

Activity and Financial Report 2014 submitted to IMU



Key activities:

Administration and Governance

The ICMI Executive Committee (2013-2016) held its second meeting in Rio de Janeiro, Brazil from April 22-24, 2014. The third meeting will be held in Macao, China from May 30 – June 2, 2015. The formation of the Nomination Committee for the upcoming ICMI EC (2017-2020) has commenced.

Member Countries

In 2014, ICMI had 92 member countries, 70 are also members of IMU and 10 are associate members of IMU.

ICMI Regional Conferences

In 2014 ICMI was involved in the preparation of the following regional conferences:

CIAEM-14 (XIV Inter-American Conference on Mathematics Education), which will be held in Tuxtla Gutiérrez, Chiapas, Mexico, from May 3-7, 2015 (http://xiv.ciaem-iacme.org/index.php/xiv_ciaem/xiv_ciaem).

The 7th EARCOME conference "In Pursuit Of Quality Mathematics Education For All" will be held in the Philippines from May 11-15, 2015 (http://earcome7.weebly.com/).

The sixth EMF conference (L'Espace Mathèmatique Francophone - EMF- 2015) which will be held in Algeria from October 10-14, 2015.

The Espaço Matemático em Língua Portuguesa was created and preparations started for its first meeting from October 28-31, 2015, Coimbra, Portugal.

ICMI Studies

ICMI Study 21 "Mathematics Education and Language Diversity": Jointly edited by members of the IPC, coordinated by IPC member Richard Barwell (Canada), was finalized in 2014 and submitted to the publisher.

ICMI Study 22 "Task Design in Mathematics Education": Co-chaired by Anne Watson (UK) and Minori Ohtani (Japan). The proceedings of the conference were uploaded for free use (hal.archives-ouvertes.fr/hal-00834054). The Study Volume has been completed and submitted to the publishers.

ICMI Study 23: "Primary Mathematics Study on Whole Numbers": Co-chaired by Mariolina Bartolini Bussi (Italy) and Sun Xuhua (China). The IPC meeting was held in January 2014, the ICMI Study Conference will be held from June 3-7, in Macau, China (http://www.umac.mo/fed/ICMI23/).

Outreach to Developing Countries

The following activities under the umbrella of the Capacity and Network Project (CANP) were held in 2014:

CANP 4, East Africa: The IPC and Local Organizing committee started working in 2013. The fourth CANP was held from September 1-12, 2014, in Dar es Salaam, Tanzania (http://www.mathunion.org/icmi/activities/outreach-to-developing-countries/canp-project-2014-east-africa/?no_cache=1&sword_list%5B%5D=tanzania).

CANP 5, Andean Region: in 2014 the ICMI EC selected the fifth region with the participation of the following countries: Bolivia, Ecuador, Peru, Paraguay and Amazonian Brazil. The Program Manager and Local Coordinating Chair have been selected and started working in 2014. The fifth CANP will be held in February 2016.

Klein Project

A Klein Workshop and a meeting for the design team were held in Rio de Janeiro, Brazil in April 2014.

ICMI Awards

In 2014 the first Emma Castelnuovo Award Committee was selected and started working. The mandate of the F. Klein and the H. Freudenthal Awards Committee was extended for one year (until 2016) in order to complete the selection process of the 2015 awardees.

ICME-13

Preparations for the ICME-13 to be held in Hamburg on July 24-31, 2016 (http://icme13.org/) were under way.

Outreach and Dissemination of Information

- Three issue of the ICMI Newsletter were published and distributed (March 1, July 1 and November 1, see http://www.mathunion.org/icmi/publications/icmi-news/?no cache=1&sword list%5B%5D=newsletter)
- Papers from hitherto unpublished issues of the ICMI Bulletin were assembled and published on the ICMI website: http://www.mathunion.org/?id=2750
- ICMI materials were distributed at various conference and events, e.g. at the MENAO symposium in Seoul, Korea, at the ICM in Seoul, during CANP East Africa and other events.
- The regular columns on ICMI News were published in the journal L'Enseignement Mathématique (the official organ of ICMI) and the December Issue of the Newsletter of the European Mathematical Society.
- ICMI Archives: activities to document and preserve items from the history of ICMI are ongoing.

Administration and Governance

Organisation

ICMI Members and Representatives

In 2014 ICMI had 92 member countries, 70 are also members of IMU and 10 are associate members of IMU. Each member country is required to elect an ICMI Representative who represents the ICMI member country at the ICMI General Assembly and has the (sole) voting right for the ICMI Executive Committee (ICMI EC). The ICMI representatives also inform the national communities of developments within ICMI.

Executive Commission 2013-2016

The members of the EC 2013-2016 are: PRESIDENT: Ferdinando Arzarello (Italy)

SECRETARY-GENERAL: Abraham Arcavi (Israel) VICE-PRESIDENT: Cheryl Praeger (Australia) VICE-PRESIDENT: Angel Ruiz (Costa Rica)

MEMBERS AT LARGE (5): Jean-Luc Dorier (Switzerland) Yuriko Baldin (Brazil)

Roger Howe (USA)

Catherine P. Vistro-Yu (Philippines)

Zahra Gooya (Iran)

Ex officio: Bill Barton (New Zealand) (Past President of ICMI) Ingrid Daubechies (President of IMU) (until 31.12.2014) Martin Grötschel (Secretary of IMU) (until 31.12.2014)

Cheryl Praeger was the ICMI liaison person with the IMU EC until December 31, 2014.

The second meeting of the 2013-2016 Executive Commission took place in Rio de Janeiro, Brazil in April 2014.



Participants ICMI EC Meeting April 2014, IMPA Rio de Janeiro, Brazil Yuriko Yamamoto Baldin, Angel Ruiz, Jean-Luc Dorier, Bill Barton, Lena Koch, Abraham Arcavi, Ferdinando Arzarello, Zahra Gooya, Cheryl E Praeger (from left to right)

IMU Secretariat

The IMU Secretariat in Berlin, Germany gives administrative and logistical support for ICMI activities. Lena Koch is the ICMI administrator and responsible for all administrative and organisational issues regarding ICMI. Other staff members in Berlin also assist ICMI, including the IMU Secretariat Manager, the accountant, the IT and technical support staff member as well as the IMU Archivist and the Head of the IMU Secretariat.

In January 2014 the ICMI Study 23, IPC meeting was held in the premises of the IMU Secretariat and was financially supported by the funds of the IMU Secretariat (German Ministry of Education and Research and the City of Berlin).

ICMI General Assembly

The next ICMI General Assembly will take place in Hamburg, Germany on Saturday, 23 July 2016.

ICMI Affiliate Organizations

ICMI's organisational outreach includes ten multi-national organisations and study groups with interest in mathematics education.

Affiliated organisations are independent from ICMI and are self-financed. They collaborate with ICMI on specific activities, such as the ICMI Studies or CANP. The ICMI Affiliate Organisations also produce reports for the General Assembly of ICMI. There are currently four multi-national Mathematical Education Societies (one affiliated in 2011) and six international Study Groups, which have obtained affiliation to ICMI.

The multi-national Mathematics Education Societies currently affiliated to ICMI, with year of affiliation are:

- CIAEM: Inter-American Committee on Mathematics Education (2009)
- CIEAEM: International Commission for the Study and Improvement of Mathematics Teaching (2010)
- ERME: European Society for Research in Mathematics Education (2010)
- MERGA: Mathematics Education Research Group of Australasia (2011)

The Study Groups currently affiliated to ICMI, with their year of affiliation, are:

- HPM: The International Study Group on Relations between the History and Pedagogy of Mathematics (1976)
- ICTMA: The International Study Group for Mathematical Modelling and Applications (2003)
- IOWME: The International Organization of Women and Mathematics Education (1987)
- MCG: The International Group for Mathematical Creativity and Giftedness (2011)
- PME: The International Group for the Psychology of Mathematics Education (1976)
- WFNMC: The World Federation of National Mathematics Competitions (1994)

The International Congress on Mathematical Education (ICME)

ICME-13

Hamburg, Germany will host the next ICME-13 from 24 -31 of July 2016. More than 3,000 participants from 80 countries are expected to participate. Gabriele Kaiser, of the University of Hamburg, is chairing the International Programme Committee (IPC) and is the convener of the conference.

Information about the congress is available at: http://icme13.org

Each ICME devotes at least 10 per cent of the registration fees to the ICME Solidarity Fund that allows organizers to give support to some participants from developing countries. The composition of the ICME-13 Solidarity Fund Committee will consist of three ex-officio members: the Chairperson

of the IPC, the Chairperson of the LOC and the ICMI Secretary-General and three other members representing the IPC (chosen by the IPC Chairperson), the LOC (chosen by the LOC Chairperson) and the ICMI EC (chosen by the EC). In 2013 the ICMI EC decided that ICMI Vice President Angel Ruiz and Abraham Arcavi, ICMI Secretary-General will represent the ICMI EC in this important committee. Other members of the grant committee are Gabrielle Kaiser (Chair of IPC), Marianne Nolte (Chair of LOC), one person representing the IPC (chosen by the chair of IPC) and one person representing the LOC (chosen by the chair of the LOC). The grants committee will meet in February 2016 to make decisions.

ICME-14

The call for intention to bid for ICME-14 in 2020 was distributed globally and resulted in three firm bids to host ICME-14 in 2020.

ICM 2014:

The ICM 2014 was held in Seoul, Korea, August 13 - 21, 2014. One day of the ICM is dedicated to Mathematics Education and Popularization of Mathematics. Several ICMI members participated in the program; videos and further information about the invited talks and panels of the "Mathematics Education and Popularization of Mathematics" can be found here:

http://www.mathunion.org/icmi/news/details/?tx_ttnews[tt_news]=889&cHash=6feb99c0dbcbee eef7360674b5f25fb9

ICMI Regional Conferences

Launched in the mid-seventies, ICMI Regional Conferences aim to facilitate wider discussion of mathematical education issues in particular regions. No regional conference was held in 2014.

In 2014 ICMI was involved in the preparation of the following regional conferences:

CIAEM-14 (XIV Inter-American Conference on Mathematics Education) will be held in Tuxtla Gutiérrez, Chiapas, Mexico, May 3-7 2015. Angel Ruiz is the chair of the conference.

The 7th EARCOME conference "In Pursuit Of Quality Mathematics Education For All" will be held in the Philippines from May 11-15, 2015. Catherine Vistro Yu is the chair of the conference and Yuriko Baldin is the ICMI EC Liaison person.

The sixth EMF conference (Espace Mathèmatique Francophone) EMF- 2015) will be held in Algeria from October 10- 14, 2015. Jean Luc Dorier is the ICMI EC Liaison person and a member of the scientific committee of the conference.

ICMI Studies

A major ICMI programme is the series of ICMI Studies. Each Study addresses an issue or topic of particular significance in contemporary mathematical education, and is conducted by an international team of leading scholars and practitioners. Built around an international conference, it is directed towards the preparation of a published volume to promote discussion and action at the international, regional or institutional level. More than 21 volumes have been published between 1986 and 2014.

The series editors 2013-2016 are ICMI President Ferdinando Azarello, Secretary-General Abraham Arcavi and Vice President Cheryl Praeger.

Current Studies are:

ICMI Study 21: Mathematics Education and Language Diversity:

The Study Conference took place in Águas de Lindóia, São Paulo, Brazil, on 16-20, September 2011. The Study Volume has entered the editing process and will be published in 2015 (NISS 17).

ICMI Study 22: The study on Task Design was launched 2010. The co-chairs are Anne Watson (Oxford University) and Minoru Ohtani (University of Kanazawa, Japan). The Study conference was held 2013 in Oxford, UK and Ferdinando Arzarello and Abraham Arcavi represented the ICMI EC. In 2014 the editing process started and the Study Volume will be published 2015.

ICMI Study 23 Primary Mathematics Study on Whole Numbers was launched in 2012, Co-Chairs are Mariolina Bartolini Bussi, University Modena e Reggio Emilia, Italy and Sun Xuhua of the University of Macau, China. The IPC has been appointed and started working in 2013. The IPC meeting has been held January 19-24, 2014 at the IMU Secretariat in Berlin, Germany. The Study Conference will be held in June 2015 in Macau, China. Roger Howe is the Liaison to ICMI Study 23.

The Klein Project

The Klein Project, inspired by Felix Klein's Elementary Mathematics from an Advanced Standpoint, provides contemporary mathematics for mathematics teachers.

A workshop "Challenges and Opportunities" was held from April 14-16, 2014 at IMPA in Rio de Janeiro, Brazil. About 60 participants participated in the three-day meeting. http://klein.sbm.org.br/workshop/

The Vignettes are being distributed via a Blog (http://blog.kleinproject.org/ under the coordination of Bill Barton.

Bill Barton presented the Klein Project at Rennes University in France in September 2014 as well as at the Simon Fraser University and University of British Columbia in Vancouver, Canada in November 2014.

Outreach to Developing Countries

Capacity and Networking Project (CANP)

CANP aims to enhance mathematics education in developing countries by supporting the educational capacity of those responsible for mathematics teachers, and creating sustained regional networks of teachers, mathematics educators and mathematicians, linking them to international support.

The first CANP Program, CANP EDIMath Sub Sahara Africa was held for two weeks in 2011 in Mali with about 40 participants from five countries in the region. The follow up meeting of CANP Sub-Sahara EDIMath was successfully held in September 2012 in Senegal.

The second CANP Programme, CANP Central America and the Caribbean, held its two-week workshop in 2012 with 67 researchers and educators from Colombia, Panama, Venezuela, Dominican Republic, Spain, Mexico, Cuba and host country Costa Rica. The most important result of CANP Costa Rica 2012 was the founding of the *Mathematics Education Network of Central America and the Caribbean*, which seeks to enhance capacities in Mathematics and Mathematics Education in the region. The website is: http://redumatematicacyc.net. In 2013 the Network met (as a follow up) in November 6-8 in Santo Domingo, Dominican Republic. In 2014 the Central American and the Caribbean National Report was translated into English and can be found here: http://www.mathunion.org/icmi/activities/outreach-to-developing-countries/canp-project-2012-central-america-and-the-caribbean/

CANP 3 South East Asia: The Third Capacity and Network Project (CANP) started with a two week workshop which was held from 14th to 25th October, 2013 in Phnom Penh, Cambodia with more than 40 participants from Cambodia, Laos, Thailand and Vietnam.

CANP 4, East Africa: The Local Organizing Team, lead by Anjum Halai and the Programme Manager, Ferdinando Arzarello met 21-23. February in Dar el Salaam to prepare CANP 4, East Africa. The workshop was held in Dar el Salaam 1-12. September 2014. Mathematics educators from East Africa and gathered at the Aga Khan University Institute for Educational Development from September 1 to 12, for the Capacity and Network Project (CANP) East Africa conference.

About 80 mathematics teachers and teachers' educators from Tanzania, Kenya, Uganda and Rwanda participated in the conference aimed at advancing mathematics education in East Africa. In addition to East African representatives, speakers from Botswana, Canada, Mozambique, France, Italy, South Africa, and Sweden participated in the conference. Among the speakers were Edward Lungu (Botswana), Jill Adler (South Africa, former ICMI EC member), Christiane Rousseau (Canada and IMU EC member) and Daniel Nyanganyura (ICSU Regional Office, ROA, South Africa) as well as the local programme chair, Anjum Halai from the Aga Khan University, and ICMI president and CANP 4 Programme Manager Ferdinando Arzarello.

CANP 5, Andean Region: In 2014 the ICMI EC selected the fifth region. The following countries will be invited to participate: Bolivia, Ecuador, Peru, Paraguay and Amazonian Brazil. The Program Manager and Local Coordinating Chair have been selected (Yuriko Baldin and Uldarico Malaspina) and started working in 2014. The fifth CANP will be held in February 2016. In 2014 Yurko Baldin visited the headquarters of JICA, in Tokyo, as ICMI EC member, and presented the programs of ICMI around the world and to seek support to the activities in South America especially for CANP 5-Andean region. The JICA keep offices and activities including Education in the participating countries of CANP5. ICMI is hoping to involve JICA in the CANP 5 workshop.

IMU - Commission for Developing Countries (CDC)

The ICMI EC also appoints one member of the IMU Commission for Developing Countries (CDC). The ICMI EC 2010-2012 nominated Angel Ruiz as member of this Commission (2010-2014).

MENAO Symposium at the ICM

In 2014, the IMU held a daylong symposium prior to the opening of the International Congress of Mathematicians (ICM), entitled *Mathematics in Emerging Nations: Achievements and Opportunities* (MENAO). Approximately 260 participants from around the world, including representatives of embassies, scientific institutions, private business and foundations attended this session. Attendees heard inspiring stories of individual mathematicians and specific developing nations. Cheryl Praeger chaired the MENAO symposium and Angel Ruiz supported the MENAO symposium and its related activities in his position as ICMI representative in the IMU-CDC. More information, all lectures and the result booklet can be found here: http://www.mathunion.org/cdc/menao/

ICMI Awards

In 2003 ICMI created two awards in mathematics education research: the Felix Klein Award, for lifelong achievement in mathematics education research and the Hans Freudenthal Award for a major programme of research on mathematics education. These awards are announced every two years and conferred at the opening ceremonies of ICMEs. The next award will be announced in 2015. The Klein and Freudenthal Awards Committee has six members and is currently chaired by Carolyn Kieran (Canada).

In 2014 ICMI created a new award named after Emma Castelnuovo. The award committee was formed in 2014 and consists of six members, currently chaired by Jeremy Kilpatrick (USA).

Communication and Outreach

ICMI uses the following channels of communication with professional organizations and the general public:

- The ICMI News Newsletter is issued three times a year (July 1, November 1, March 1) and includes relevant news, announces activities, and presents reports. The newsletter includes a short editorial by an ICMI EC member and serves to disseminate ICMI information. The ICMI Newsletter editors are Cheryl Praeger and Abraham Arcavi.
- ICMI has a column in the newsletter of the European Mathematical Society (four publication per year) and in L'Enseignement Mathématique. Jean Luc Dorier is the ICMI contact person.
- ICMI is actively maintain its website www.mathunion.org/icmi. The editor is Lena Koch. The ICMI website is hosted on the IMU server in Berlin.
- Each spring ICMI is issuing an annual activity and financial report to IMU.
- The ICMI Facebook page was established in 2011 and has more than 4,700 likes. The editors are Jaime Carvalho e Silva and Lena Koch.

These channels of communication cover ICMIs archival requirements and fulfil ICMI's statutory obligations. It was unanimously decided to discontinue the production of the Bulletin, whose functions will be fully covered by the four channels described above.

All communications except the Social Media Site are under the Senior Editorship of the ICMI Secretary-General.

Further Activities

ICMI Digitization Program

The ICMI Digital Library Project aims at providing open access to all ICMI publications and thematic Studies. Currently proceedings of the symposium organized in the year 2000 on the occasion of the centennial of L'Enseignement Mathématique, the official organ of ICMI, the first five ICMI Studies, ICMI Bulletins, and proceedings various meetings and conferences are available for free download on the ICMI website.

http://www.mathunion.org/icmi/digital-library/introduction/

Database Project

The Database Project, launched in 2011 has as its ultimate goal to build up a free access database of the mathematics curricula (ranging from pre-primary, primary, elementary, middle, secondary to vocational and undergraduate university level) from all over the world. Useful web links can be sent to the ICMI Secretary General. Currently information from 28 countries is available on the ICMI website. The database is already in use by researchers and curriculum-developers.

Further International Cooperation and Outreach

In March 2014 Ferdinando Arzarello met in Koblenz the different groups, which are organizing the Thematic Afternoon on European Didactic and German Speaking Traditions, Legacy of Felix Klein and European Didactic Traditions at the next ICME in Hamburg (July 24. -31. 2016): see cme13.org/thematic_afternoon.

Ferdinando Arzarello presented ICMI in the IMU General Assembly in Korea and gave a report about the past ICMI activities and a financial report (2010-2014).

Cheryl Praeger participated in the ICSU General Assembly in September 2014, in Auckland NZ as an Australian voting delegate but liaised with the IMU delegation. She also participated in IMU EC meetings in August 2014 before the IMU GA, and also during the ICM, participated in the IMU GA and was a Chair of the Credentials Committee.

Bill Barton and a student assistant (Kimberly Strauch) participated in the 4th USA Science & Engineering Festival, which was held in Washington, DC in April 2014. The festival is a large science festival, featuring contests and school programs (http://www.usasciencefestival.org/). ICMI activities and in particular the Klein Project were presented.

All ICMI EC members kept their national organisations and adhering organisations informed about ICMI developments.

ICMI Archival Activities

Bernard Hodgson, the ICMI Archive Curator visited the IMU Secretariat Archive from May 13-21 of May 2014. He took first steps towards digitalising old ICMI materials. He also met with the IMU Secretariat Archivist Birgit Seeliger and the IMU Archive Curator Guillermo P. Curbera and the IMU Secretary Martin Groetschel to discuss archiving issues.

Espaço Matemático em Lingua Portuguesa

In 2014 Yuriko Baldin became a liaison member of the EMeLP (Espaço Matemático em Lingua Portuguesa) which was constituated at the joint meeting of ICMI representatives of Brazil, Portugal and Mozambique. The first conference of EMeLP, including Cabo Verde will be held in Coimbra, Portugal in October 2015.

Financial Summary

ICMI's principal source of 'core' income is an annual grant from the International Mathematical Union (IMU) that receives its financial support from IMU member countries.

In 2014 ICMI additionally received a grant (Euro 10,000) from the IMU Secretariat (based at the WIAS Berlin) to hold the ICMI Study 23, IPC meeting in Berlin. The IMU Secretariat receives an annual subvention from the IMU Secretariat host country (Germany) to run all its administrative business. In 2014 ICMI also received a grant from ICSU for the CANP 4 Tanzania workshop (Euro 30,000) as well as a grant from UNESCO for CANP 4 (Euro 2,692.80). The other major financial support for ICMI activities is financial support via the home institutions of its members. The ICMI EC approves the ICMI budget and all its related spending.

The ICMI EC would like to thank in IMU, ICSU, UNESCO, the IMU Commission for Developing Countries (IMU-CDC), the IMU Secretariat and all individuals who are actively involved in ICMI activities very much for all the support and collaboration.

More information about ICMI can be found on the website: www.mathunion.org/icmi

Ferdinando Arzarello, ICMI President Abraham Arcavi, ICMI Secretary- General Lena Koch, IMU Secretariat May 2015

Photo credits: Anjum Halai Jaime Carvalho e Silva Lena Koch

ICMI Income and Expenditure 1.1.2014-31.12.2014 $^{\scriptscriptstyle 1}$ All income is in EURO.

Revenue by Source		In EURO	%
Savings 2013 (1.1.2014)		€ 190,099.21	67%
Return funds WIAS		€ 2,340.19	1%
IMU Grant 2014		€ 54,895.30	20%
Institutional Fundraising			
UNESCO Grant CANP Tanzania		€ 2,692.80	1%
ICSU Grant		€ 30,000.00	10%
Interest			
Bank Interest		€ 73.52	0.03%
Publishing Revenue			
Springer Royalties		€ 520.71	0.17%
Total Income 2014	€ 280,621.73	€ 280,621.73	100%
EXPENDITURE by Category			
		0.4.1.222.22	17.34%
ICMI EC MEETING RIO		€ 14,239.22	2.222
IPC Meeting 22 and 23		€ 807.49	0.98%
VOMENTAL III		6.006.55	0.29%
ICMI Website work		€ 236.55	60.0004
CANP Tanzania		€ 52,053.35	63.39%
			0.30%
CANP SEA		€ 244.86	0.500/
Meeting Koblenz March 2014		€ 414.17	0.50%
Science Fair USA (including PR work)		€ 5,492.50	6.69 %
belefiee fair out (meraanig fix work)		0.0,192.00	0.73%
Klein Project Blog Assistant		€ 600.00	017 0 70
Klein Project Rio		€ 961.02	1.17%
mem i roject ido		C 701.02	2.36%
ICMI Curator Visit Berlin		€ 1,938.55	2.50 /0
ICM 2014 Seoul (hotel cost)		€ 1,997.04	2.43%
1011 2011 Scoul (note) Cost)		G 1,777.UT	3.75%
ICMI EC Meeting 2015		€ 3,077.59	
Bank Account fee		€ 52.90	0.06%
		€ 82,115.24	100%
Total Expenditure in 2014		,	

 $^{^1}$ Budget does not include the flight cost for the ICME-14 (2020) site visits which were spent in 2014, but will be returned to ICMI in 2015 by the three bidding committees.