announcement have been distributed to mathematicians via e-mail. The Second Announcement was printed in the beginning of 2002. Currently, 4000 copies of the Second Announcement have been sent to mathematics departments at hundreds of universities, national mathematical societies, and individuals.

We would like to thank the American Mathematical Society (AMS) for publishing a text version of the Second Announcement in the *Notices of the AMS* and to thank the Chinese Mathematics Society for publishing the Chinese version of the Second Announcement in the Bulletin of CMS.

12.2 Abstracts and Proceedings Volumes

During the on site registration, each participant will receive the program, an abstract volume, and Volumes II and III of the Proceedings, containing the papers of invited Section Speakers. These documents also will be available electronically shortly before the Congress. Volume I of the Proceedings will be distributed shortly after the Congress and will contain the speeches given at the Opening Ceremony, including the Laureates on the Prize Winners, and the report on the Congress, as well as the papers of the Plenary Speakers. The Proceedings will be published by Higher Education Press.

12.3 Beijing Intelligencer and Daily News

The Chinese Mathematical Society, Springer-Verlag Berlin/Heidelberg and Higher Education Press, together, will prepare, publish, and present to all participants a magazine called the "Beijing Intelligencer." This publication will welcome participants to ICM 2002 and will serve as a guide to Beijing and to its manifold aspects and attractions.

A newsletter containing program changes, announcements of informal seminars and information of general interest to ICM 2002 participants will be available each day outside the meeting rooms in the BICC. Participants with announcements for the newsletter must submit them to the conference office no later than 3:00 p.m. the day before.

13. Fees:

The registration fees are as follows:

Registration	until April 30, 2002	after April 30, 2002
Full Registration	US \$240	US \$280
Students*	US \$120	US \$140
Accompanying Persons +	US \$80	US \$100

* Registration as a student requires an official certificate of the university to be attached.

+ Registered accompanying persons are entitled to attend the Opening Session, Opening Reception after the Opening Session, the ICM-2002 Party, and coffee breaks.

14. General Assembly

The IMU General Assembly 2002 will be held in Shanghai, China, August 17-18, before the International Congress of Mathematicians in Beijing (ICM 2002). The Organizing Committee of ICM 2002 has appointed a Local Organizing Committee in Shanghai, chaired by Professor LI Ta-tsien. The corresponding address is:

Prof. LI Ta-tsien (LI Daqian)
Department of Mathematics
Fudan University
Shanghai 200433, China
E-mail: dqli@fudan.edu.cn or moffice@fudan.edu.cn
Tel: (86-21) 65642469 Fax: (86-21) 65648274

All the expenses for supporting the organization of the General Assembly in Shanghai are offered by the Shanghai Municipality. For further information concerning the General Assembly, please see the separate report in this Bulletin and the following web page: www.mathca.com/icm2002.

14th General Assembly, August 17-18, 2002, Shanghai, China

Report prepared by Zhi-Ming Ma, Chairman of the IMC 2002 Local Organizing Committee
April 4, 2002

(Detailed information can be found on the GA website: www.mathca.com/icm2002.)

The General Assembly 2002 will be held in Shanghai, August 17-18, 2002, on the weekend before the International Congress of Mathematicians in Beijing (ICM 2002).

General Assembly Venue:

Shanghai International Convention Center
2727, Riverside Avenue
Shanghai 200210, China
Telephone: (86-21) 50370000
Fax: (86-21) 50370045

Hotel Accommodations:

Peace Hotel
20, Nanjing Road (E)
Shanghai, 200002, China
Telephone: (86-21) 63216888
Fax: (86-21) 63290300
Website: www.Shanghaipeacehotel.com

The Peace Hotel is one of the most famous hotels in China. Facing the developing Pudong New Area, the hotel is located at the east end of Nanjing Road -- the most famous commercial street in Shanghai and on the riverside of Huang Pu River. The delegates and the observers can easily take a walk from the Peace Hotel to the Shanghai International Convention Center via the sightseeing tunnel under the Huang Pu River.

Enclosed with the letter of invitation to the General Assembly will be procedures for room reservations at the Peace Hotel, a list of room charges and information concerning travel to the hotel.

Schedule (tentative):

Friday, August 16

Arrival of delegates in Shanghai

Saturday, August 17

10:00 a.m. – 1:00 p.m.	Opening and first session (Shanghai International Convention Center)
1:00 p.m. - 2:00 p.m.	Lunch
2:00 p.m. – 4:30 p.m.	Second Session (Shanghai International Convention Center)

5:30 p.m. – 7:00 p.m.	Reception
7:00 p.m.	Concert
Sunday, August 18	
8:00 a.m. – 9:15 a.m.	Sessions of subcommittees (Peace Hotel)
9:00 a.m. – 1:00 p.m.	Third session and closing (Shanghai International Convention Center)
1:00 p.m. – 2:00 p.m.	Lunch
2:00 p.m.	Visit to Shanghai Museum and sightseeing
7:30 p.m.	Visit to Shanghai TV Tower and boat tour of Huang Pu River
Monday, August 19	
Afternoon	Transfer from Shanghai to Beijing

The ICM 2002 Local Organizing Committee is responsible for the organization of the General Assembly. It has appointed a Local Organizing Committee in Shanghai for supporting the organization of the General Assembly. For questions, please contact the Chairman of the Local Organizing Committee in Shanghai:

Professor LI Ta-tsien (Li Daqian)
 Department of Mathematics
 Fudan University
 Shanghai 200433, China
 Telephone: (86-21) 65642469
 Fax: (86-21) 65648274
 E-mail: dqli@fudan.edu.cn or moffice@fudan.edu.cn

All expenses for supporting the organization of the General Assembly in Shanghai are offered by the Shanghai Municipality.

Commission on Development and Exchanges (CDE)

Report prepared by Herb Clemens, Secretary/Treasurer, 2001.

During the year 2001, the CDE received 40 or more requests, inquiries and applications from mathematicians in developing countries for support for research travel, conferences and projects. After initial routine screening by the Secretary/Treasurer to insure that requests fell within IMU program guidelines, 11 formal applications for individual research travel were reviewed, with support or partial support being granted in 6 cases, and 17 formal applications for conference support were reviewed with support or partial support being granted in 12 cases. One request for project support, using dedicated funds raised externally by IMU, was also processed.

CDE wishes to encourage wider use of its programs by developing world mathematicians. At this point geographical distribution of applications and awards is quite uneven. Fully half of the proposals funded by CDE this past year were for research travel by Indian mathematicians or for conferences in India. This seems entirely due to the fact that many qualified mathematicians in many other parts of the developing world do not apply to CDE for research support.

A detailed financial report can be found on page 37.

INTERNATIONAL COMMISSION ON THE HISTORY OF MATHEMATICS (ICHM)

Report prepared by Kirsti Andersen, 2001.

New Members

At the XXIst International Congress of History of Science and Technology, Mexico City, July 8-14, 2001, the following Executive Committee serving for the term: 2002-2005 was elected.

Chair:	Karen V.H. Parshall	(USA)	khp3k@virginia.edu
Vice-Chair:	Craig Fraser	(Canada)	cfraser@origin.chass.utoronto.ca
Secretary:	Jan P. Hogendijk	(Netherlands)	hogend@math.uu.nl
Treasurer:	Menso Folkerts	(Germany)	M.Folkerts@lrz.uni-muenchen.de
Members:	Natalja Ermolaeva	(Russia)	naterm@NE2301.spb.edu
	Alejandro R. Garcíadiego	(Mexico)	gardan@servidor.unam.mx
	Mariano Hormigon	(Spain)	hormigon@posta.unizar.es
	Giorgio Israel	(Italy)	israel@mat.uniroma1.it
	QU Anjing	(China)	qua@cc.kyoto-su.ac.jp (until Spring 2002)
	Chikara Sasaki	(Japan)	ch-sasaki@msi.biglobe.ne.jp
Ex-Officio:			
	Kirsti Andersen	(Denmark)	ivhka@ifa.au.dk
	Joseph W. Dauben	(USA)	jdauben@worldnet.att.net
	Eberhard Knobloch	(Germany)	eberhard.knobloch@tu-berlin.de
	Christoph J. Scriba	(Germany)	fm3a503@math.uni-hamburg.de

New IMU representatives will be elected at the ICM in Beijing in 2002.

Editors of *Historia mathematica*: Umberto Bottazzini and Craig Fraser

There is no change of national members who are listed on the cover of *Historia mathematica*.

The Kenneth O. May Medal- awarded once every four years during the International Congress of History of Science in honor of the founder of ICHM: At a general meeting of ICHM during the congress in Mexico City the May Medal was awarded to Ubiratan d'Ambrosio (Brazil) and Lam Lay Yong (Singapore).

Sponsored conferences: ICHM has agreed to support the satellite conference of the ICM 2002 on history of mathematics which will be held at Northwest University in Xi'an 15-18 August 2002. The main topics are:

1. Transformation and transformation of mathematics: East and West
2. Mathematics thought of the 20th century
3. Mathematics in China

INTERNATIONAL COMMISSION ON MATHEMATICAL INSTRUCTION (ICMI)

Report prepared by Bernard R. Hodgson, Secretary, 2001.

1. Organization

The Executive Committee of ICMI had its third meeting on April 24, 27, 28 and 29, 2001, at East China Normal University in Shanghai, China. An international symposium on mathematics education was held at ECNU in conjunction with the ICMI EC visit. Other than this meeting, the work of the EC during 2001 was conducted by electronic communication under the direction of the President and the Secretary.

There has been no modification to the list of members of ICMI in 2001, and no new National Sub-Commission for ICMI has been established. There were a few new appointments among the ICMI National Representatives, but a number of ICMI countries still have no National Representative at the moment. Contact with ICMI National Representatives is made through the *ICMI Bulletin* or by e-mail (for the 40 or so Representatives for whom an e-mail address is known). In December 2001, on the occasion of the ICMI Study Conference on Algebra taking place in Melbourne, the Secretary had a meeting with members of ASICMI, the Australian Sub-Commission of ICMI.

In preparation for the General Assembly of the International Mathematical Union, August 2002, the President and Secretary of ICMI have been in e-mail contact with the President and Secretary of IMU on ICMI-related matters to be discussed at the GA, especially concerning the election of a new Executive Committee of ICMI for the period 2003-2006 and the updating of the Terms of Reference of ICMI.

2. ICMEs

The 10th International Congress on Mathematical Education, ICME-10, will be held in Copenhagen, Denmark, from July 4 to 11, 2004. A distinctive flavor of ICME-10 is the fact that it is being organized in close cooperation among the Nordic countries — Denmark, Finland, Iceland, Norway and Sweden — under the guidance of a special Nordic Contact Committee chaired by Professor Gerd Brandell, Lund University, Sweden. The International Program Committee, chaired by Professor Mogens Niss, Roskilde University, Denmark, had its first meeting in June 2001 in Copenhagen. The first announcement of the congress is due to appear in 2002. Up to date information about the congress is available on the website <http://www.icme-10.dk>

A call for bids to host ICME-11 in 2008, the year of the centennial of the Commission, had been launched by the Secretary of ICMI during the closing session of ICME-9, in August 2000, and published in the *ICMI Bulletin* (No. 49, December 2000). A few countries have responded in 2001 to the invitation then made to inform the ICMI Executive Committee by a declaration of intent that they are considering preparing an official bid, to be submitted by September 2002.

3. ICMI Studies

The mounting and conducting of so-called ICMI Studies on crucial themes and issues in mathematics education were continued in 2001. The resulting ICMI Study volumes are published by Kluwer Academic Publishers, Dordrecht, the Netherlands, in the “New ICMI Study Series” (NISS) appearing under the general editorship of the President and the Secretary of ICMI. During the year 2001, a new volume of this series (NISS 7) has appeared and one Study Conference (for the 12th Study) was held. Here are the last developments concerning the ICMI Studies.

ICMI Study 11: The Study Volume on the *Teaching and Learning of Mathematics at University Level* (NISS 7) appeared in October 2001. It was edited by the chair of the International Programme Committee for the Study, Derek Holton. The corresponding Study Conference was held in Singapore in December 1998 and attended by 89 participants from 25 countries. Another outcome of this Study is a special issue of the *International Journal of Mathematical Education in Science and Technology* (iJMEST) — volume 31, number 1 — which appeared in 2000.

ICMI Study 12: The Study Conference on *The Future of the Teaching and Learning of Algebra* was held at the University of Melbourne, Australia, on December 9-14, 2001, and was attended by 110 participants from 26 countries. Kaye Stacey, University of Melbourne, chaired the International Programme Committee and Helen Chick, University of Melbourne, the Study Secretary. Jill and John Vincent were in charge of the local organization of the Study Conference. The Discussion Document for this Study was published in various journals and newsletters, including the *ICMI Bulletin* No. 48, June 2000, pp. 6-13, *L'Enseignement Mathématique* 46 (2000) pp. 209-217, and *Educational Studies in Mathematics* 42 (2000) pp. 215-224.

ICMI Study 13: The thirteenth ICMI Study is entitled *Mathematics Education in Different Cultural Traditions: A Comparative Study of East-Asia and the West*. The co-chairs for this Study are Klaus-Dieter Graf, Freie Universität Berlin, Germany, and Frederick K.S. Leung, University of Hong Kong. The Discussion Document for this Study was published in various journals and newsletters, including the *ICMI Bulletin* No. 49, December 2000, pp. 16-33, *L'Enseignement Mathématique* 47 (2001) pp. 185-201, and *Educational Studies in Mathematics* 43 (2000) pp. 95-116. The International Programme Committee had its second meeting in 2001 to finalize the program of the Study Conference, which will take place at the University of Hong Kong on October 20-25, 2002. Francis Lopez-Real, University of Hong Kong, is in charge of the local organization.

ICMI Study 14: The next Study is devoted to the theme of *Applications and Modelling in Mathematics Education*. The International Programme Committee, chaired by Werner Blum, Universität Kassel, Germany, was appointed in 2000 and met in August 2001 to prepare the Discussion Document for this Study. The Study Conference is expected to take place in October 2003 in Dortmund, Germany.

ICMI Study 15: A new ICMI Study was launched in 2001 on the theme of teacher education and development. The International Programme Committee is co-chaired by Deborah Ball, University of Michigan, USA, and Ruhama Even, Weizmann Institute of Science, Israel. The composition of the IPC was announced in the December 2001 issue of the *ICMI Bulletin*. The Study Conference is planned to take place during the first part of 2004.

4. Regional Conferences

There were no ICMI regional conferences in 2001. One meeting previously recognized as an ICMI regional conference is now under preparation: the second ICMI-EARCOME (East Asia Regional Conference on Mathematics Education) — also designated as the Ninth Southeast Asian Conference on Mathematics Education or SEACME 9 — will be held in Singapore on May 27-31, 2002.

5. Other Initiatives

ICMI was involved in 2001 in three activities having to do with science and mathematics education or with the International Council for Science (ICSU), the umbrella organization to which ICMI belongs through IMU.

ICMI has reinitiated contacts with UNESCO on the occasion of the International Conference on Science, Technology & Mathematics Education for Human Development held on February 20 - 23, 2001, in Goa (India) and in which the Secretary took part. This conference, organized jointly by UNESCO and the Commonwealth Association of Science, Technology and Mathematics Educators (CASTME), was related to UNESCO Project 2000+ on science and technology literacy for all.

ICMI has co-sponsored an international workshop entitled “International Perspectives on Standards and Goals for K-12 Mathematics Education” organized in Utah, USA, on July 19-24 in the context of the annual Park City Mathematics Institute hosted by the Institute for Advanced Study (Princeton, NJ, USA). The workshop was centered around the theme ‘Mathematics Education around the World: Bridging Policy and Practice’ and has received a grant of US \$10,000 from ICSU.

ICMI has established contacts with the ICSU Committee on Capacity Building in Science and is collaborating with CCBS on the preparation of an international conference on Science and Mathematics School Education to be held in Rio de Janeiro in September 2002, on the occasion of ICSU General Assembly.

6. Affiliated Study Groups

ICMI continues to have four affiliated study groups: *HPM* (The International Study Group on the Relations Between the History and Pedagogy of Mathematics), *IOWME* (The International Organization of Women and Mathematics Education), *PME* (The International Group for the Psychology of Mathematics Education), and *WFNMC* (The World Federation of National Mathematics Competitions).

7. The Solidarity Program

In 1992 ICMI established a Solidarity Program in Mathematics Education. The overall objective of the Solidarity Program is to increase, in a variety of ways, the commitment and involvement of mathematics educators around the world in order to improve the situation of mathematics education, in particular in those parts of the world where the economic and socio-political contexts do not permit adequate and autonomous development. This initiative thus aims at providing means which, together with institutional or other help obtained from various sources, may support concrete initiatives and activities so to foster solidarity in mathematics education between well-defined quarters in developed and less developed countries. Particular emphasis is

placed on projects that enable the activation of a self-sustainable infra-structure within mathematics education in the region, country, or province at issue.

ICMI is currently reviewing the functioning and the impact of the Solidarity Fund, after its eight years of existence, so to redefine its orientation and development.

8. The ICMI Awards

It has been suggested frequently in the past that the Commission should establish some ICMI sponsored awards aiming at recognizing exceptional contributions to mathematics education. Following the recommendations made to the Executive Committee of ICMI by an ad hoc committee of internationally renowned people, it was announced in the June 2001 issue of the *ICMI Bulletin* that the Commission is establishing two awards, one recognizing a major program of research on mathematics education during the past ten years, and the other for life-time achievement in mathematics education. These awards would be announced in odd-numbered years and presented at the next ICME. Hence two awards may be presented at ICME-10, and four at the following ICMEs.

The design of medals to be given to the awardees raises the issue of the visual identification of ICMI in the form of a logo. A call for comments on criteria for the selection of a logo as well as suggestions of logos was launched in the June 2001 issue of the *ICMI Bulletin*.

9. Information and Communication

An important channel for dissemination of information about the Commission and its activities remains the *ICMI Bulletin*, published twice a year under the editorship of the Secretary of ICMI. Issues Nos. 50 and 51 are dated June and December 2001. The June issue contains material celebrating the 50th appearance of this vehicle of communication launched in 1972: four Presidents of the Commission, Shokichi Iyanaga (1975-1978), Jean-Pierre Kahane (1983-1990), Miguel de Guzmán (1991-1998) and Hyman Bass, the current President, have prepared texts in which they share their reminiscences of their term as President and their views on current trends and issues in mathematics education and the role the Commission could or should play.

Direct access to the *ICMI Bulletin* or to other information concerning ICMI can be found on the ICMI-pages of the IMU-server on the World Wide Web, at the address:
<http://www.mathunion.org/ICMI/>

Since the inception of the Commission in 1908, the official organ of ICMI has been the journal *L'Enseignement Mathématique*, established in 1899. ICMI has recently reinvigorated its contact with the journal and in 2001, in addition to the Discussion Document for ICMI Study 13, reports have appeared in *L'Enseignement Mathématique* on the activities of the Commission for the years 1999 and 2000, on the symposium celebrating the centennial of the journal, as well as on the 8th ICMI Study entitled "What is research in mathematics, and what are its results?".

COMMITTEE ON ELECTRONIC INFORMATION AND COMMUNICATION

Report prepared by Peter Michor, Secretary, 2001.

Minutes of the fourth meeting of the Committee on Electronic Information and Communication (CEIC) of the International Mathematical Union held at the IAS, Princeton, New Jersey, May 12-14, 2001.

Membership and Participation

Peter Michor (Austria), Jonathan Borwein (Canada), John Ewing (USA), Martin Groetschel (Germany), Wilfrid Hodges (UK), David Morrison (USA), Kapil Paranjape (India), Alf van der Poorten (Australia), Alexei Zhizhchenko (Russia). By invitation: Roland Schwaenzl (Germany). Did not attend: Jonas Gomes (Brazil), Qing Zhou (China). [Jacob Palis, President of the IMU, attended a substantial portion of the Committee's meeting].

The CEIC met on Saturday, May 12 (commencing at 10:00) and through Sunday, May 13. It held a joint meeting with the Executive Committee of the IMU on Monday morning, May 14 following which there was a further short meeting to recall tasks accepted by members (concluding at 12:30).

Agenda and Minutes of the previous meeting

Math-Net -- Martin Groetschel spoke on "Math-Net: The Current State of the Art". Remarks on the internationalization of Math-Net included: UK has Math-Gate; Brazil has not been a success; *Persona Mathematica* will be further developed in India, as proposed by Kapil Paranjape. The MPRESS mirror in EMIS is often down. Domain-names should be transferred from W. Dalitz to the IMU.

arXiv and preprint servers in other sciences -- Pub-Med Central in the medical sciences is going online. Science server will become freely accessible with a moving wall of 6 months. Commercial preprint servers: Elsevier server.

EMIS and EMS -- Normal growth is being experienced; there are now 51 freely accessible journals, 24 mirrors in Europe, 18 elsewhere. EULER (full online version of *Jahrbuch der Mathematik*, most important papers scanned) is part of EMIS. Collaboration between preprint servers, CEIC should become active. Proposal (Michor, not serious): That Greg Kuperberg be asked to put his Front of the arXiv under a secondary homepage, and that ZIB offers to migrate its preprint archive into the arXiv.

Activities of AMS -- John Ewing did not want to repeat the items from his report at the previous meeting, and consequently limited his remarks to updating the committee on the STIX project (to create a complete set of fonts to accompany the large number of mathematical glyphs added to unicode). This is a project sponsored jointly by six publishers (mainly scientific societies).

Activities of CMS/SMC -- Jon Borwein reported that the Society has some 1200-1500 members. All four publications are now digital. The Society, and the three institutes PIMS, Fields Institute, and CRM, will all install secondary homepages.

Activities of LMS -- Wilfrid Hodges reported that he is no longer closely involved with the London Mathematical Society, but he obtained the following report from the LMS Publications Secretary (Chris Lance, 9 May 2001):

``All our print journals are available online. We have acquired a DOI prefix for the LMS, and are moving towards using CrossRef (in cooperation with our publishing partners CUP, IOP and Turpion).

Our electronic journal, the LMS JCM, maintains high academic standards, but does not receive as many good papers as it would like. For the years 2000 and 2001, it is only available to paying subscribers. A subscription to the LMS Proceedings includes one to the JCM. Other than these bundled subscriptions, the JCM has only attracted a few individual subscriptions, and scarcely any library subscriptions. For this reason, the LMS Council recently decided that, from 2002, the JCM should again be made freely available. If and when the size of the journal increases substantially from its present level, we intend to reintroduce a subscription system.

At present, we do not have any plans for further electronic journals.

Activities of DMV (see <http://www.mathematik.de>) -- Activities of other mathematical societies report from the discussion forum EMJ.

UNESCO/ICSU Conference "Electronic publishing in science" -- Alf van der Poorten reported briefly on the meeting held in Paris, February 20-23, emphasizing the importance of mathematics being represented at general scientific meetings. See also [UNESCO_-report](#) an attachment to these minutes.

Copyright issues -- A draft of an Executive Summary, to accompany the Copyright checklist, had been prepared. A revised version was approved. Both the Executive Summary and the checklist may be found at <http://www.maths.qmul.ac.uk/~wilfrid/copyright.html>.

The Committee acknowledged its indebtedness to Wilfrid Hodges and thanked him for his outstanding contribution to its work.

Standards -- Roland Schwaenzl made a presentation 'Some Remarks about MathML'. It was agreed that the CEIC should produce an article on standards in electronic communications, on MathML, pdf, TeX, SGML, Unicode, reviewing the present state of play. A group was formed of Jon Borwein, Alf van der Poorten (chair), Roland Schwaenzl, and David Morrison, also Patrick Ion should be contacted.

Call to mathematicians with homepages -- Following a brief presentation by Alf van der Poorten on 'Storing mathematics electronically; notes for the uneducated', Peter Michor presented the notion that mathematicians be urged to consider scanning their older publications and putting them online, for fair use only, and for the benefit of developing countries. A suitable 'Call to mathematicians' was then formulated.

In discussion of what has been done, Dave Morrison mentioned that all of his papers are online at: (<http://www2.math.duke.edu/publications/drm>); it was suggested that Juergen Moser's collected works could be done in this way.

It was resolved that a webpage with technical advice for several operating systems should be prepared: see for example <http://www.mat.univie.ac.at/~michor/howto.html>.

Resolutions suitable for presentation to the EC were formulated.

World Directory of Mathematicians -- It was agreed that for 2002 there was no alternative to preparing a print directory, as in the past. Looking to the future, members of the Committee noted that privacy laws may well inhibit the highly desirable alternative of maintaining a publicly accessible electronic list of mathematicians.

Miscellaneous -- The Committee discussed a suggestion by the European Physical Society to sign a formal agreement concerning Math-Net. It became clear that such a proposal was inappropriate at this level and should be politely rejected in favor of offers of local and regional cooperation on a less formal basis.

The following reports were given: How the CEIC functions (Peter Michor) and review of “how we stand with respect to our ‘terms of reference’”(Martin Groetschel).

arXiv and standards -- (David Morrison) MPRESS and Metadata (Roland Schwaenzl) EMIS (Peter Michor) ‘Personal collected works’ (Alf van der Poorten).

‘*Call to mathematicians*’ -- was accepted by the EC.

Copyright checklist (Wilfrid Hodges). -- The executive summary was accepted by the EC with the proviso that it be amended by adding a suitable introduction. It was that the Copyright Checklist, sometime in the future, be presented to the ICSU.

Math-Net (Martin Groetschel, Jon Borwein) -- Members of the EC recommended there should be a CEIC afternoon in Beijing 2002 and presentation at GA. It was agreed that the CEIC will organize an afternoon at ICM 2002 (Beijing) on electronic communication and information and that on behalf of the IMU it organize a similar such session at ICIAM 2003 (Sydney). It was remarked that the CEIC should have finite lifetime and that, in particular, arrangements should be made for an orderly and gradual change in its membership. [In a subsequent discussion, Peter Michor indicated his wish to withdraw as Chair of the Committee in 2002, and his intention to recommend that Jon Borwein take over that task].

Attachments

- Copyright Checklist (What do you want from your publisher):
http://elib.zib.de/IMU/IMU_Committees/want_pub.html
- Call to mathematicians:
http://elib.zib.de/IMU/IMU_Committees/call_authors.html

What do you want from your publisher?

Executive summary for authors of research papers in journals

Endorsed by the Executive Committee of the IMU in its 68th's session in Princeton, NJ, May 14-15, 2001)

The number of mathematical papers that are stored or circulated as electronic files is increasing steadily. It is important that copyright agreements should keep in step with this development, and not inhibit mathematical authors or their publishers from making best use of the electronic medium together with more traditional media. While most mathematicians have no desire to learn the subtleties of copyright law, there are some general principles that they should keep in mind when discussing copyright for research papers with their publishers.

1. A copyright agreement with your publisher is a bargain struck between his interests and yours. You are entitled to look out for your interests. Most journal publishers have a standard copyright form, and may be unwilling to vary it for individual authors. But nothing prevents you from asking, if you see room for improvement. Pressure from authors may lead publishers to change their standard contracts.
2. Three groups of people have an interest in your paper:
 - a. Yourself and your employer (who may in some countries be automatically the original copyright holder and hence a party to the copyright agreement);
 - b. The journal publisher;
 - c. Users of paper who are not parties to the copyright agreement, including readers and libraries.

One of the main purposes of your copyright agreement is to control how your publisher or you make the paper available to this third group. Publishers will hardly allow individual authors to dictate agreements with libraries. But if you know that a certain journal publisher makes life hard for libraries, you can take this into account when choosing where to submit your paper.

3. There is no ideal copyright agreement for all situations. But in general your agreement should contain the following features:
 - a. You allow your publisher to publish the paper, including all required attachments if it is an electronic papers.
 - b. You give your publisher rights to authorize other people or institutions to copy your paper under reasonable conditions, and to abstract and archive your paper.
 - c. Your publisher allows you to make reprints of the paper electronically available in a form that makes it clear where the paper is published.
 - d. You promise your publisher that you have taken all reasonable steps to ensure that your paper contains nothing that is libelous or infringes copyright.
 - e. Your publisher will authorize reprinting of your paper in collections and will take all reasonable steps to inform you when he does this.

4. Should you grant full copyright to the publisher? In some jurisdictions it is impossible to transfer full copyright from author to publisher; instead the author gives the publisher an exclusive right to do the things that publishers need to do, and these things need to be spelt out in the agreement. This way of proceeding is possible in all jurisdictions, and it has the merit of being clear and honest about what is allowed or required.

The complete copyright checklist was written by Wilfrid Hodges. It was approved and is recommended by the Committee on Electronic Information and Communication of the International Mathematical Union (IMU).

Attachment #2

Call to All Mathematicians

Endorsed by the IMU Executive Committee on May 15, 2001, in its 68th's session in Princeton, NJ.

Open access to the mathematical literature is an important goal. Each of us can contribute to that goal by making available electronically as much of our own work as feasible.

Our recent work is likely already in computer readable form and should be made available variously in TeX source, dvi, pdf (Adobe Acrobat), or PostScript form. Publications from the pre-TeX era can be scanned and/or digitally photographed. Retyping in TeX is not as unthinkable as first appears.

Our action will have greatly enlarged the reservoir of freely available primary mathematical material, particularly helping scientists working without adequate library access.

This statement was written and recommended by the Committee on Electronic Information and Communication (CEIC) of the International Mathematical Union (IMU).

**IMU APPROVED BUDGET FOR THE YEARS 1999 – 2002
IN SWISS FRANCS**

EXPENDITURE:

Schedule A:	1991-1994	1995-1998	1999-2002
Secretarial help, IMU office	19,400	15,000	17,000
Secretarial help, President	2,000	3,000	5,000
ICMI	10,000	11,000	11,000
CDE	5,500	6,000	6,000
Office expenses (including postage)	7,500	8,400	14,400
Travel expenses of the EC	25,000	27,000	30,000
President's and Secretary's expenses	2,000	2,000	4,000
Contribution to ICSU	5,000	7,000	7,000
IMU Bulletin	2,000	2,000	3,000
Audit fee	2,000	2,000	4,500
General Assembly – 2002	3,500	4,000	4,000
World Directory of Mathematicians	18,000	20,000	20,000
Contingencies	2,000	2,000	2,000
Subtotal	104,500	110,000	127,900
Schedule B:			
Symposia, confer, IMU Lecture	56,000	65,000	86,000
ICMI scientific activities	18,000	22,000	22,000
CDE scientific activities	15,000	40,000	33,000
Program Committee for ICM 2002	5,500	6,000	8,000
Travel grants	15,000	25,000	40,000
Subvention to ICM 2002	24,000	26,000	28,000
Subtotal	133,500	184,000	217,000
Total	238,000	294,000	344,900

INCOME:

Membership dues (212x1200)	187,000	210,000	254,400
ICSU subvention	20,000	26,000	10,500
Sales of W.D.M.	12,500	10,000	12,000
Special Development Fund	15,000	25,000	45,000
Interest on bank accounts	3,500	23,000	23,000
Total	238,000	294,000	344,900