



## International Commission on Mathematical Instruction

### Report on ICMI activities in 2011

#### 1. Organisation

The second meeting of the 2010-2012 EC took place in Beijing, China 21-25. February 2011. IMU was represented by Cheryl Praeger. The major decision was the continued expansion of ICMI development activities in the form of the CANP (see below). The next ICMI EC meeting will take place in July 2012, prior to ICME -12. The **new 2013-2016 ICMI EC** will be elected at the General Assembly prior to ICME-12.

ICMI is supported by Lena Koch, a half-time staff person responsible for all administrative and organizational issues regarding ICMI. Other staff members at Berlin also assist ICMI, including the accountant, the IT and technical support as well as the IMU archivist.

#### 2. ICMI members

In 2011 ICMI had 90 member countries of ICMI, 69 of which are also members of IMU and eight are associate members of IMU.

#### 3. ICME

Seoul, Korea will host **ICME-12** in 2012 in the COEX Convention Centre on July 8-15, 2012. The **International Programme Committee (IPC)** chaired by Professor Sung Je Cho, Seoul National University, had its second meeting in February 2011 in Jeju, Korea. The programme is already completely structured and all activities are well under way. Information about the congress is available at <http://www.icme12.org>.

A call for bids for **ICME-13**, to be held in 2016, was made in 2008. Formal bids were due by November 1, 2010, and three bids were received. The site visits were conducted in 2011 and the decision for ICME-13 was announced by the end of 2011. **Hamburg, Germany will host ICME-13 in 2016.**

#### 4. ICMI Studies

The 2010-2012 Executive Committee launched a new Study in 2010 on Task Design, and is preparing another study on a Primary Mathematics topic. **ICMI Study 18: *Statistics Education in School Mathematics: Challenges for Teaching and Teacher Education*** was published under the editorship of Carmen Batanero, chair of the International Programme Committee, together with Gail Burrill and Chris Reading in August 2011. (NISS 14) ICMI is currently working on the following ICMI Studies:

- **ICMI Study 19: *The Role of Mathematical Reasoning and Proving in Mathematics Education***  
The NISS volume is currently in preparation under the editorship of the two co-chairs, Gila Hanna and Michael de Villiers, with publication expected in March 2012. (NISS 15)
- **ICMI Study 20: *Educational Interfaces between Mathematics and Industry*** is organised jointly with the International Council for Industrial and Applied Mathematics (ICIAM). The IPC is co-chaired by Alain Alabamian (Université Paris-Est) and Rudolf Sträßer (Justus-Liebig-Universität Gießen). The Study was presented during the 7th International Congress on Industrial and Applied Mathematics (ICIAM 2011),

held in July 2011, in Vancouver, Canada by the Secretary-General of ICMI and the two co-chairs of the Study. The NISS volume is currently in preparation under the editorship of Alain Damlamian, Rudolf Sträßer and José Francisco Rodrigues with publication expected in 2012/13. (NISS 16).

- **ICMI Study 21:** *Mathematics Education and Language Diversity*, had Co-chairs Mamokgethi Setati (University of Pretoria) and Maria do Carmo Domite (Universidade de São Paulo). The Study Conference took place in Águas de Lindóia, São Paulo, Brazil, on 16-20 September, 2011. Both Co-chairs have since stepped down due to personal reasons. The preparation of the Study Volume is in the hands of the IPC. The website is <http://www.icmi-21.co.za>.
- **ICMI Study 22:** The 2010-2012 Executive Committee launched a new Study late in 2010 on Task Design. The co-chairs are Anne Watson (Oxford University) and Minoru Ohtani (University of Kanazawa, Japan). The IPC had its first meeting in January 2012 in Oxford, UK.
- **ICMI Study 23:** EC members Mariolina Bussi and Roger Howe are preparing a proposal that will support the launching a new Study on Primary School Mathematics in its meeting in 2012.

## 5. ICMI Regional Conferences

Launched in the mid-seventies, ICMI Regional Conferences aim to facilitate wider discussion of mathematical education issues in particular regions. They foster reflection, action and co-operation among mathematicians, mathematics educators and teachers. These meetings are supported morally by ICMI, sometimes with a modest financial contribution. One ICMI Regional Conference was held in the year 2011.

- **XIII CIAEM** (Conferencia interamericana de educación matemática), took place in Recife, Brasil, on June 26-30, 2011. This meeting coincided with the 50th anniversary of the *Comité Interamericano de Educación Matemática* (CIAEM), an organization recently affiliated to ICMI. The ICMI EC was represented on the International Programme Committee by Michèle Artigue and Bernard Hodgson. More than 1800 math educators, mathematicians and teachers from 33 countries met for five days and could follow five plenary talks, four plenary round tables (one of them dedicated to the work of Ubiratan D'Ambrosio), 30 parallel talks, six parallel round tables, and more than 700 contributed papers. In this meeting ICMI Study 18 was launched and an update of the Klein Project was presented to the participants.

The ICMI EC has granted the status of ICMI Regional Conference to the following conference in 2012 and 2013:

- **EMF 2012** (Espace Mathématique Francophone), held in Geneva, Switzerland, in February 2012. The ICMI EC is represented on the International Programme Committee of EMF 2012 by Bernard Hodgson and Jaime Carvalho e Silva.
- **ICMI-EARCOME-6** conference (the *Fifth ICMI East Asia Regional Conference in Mathematics Education*), to be held in Phuket, Thailand in March 2013. The ICMI EC will be represented on the International Programme Committee of this conference by Zhang Yingbo.

## 6. The Klein Project

The Klein Project has turned its primary focus to the production, dissemination, and trialling (with teachers) of Klein Vignettes. Two Klein meetings were held in 2011, one in Sweden in March, and a major week-long workshop of 30 people funded by AIM in Palo Alto (USA), 7-11 November 2011.

As well as the website, the Vignettes are being distributed via a Blog ([www.blog.kleinproject.org](http://www.blog.kleinproject.org)) and are being trialled both in Brazil under the coordination of Yuriko Baldin, and in New Zealand under the coordination of a part-time Research Assistant Rebecca Fowler. Another Research Assistant, Antoine Nectoux, is undertaking French translations and revisions.

## **7. CANP: Capacity and Networking Project**

**CANP** is the major development project of ICMI in conjunction with IMU (CDC), UNESCO and International Congress of Industrial and Applied Mathematics, ICIAM. It aims to enhance mathematics education in developing countries by developing the educational capacity of those responsible for mathematics teachers, and to create sustained regional networks of teachers, mathematics educators and mathematicians, linking them to international support.

CANP consists of a program in a different developing region each year. The first program was very successfully held in Mali in September, 2011. The second will be held in Costa Rica in August 2012. The third will be in Cambodia in 2013.

The Mali CANP project was financially supported by UNESCO, the IMU Commission for Developing Countries, ICMI, the International Centre for Pure and Applied Mathematics (CIMPA), the SCAC of the Embassy of France in Mali, Joseph Fourier University in Grenoble and substantial support from the Ministry of Education, Literacy and National Languages of Mali. In addition, the FAST University of Bamako made freely available an Amphitheatre for the opening ceremony, a large room and a computer room for training and provided wireless internet access for participants. More information can be found at:

<http://www.mathunion.org/icmi/other-activities/outreach-to-developing-countries/canp-project-2011-mali/>

## **8. Commission for Developing Countries**

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

## **9. ICMI Solidarity Fund**

The ICMI Solidarity Fund was established by ICMI in 1992. Its purpose is to help the development of mathematics education in countries in which there is a need for it that justifies international assistance. It currently holds approximately USD 34.000 (Euro 26.000).

## **10. ICMI Affiliate Organizations**

ICMI's organizational outreach includes multi-national organizations with interest in mathematics education, operating consistently with the aims and values of the Commission. Affiliated organizations 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 Organizations 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: Intl. 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 Intl. 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)

### 11. ICMI Awards

The ICMI awards each in the form of a certificate and a medal, to recognize outstanding accomplishments in mathematics education research:

- **Hans Freudenthal Award**, for a major programme of research on mathematics education,
- **Felix Klein Award**, for lifelong achievement in mathematics education research.

The 2011 awards were announced in February, 2012. Alan Schoenfeld received the Felix Klein Medal for lifetime achievement and Luis Radford for the Hans Freudenthal Medal for a major cumulative programme of research. Carolyn Kieran is the chair the ICMI Award Committee 2010-2014. In addition, two other members were elected in 2010. Only the name of the Chair is publicly known.

### 12. IMU/ICMI Digitization Program

The **ICMI Digital Library** was officially launched on July 1, 2009, with the posting online of the Proceedings of the symposium organized in 2000 on the occasion of the centennial of *L'Enseignement Mathématique*, the official organ of ICMI. A contract was signed with Cambridge University Press in June, 2010 to make this material available online and negotiations with Springer are still in progress.

All Bulletins digitised with the help of IMU, the most recent Proceedings of ICMI Study meetings, and the ICMI Studies edited by CUP are all available online for the ICMI community.

### 13. Database Project

The ICMI Executive Committee decided in its February 2011 meeting to launch another major project, called the Database Project, whose ultimate goal is to build and update a database of the mathematics curricula all over the world. For the first phase of this project, all ICMI representatives were asked to send a link to the webpage(s) of their country where official mathematics curricula at all levels of instruction (pre-primary, primary, elementary, middle, secondary, vocational, etc.) could be found. We have currently received information for 20 countries. The database is already in use by researchers and curriculum-developers.

### 14. Information and Communication

Communication within ICMI is by direct email contact with the ICMI Representatives, and, for individuals, through **ICMI News** appearing every two months, alternating with *IMU-Net*. An **ICMI Facebook page** was established in 2011 (it currently has more than 1100 'friends' and 360 'likes'). An annual **ICMI Bulletin** is the official organ of ICMI activities.

The ICMI website, now hosted on the IMU server in Berlin, will receive some updates in 2012: <http://www.mathunion.org/icmi/>

All communications are under the Editorship of the Secretary-General.

**Jaime Carvalho e Silva**, Secretary-General

[jamecs@mat.uc.pt](mailto:jamecs@mat.uc.pt)

**Bill Barton**, President

[b.barton@auckland.ac.nz](mailto:b.barton@auckland.ac.nz)

21 March 2012

## ICMI Balances

(in EURO)

IMU Support 2010 and 2011	81.068,80 €
ICMI Balances 2010 as of 31.12.2010	75.316,18 €
ICMI Income: CIMPA Grant (for EdiMath/CANP)	1.800,00 €
ICMI Income: CDC Grant (for EdiMath/CANP)	3.830,83 €
ICMI Income: UNESCO Grant (for EdiMath/CANP)- 3 <sup>rd</sup> payment	3.808,94 €
ICMI Income: Australian Mathematical Society for Klein Project 2010	2.694,05 €
ICMI Solidarity Fund	26.767,60 €
Bank Interest	171,89 €
<b>TOTAL BUDGET available for 2011:</b>	<b>195.458,29 €</b>
<b>ICMI Expenses:</b>	
Klein Project 2010	2.584,89 €
ICM 2010	1.258,63 €
ICMI EC Meeting 2010	2.602,05 €
ICMI Study 20, Conference Lisboa	2.252,70 €
IMU Secretariat Inauguration, Berlin, 2011	239,64 €
ICMI EC Meeting 2011	4.484,40 €
CANP/ Edimath Mali	26.660,68 €
ICMI Study 18	100,00 €
ICIAM Conference	1.647,90 €
ICMI Study 21	2.060,21 €
Administrative Costs	356,70 €
<b>Total Spending 2011</b>	<b>44.247,80 €</b>
<b>ICMI Balances as of 31.12.2011</b>	<b>151.210,49 €</b>