International Study Group on the Relations Between the HISTORY and PEDAGOGY of MATHEMATICS
An Affiliate of the International Commission on Mathematical Instruction

No. 78 **November 2011**

This and earlier issues of the Newsletter can be downloaded from our website

http://www.clab.edc.uoc.gr/hpm/

These and other news of the HPM group are also available on the website

http://grouphpm.wordpress.com/

(the online and on time version of this newsletter).

Important Books

Mathematics for the million by Lancelot Hogben

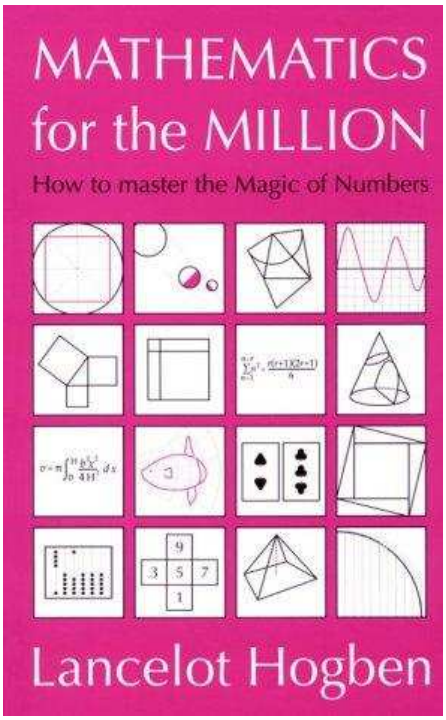
As a new regular feature of the HPM Newsletter, members of the HPM community will be asked to name a book (or books, or a paper) that has been important to them and to give their reasons for this. In this way, "classics" may be introduced to new audiences. In this issue, we ask recently retired HPM Newsletter editor Chris Weeks for his choice of book.

Lancelot Hogben, Mathematics for the Million, London, Allen & Unwin, 1936.

I was asked recently how I had become interested in the history of mathematics. I was always vaguely aware that mathematics and all science must have been developed over time but I owe a more specific awakening of interest in the history of mathematics to Hogben's *Mathematics for the Million*. I read it while starting the more advanced mathematics courses at school and for the first time I found a book about mathematics that was not a recipe book for manipulating mathematical expressions. (To be fair a little more than following rules is required for higher school mathematics, but not much more.) The striking thing about the book is that the mathematics is presented from the outset as an historical development. He says:

> The customary way of writing a book about mathematics is to show how each step follows *logically* from the one before without telling you what use there will be in taking it. This book is written to show how each step follows *historically* from the step before and what use it will be … [author's italics]

Hogben claims to assume in the reader no more than an elementary knowledge of mathematics and he certainly starts from number and simple geometry. But a familiarity with algebraic manipulation is necessary almost from the outset. By the end of the book we meet almost all the mathematics that was then part of advanced mathematics in British schools prior to university.



The book was published by Allen & Unwin, London in 1936 and when I read it about 20 years later copies were to be found in almost every public lending library. It was endorsed by H G Wells (‘a great book of first class importance’) and by Albert Einstein (‘makes alive the contents and elements of mathematics’). There was a new edition in 1968 and after going out of print it was surprisingly reissued in paperback format by the left wing publisher Merlin Press in 1995 but is no longer in their list. How does it stand the test of time?

The first thing I noticed on rereading it was the confident and optimistic tone of the writing. It is unashamedly Whiggish in style. Science has made enormous progress since the Stone Age and mathematics is the tool that allowed such progress. Hogben also claims that mathematics is essentially a language about size. It enables us to calculate and measure. He is dismissive of the Plato school of philosophical reflections about the nature of number. That line only leads to mysticism. Mathematics is no use unless it makes things happen. As far as Greek science is concerned, the centre is Alexandria and Hogben is careful enough to insist on the description Alexandrian and to point out that the only thing that the mix of peoples associated with Alexandria had in common was their use of the Greek language.

The book claims to teach mathematics through tracing its story of development. In fact it sets out to be a teaching book (the author advises us to have paper and pencil to hand). It is carefully constructed in terms of increasing levels of mathematical demands and starts with simple arithmetic and geometry and ends with applications of the calculus and a final chapter on statistics and probability. In keeping with its time, there is a quite a lot about the use of determinants but no appearance of a matrix.

For my part, when I used the book, it almost exactly mirrored what I was studying at school but with the advantage of a wider context, more interesting problems and some indication of history. In fact the economic or military stimuli to new mathematical discoveries is evident. But there was richer fare including a whole chapter on ‘Mathematics for the mariner’ which includes a description of the celestial sphere and an introduction to spherical geometry.

For its mathematical content, I would certainly recommend the book to any budding mathematician. Of course the reader has to

learn to read mathematics presented in a slightly unfamiliar way, but that's no bad thing. And the reward is a number of delights, including this instruction from the British Ministry of Agriculture and Fisheries (1935) on how to lay out a right angle for a plantation of fruit trees:

> The 24th link is pegged at the point from which the right angle is to be set out, the nought end of the chain and the 96th link are pegged together, back along the base line, so that the piece of chain 0-24 is taut. If the 56th link is taken in the direction required until both the sections 24-56 and 56-96 are taut, then the point reached will be at right angles to the base line.

So we have a 24:32:40 or 3:4:5 triangle. The reader of Hogben's day would know that standard land measurement used Gunter's chain of 100 links, where 1 chain is 22 yards (the length of a cricket pitch, as every schoolboy knew) and where, of course, 10 chains = 1 furlong and 8 furlongs = 1 mile. Today's reader may need to do a bit of research but Google is at hand and a calculator will make the helpful addition of logarithmic and trigonometrical tables in the book unnecessary (although it might be instructive to learn how to use them).

Finally, a word about Hogben himself, which would have impressed me even more had I known it at the time I read his book. Hogben, largely self-educated at Stoke Newington Public Library, was an experimental zoologist and medical statistician by trade. During the First World War he served as an ambulance driver for the Red Cross in France but after his decision to leave the Front and return to Cambridge he was imprisoned in 1916 as a conscientious objector. He married the mathematician and feminist Enid Charles, a statistician who worked on fertility rates. Both spoke against the then fashionable idea of eugenics. Hogben also wrote *Science for the Citizen* (1938), a companion book to *Mathematics for the Million* in the collection 'Primers for the Age of Plenty', a project which he edited and which was intended to encourage in his readers the self-education that he had valued in his youth. But both books, enormously popular as they were, were incidental to his main work in biology and statistics. The Hogben archive is housed at Birmingham University.

[For biographical information I have made free use of the Wikipedia entry for Lancelot Hogben]

Chris Weeks

Book reports

New book: History of Mathematics in Africa: AMUCHMA 25 Years

(Authors: Paulus Gerdes & Ahmed Djebbar, 924 pages in two volumes; Volume 1: 1986-1999 [ISBN 978-1-105-11807-4, 480 pp.]; Volume 2: 2000-2011 [ISBN 978-1-105-14100-3, 444 pp.]; Distribution by Lulu, Morriville NC, Published October 27, 2011)

The book reproduces the thirty-seven newsletters published by AMUCHMA (African Mathematical Union Commission on the History of Mathematics in Africa) since its birth in 1986. The book celebrates the 25 years of AMUCHMA by giving a vivid picture of the activities that took place, of the studies done, of the queries, of sources, of meetings, of lectures, of dissertations, of publications… At the end of the book are included country and name indices.

The book contains Prefaces written by Professor Saliou Touré (President of the African Mathematical Union), by Professors Craig Fraser and Elena Ausejo (Chair and Secretary of the International Commission for the History of Mathematics), and by Professor Eberhard Knobloch (President of the International Academy of the History of Science). Professors Aderemi Kuku (President [1986-1995] and Honorary President of the African Mathematical Union) and Jean-Pierre Ezin (Commissioner for Human Resources, Sciences and Technology of the African Union) wrote the Afterwords.

(text provided by the publisher)

Reports on new books are welcome.

Conference reports

Conference report: European perspectives in the use of history in mathematics education

In July 4th-6th, 2011 a Workshop was held in Nantes dealing with the developments of research in the field of the use of history in mathematics education, with particular reference to Europe. The participants were: Evelyne Barbin (France, president of HPM), Fulvia Furinghetti (Italy, past president of HPM, Tinne Hoff Kjeldsen (Denmark), Solène Mainterot (France), Maria Rosa Massa-Esteve (Spain), Guillaume Moussard (France), François Pineau (France), Leo Rogers (UK), Daina Taimina (Latvia-USA), Costas Tzanakis (Greece).

In some countries of Europe there is a solid tradition in the use of history in mathematics education. I just quote two significant cases. In France the net of IREMs (Instituts de Recherche sur l'Enseignement des Mathématiques) has fostered the production of good materials in the field (reprints of original sources, reports of activities in the classroom, teaching sequences) and the formation of a group of teachers with a remarkable expertise in history and its integration in their mathematics teaching. In UK the conferences HIMED (History In Mathematics Education) has gathered researchers and teachers to share their experience in the use of history and afterwards Prince' Teaching Institute har been organising a day for teachers every two years.

The creation of the European Summer Universities (ESU) in 1993 (the first was in Montpellier, France) has added a clear international character to the tradition in the use of history in mathematics education and has fostered the birth of a net of competences involving teachers, researchers in education, and historians. The proceedings are a landmark of the evolution of the approach to this use. The great power of the ESUs is the teachers' participation to the activities, which means to keep always the contact with teaching practice and to have a first hand feedback of the proposals put forwards by the researchers. The national and international financial restrictions sometimes make difficult the participation to ESUs for teachers (and for researchers), even if in many European countries the curricula encourage the introduction of the historical dimension in mathematics and science teaching.

According to the last decisions of the Program Committee, in the future the ESUs will take place between the two Satellite meetings of ICME. In the meeting of Nantes Maria Rosa Massa-Esteve (Centre de Recerca per a la Història de la Tècnica Matemàtica Aplicada I, ETSEIB, Universitat Politècnica de Catalunya, Barcelona, Spain) illustrated the progress in the preparation of ESU-7 to be held in Barcelona (possibly July 2014). This date avoids overlapping both with the Satellite meeting and with the conferences in the History of Mathematics Education that take place in the odd years.

As for the next ESU the situation is very promising: Barcelona is a beautiful town both from the historical and architectural point of view, an active group of researchers in the field linked to ESU is working in the University, a well known journal in the history of science and technology (Actes d'Història de la Ciència i de la Tècnica) is edited by members of this group. At the Nantes' meeting we have realized that the Local Programme Committee is enthusiastically working on preparing the next ESU, and we expect it to be a great event.

Fulvia Furinghetti.
Dipartimento di Matematica
dell'Università di Genova

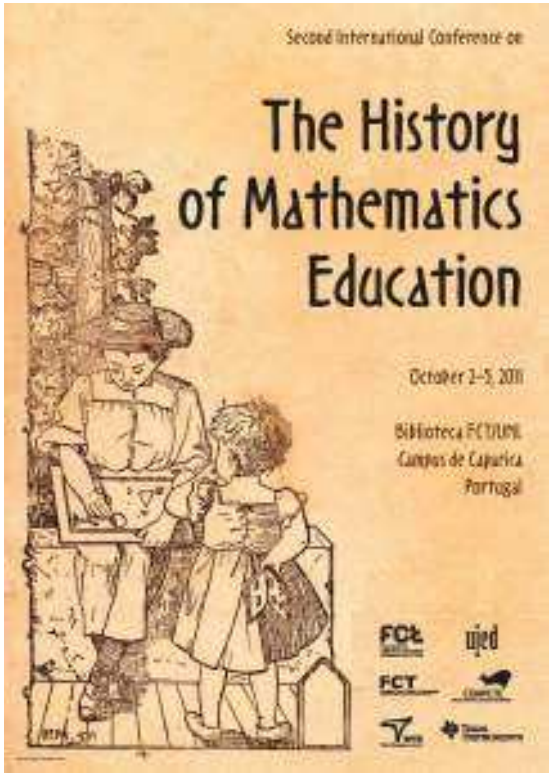
Conference report: Second International Conference for the History of Mathematics Education

The Second International Conference for the History of Mathematics Education was held in Lisbon, Portugal, October 2–5, 2011 at the Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa. A total of 35 papers from 40 contributors were presented at the conference. The themes were:

Policy and Mathematics Education – 9 papers

- U.S. Mathematicians and the New Math Movement, Jeremy Kilpatrick.
- Changes in exercise of power over school mathematics, Johan Prytz.
- Values and beliefs of a self-sustaining society as reflected in 18th and 19th century arithmetic textbooks in Iceland, Kristín Bjarnadóttir.
- Doing math or learning to count? Primary school mathematics facing the democratization of secondary education access in France, 1945-1985, Renaud d'Enfert.
- From the Few to the Many: Historical Perspectives on Who Should Learn Mathematics, Gert Schubring.

- Martha Dantas at Centre International d'Études Pédagogiques (Sèvres, 1953): an interpretation for historiography of Mathematics Education in Brazil, André Luís Mattedi Dias.
- The organization of mathematics teaching in Europe according Jules Houël (1823-86), François Plantade.
- Lessons in mathematics and astronomy in the court of Emperor Kangxi, Man Keung Siu, Qi Han.
- The Transposition of the foundational studies in Italian pedagogic debates, Erika Luciano.



Mathematics teachers – 5 papers

- American influence in math teacher training of primary education in Brazil, Wagner Rodrigues Valente.
- Supervising and monitoring: How the work of Mathematics teachers was checked and assessed in the Soviet Union between the 1930s and the 1950s, Alexander Karp.
- Forerunners of the Field: Mathematics Faculty and the Academic Climate for Mathematics Education in America during the 1890s, Eileen F. Donoghue.
- The mathematics teaching in the first years after the 1772 Reform of the University of Coimbra, Jaime Carvalho e Silva.
- Teaching mathematics in the Italian kingdom: missions and visions of secondary mathematics teachers, Fulvia Furinghetti.

The mathematics curricula – 4 papers

- An early attempt for the teaching of history of science. Paul Tannery, his program on history of science for the secondary school, and his chapters "Sciences" in the General History from the Fourth Century to the Present by Lavisse and Rambaud, François Pineau.
- Mathematics and the Dars-i-Niz.¹am¹³ Educational Reform in 18th Century India, Gregg De Young.
- La enseñanza de las matemáticas en la Ratio studiorum de los jesuitas, Jesús Paradinas
- Practical mathematics in 16th century England: Social-economic contexts and emerging ideologies in mathematical activity, Leo Rogers.

Methods of teaching – 3 papers

- The notion of method in 19th century French geometry textbooks, Guillaume Moussard.
- Mathematics education for orphans in the Dutch Republic; the Foundation of Renswoude in the eighteenth century, Jenneke Krüger.
- The Emergence of the Idea of the Mathematics Laboratory in the Early Twentieth Century, Livia Giacardi.

Reforms of Mathematics Teaching – 5 papers

- The making of mathematics curriculum: the case of Telescola in Portugal in the middle 1960s, Mária Cristina Almeida.
- Inventing modern mathematics: Early debates on mathematical curriculum reform in Belgium, Geert Vanpaemel, Dirk De Bock, and Lieven Verschaffel.
- Ernst Breslich's reform initiatives in the spirit of Felix Klein, João Bosco Pitombeira de Carvalho.
- Mathematics teaching and learning in the late 1970s in Portugal: intentions and implementations, José Manuel Matos.
- The First International Reform Movement and its failure in the Netherlands, Harm Jan Smid.

Teaching Arithmetic and Algebra – 3 papers

- Juan de Iciar practical arithmetic (1549): writing and counting in Spanish renaissance, Elena Ausejo.
- Rational approaches to arithmetic and real numbers in the Italian programmes for the scientific curricula, Marta Menghini.
- Historical research in mathematics education: the case of the metric system in Spain, Miguel Picado, Luis Rico.

Teaching geometry – 3 papers

- Teaching of conics in 19th and 20th centuries in France: what changes for what conceptions of geometrical teaching? Evelyne Barbin.
- The rise and fall of 'Reality Geometry', a contribution to the History of Geometry in Danish schools 1900-1960, Hans Christian Hansen.
- Descriptive Geometry and the Polytechnic Schools – the origin and spread of an idea, Snezana Lawrence.

Textbooks – 3 papers

- Measure and Metric System in Portuguese Primary School. Textbooks, between XIX and XX centuries, Ana Amaral, Alexandra Gomes, Elfrida Ralha.
- A controversy about geometry textbooks in Norway 1835–36, Andreas Christiansen
- A Course of Mathematics (1798-1841): The American story of an English textbook, Thomas Preveraud.

On the second day of the conference a splendid exhibition of Portuguese mathematics textbooks was opened. The organization of the conference allowed lively discussions after each presentation and in coffee- and lunch-breaks. A strong fellowship was gradually felt among the participants who presented many generations of researchers, veterans as well as doctoral students and post-doctoral fellows.

The leader of the local organizing group was José Manuel Matos, professor and leader of the research centre Unidade de Investigação Educação e Desenvolvimento at the Universidade Nova de Lisboa. The organizing committee of the conference comprised José Manuel Matos, Fulvia Furinghetti, Gert Schubring and Kristín Bjarnadóttir. Proceedings will be issued in spring 2012. The participants hope to be able to follow up the fellowship by a third conference on the history of mathematics education, preferably in Sweden in 2013.

The first specialized international research conference entitled "On-going Research in the

History of Mathematics Education" took place in Iceland, June 20–24, 2009, see a report by Furinghetti (2009). The themes treated in the conference were: Geometry teaching, Interdisciplinarity and contexts, Method, Modern mathematics, Movements in the development of mathematics education in specific countries, Practice, The internationalization of education with particular reference to the ICMI and Transmission. Proceedings of the first conference (Bjarnadóttir, Furinghetti & Schubring, 2009) are still available at the University of Iceland, School of Education, email: boksalakenno@hi.is.

References

Bjarnadóttir, Kristín, Furinghetti, Fulvia, & Schubring, Gert (Eds.) (2009). *"Dig where you stand". Proceedings of the conference on On-going research in the History of Mathematics Education.* Reykjavik: University of Iceland – School of Education.

Furinghetti, Fulvia (2009). On-going research in the history of mathematics education. *International Journal for the History of Mathematics Education*, 4 (2), 103-108.

Kristin Bjarnadottir

The editors welcome reports from conferences.

Work in progress

We encourage young researchers in fields related to *HPM* to send us a brief description of their work in progress or a brief description of their dissertation.

Become a *Convergence* Consumer and Contributor!

Convergence is the Mathematical Association of America's free online journal about the history of mathematics and its use in teaching. Serving teachers and students of mathematics at both the secondary and collegiate levels, we emphasize the history of topics from grades 8-14 mathematics: algebra, combinatorics, synthetic and analytic geometry, trigonometry, probability and statistics, elementary functions, calculus, differential equations, and linear algebra.

We encourage you to visit *Convergence* at http://mathdl.maa.org/mathDL/46/ to see the many features the journal has to offer, including:

- Mathematical Treasures = digital images of mathematical objects and texts for use in your classroom
- Featured Items = our newest articles and classroom activities
- On This Day in Mathematics History
- Problems from Another Time
- Quotations about mathematics and its history
- Calendar of upcoming mathematics history events
- Reviews of books, websites, and other instructional materials
- What's in Convergence? = Tables of Contents for all eight volumes (2004-2011) of *Convergence*

Be sure to keep your eye on *Convergence* for a new feature to debut in autumn of 2011, the Paul R. Halmos Photograph Collection. The MAA History of Mathematics Special

Interest Group is funding digitization of the large collection of photos Halmos snapped of mathematicians during his lifetime.

We invite you not only to read *Convergence* and use it in your classes, but also to submit for publication articles of the following types.

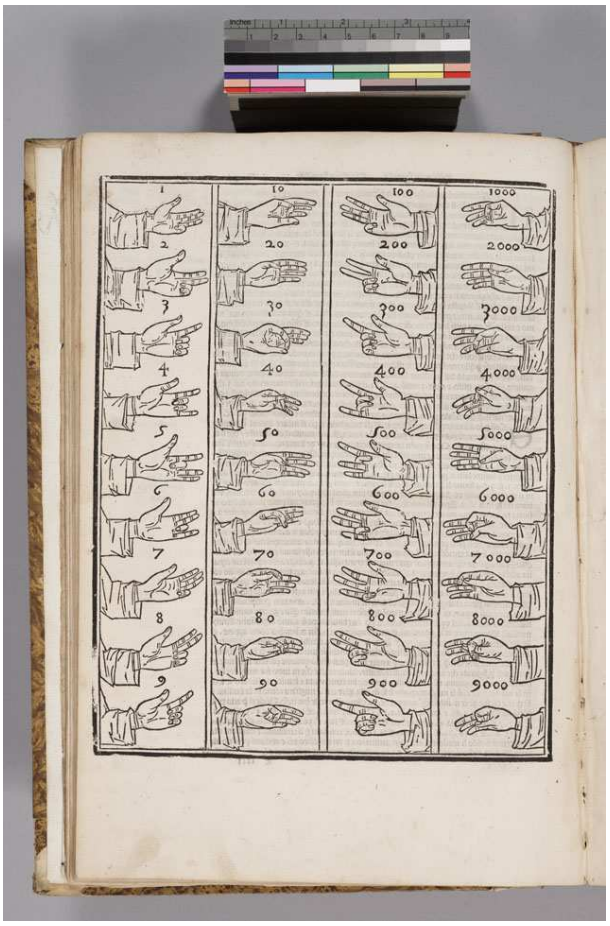
- Expository articles on the history of topics in the grades 8-16 mathematics curriculum
- Translations of original sources appropriate for grades 8-16
- Classroom activities, projects, or modules for grades 8-16
- Classroom testimonials describing your experiences using a particular teaching aid, article, book, or website
- Reviews of books, articles, teaching aids, and websites
- Announcements of conferences and events for our Calendar

For further details, please read "Guidelines for *Convergence* Authors" at the *Convergence* homepage or contact the Editors.

Convergence founding editors Victor Katz and Frank Swetz continue to serve the journal as advisors and as authors of the ongoing "Mathematical Treasures" project. The current editors are Janet Beery (janet_beery@redlands.edu) of the University of Redlands and Kathy Clark (kclark@fsu.edu) of Florida State University. *Convergence* is now part of *Loci*, the online journal of the MAA's Mathematical Sciences Digital Library (MathDL). The *Loci* editor is Tom Leathrum of Jackson State University and the MathDL editor is Lang Moore of Duke University.

Captions:

This page from al-Khwarizmi's algebra text, *Kitab al-jabr wa l-muqabala*, depicts and describes his method of "completing the square." Al-Khwarizmi wrote his text in about 825; the date of this copy is not known. (Photo from "Mathematical Treasures," *Convergence*, is used courtesy of the Columbia University Library George Arthur Plimpton Collection.)



This depiction of finger counting is from Luca Pacioli's (1445-1509) *Summa de arithmetica, geometrica, proportioni et proportionalita*, published in 1494. The *Summa* was the most comprehensive mathematical text of its time and one of the earliest printed mathematical works. (Photo from "Mathematical Treasures," *Convergence*, is used courtesy of the Columbia University Library.)

This classic depiction of Arithmetic supervising a contest between Boethius, performing written calculation using Indo-Arabic numbers, and Pythagoras, using a counting board, is from the *Margarita philosophica* (*Pearl of Wisdom*) of Gregor Reisch (1467-1525), first published in 1503. (Photo from "Mathematical Treasures," *Convergence*, is used courtesy of the Columbia University Library.)

Janet Beery,
University of Redlands
Kathy Clark,
Florida State University

Have you read these?

Acerbi, F. (2011). The geometry of burning mirrors in Greek antiquity. Analysis, heuristic, projections, lemmatic fragmentation. Archive for History of Exact Sciences, 65(5), 471-497.

Barany, M. J. (2011). God, king, and geometry: revisiting the introduction to Cauchy's Cours d'analyse. Historia Mathematica, 38(3), 368-388.

Britton, J. P.; Proust, C.; Shnider, S. (2011). Plimpton 322: a review and a different perspective. Archive for History of Exact Sciences, 65(5), 519-566.

Bruno, G.; Genovese, A.; Improta G. (2011). Routing problems: a historical perspective. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 26(2), 118-127.

Cogliati, A. (2011). On the genesis of the Cartan–Kähler theory. Archive for History of Exact Sciences, 65(4), 397-435.

D'Ambrosio, U. (2011). *Uma História Concisa da Matemática no Brasil* [A Concise History of Mathematics in Brazil]. Editora Vozes; ISBN 978-85-326-3691-1 (Brazil).

Dauben, J. W. (2011). Personal Reflections on Dirk Jan Struik. The Mathematical Intelligencer 33(2): 36-41.

Dean, A. S. (2011). An investigation of pedagogical techniques in Descartes' La géométrie. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 26(3), 167-177.

Decesare, R. (2011). William Ludlam: portrait of an eighteenth-century mathematician. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 26(2), 105-117.

Ehrhardt, C. (2011). A quarrel between Joseph Liouville and Guillaume Libri at the French Academy of Sciences in the middle of the nineteenth century. Historia Mathematica, 38(3), 389-414.

Fellner, H. G.; Lindgren, W. F. (2011). Gustav Theodor Fechner: Pioneer of the Fourth Dimension. The Mathematical Intelligencer 33(3): 126-137.

Hersh, R. (2011). Paul Cohen and Forcing in 1963. The Mathematical Intelligencer 33(3): 138-140.

Jankvist, U. T. (2011). Anchoring Students' Metaperspective Discussions of History in Mathematics. Journal for Research in Mathematics Education, 42(4), 346.

Johansson, G. (2011). Cube root extraction in medieval mathematics. Historia Mathematica, 38(3), 338-367.

Lawrence, S. (2011). Dee and his books: lessons from the history of mathematics for primary and middle school teachers. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 26(3), 160-166.

Monteferrante, S. (2011). Maya mathematics. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 26(2), 71-79.

Nauenberg, M. (2011). Proposition 10, Book 2, in the Principia, revisited. Archive for History of Exact Sciences, 65(5), 567-587.

Pambuccian, V.; Zamfirescu, T. (2011). Paolo Pizzetti: The forgotten originator of triangle comparison geometry. Historia Mathematica, 38(3), 415-422.

Rampling, J. M. (2011). The Elizabethan mathematics of everything: John Dee's 'Mathematicall praeface' to Euclid's Elements. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 26(3), 135-146.

Silva, J. N. (2011). On mathematical games. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 26(2), 80-104.

Smadja, I. (2011). Des méthodes d'intégration par arcs de sections coniques aux échelles de modules. Legendre lecteur de Landen. Archive for History of Exact Sciences, 65(4), 343-395.

Szász, D. (2011). John von Neumann, the Mathematician. The Mathematical Intelligencer 33(2): 42-51.

Taylor, K. (2011). Vernacular geometry: between the senses and reason. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 26(3), 147-159.

Unal, Hasan; Oral, H. K. (2011). Extending al-Karaji's Work on Sums of Odd Powers of Integers. Loci: Convergence (August 2011).

Yazdi, H.-R. G. (2011). Al-Khwārizmī and annular solar eclipse. Archive for History of Exact Sciences, 65(5), 499-517 and 589.

Announcements of events

IX Jornada sobre la Història de la Ciència i l'Ensenyament

[Ninth Workshop on the History of Science and Teaching]

November 18-19, 2011
Barcelona, Spain

The Catalan Society for the History of Science (SCHCT) will hold the Ninth Workshop on the History of Science and Teaching.

The main aims of this workshop are:

- Discuss issues on the relationship between history of science and teaching.
- Encourage communication and collaboration between teachers and historians of science.
- To find resources and experiences on the implementation of the history of science in education.

The organizing committee calls for papers in the following thematic areas:

- History of science in the classroom
- The matching of history of science to the educational curriculum.
- Research done by high school students in the history of science.
- The role of IT in the use of history of science in science education.
- The material culture of science in science teaching.

Details about the workshop can be found at the web site http://ixjornadahcie.weebly.com/.

National Seminar on the History and Cultural Aspects of Mathematics Education (India)

December 2-3, 2011
New Delhi, India

The NATIONAL SEMINAR ON THE HISTORY AND CULTURAL ASPECTS OF MATHEMATICS EDUCATION will be organized by Sir C.V. Raman, Chair for Science and Math Education, Indira Gandhi National Open University, Maidan Garhi, New Delhi at the Convention Centre of the same university, 2-3, December, 2011. The goal is to look at the important historical movements, innovations and efforts to improve the teaching and learning of mathematics in school and at the tertiary level throughout India over the last two centuries. Further, it aims to focus on the social, cultural and economic influences on mathematics learning and learners in India. Those interested should contact pksinclair@ignou.ac.in.

(data taken from ICMI News).

Creating Balance in an Unjust World: Conference on Math Education and Social Justice

January 13-15, 2012
San Francisco, United States

http://creatingbalanceconference.org/

Conference themes:

- Social justice in the mathematics classroom
- Mathematics literacy as "gatekeeper"
- Ethnomathematics

Call for papers – TSG 35 (The history of the teaching and learning of mathematics)

July 8-15, 2012
Seoul, South Korea

Announcement of ICME 35 Topic Study Group 35 - The history of the teaching and learning of mathematics

Please note that the **proposal submission deadline has been postponed**. The new deadline of TSG proposal submission is: **November 30, 2011**.

The deadline of TSG notification of acceptance stands as it is:
January 15, 2012
Notification of acceptance

April 10, 2012
On-line submission of final draft

12th International Congress on Mathematical Education (ICME-12), to be

held JULY 8-15, 2012, Coex, Seoul, Korea http://www.icme12.org/.

Aims of TSG35 at ICME-12.

History of mathematics teaching and learning is relatively new as a subject of international attention and research, but it is developing actively and dynamically. It became visible for the first time at ICME 10 in 2004 at Copenhagen, as the TSG29. The success and energy of these activities led to the launching of the first international journal devoted to this field of study, the International Journal for the History of Mathematics Education, which has been published since 2006. History of mathematics education then became a subject in various international meetings, for instance at the ESU-5 in Prague in 2007, ESU-6 in Vienna in 2010, and at the CERME meetings. During the TSG38 at ICME-11 in Monterrey, research into this subject proved its productivity again, with papers presented on the history of the reform movements, on the analysis of classical textbooks, and on historical practice (inside and outside institutions). Recently, specialized international research symposia took place in Iceland and in Portugal.

On the occasion of ICME-10, a first international bibliography of research in the field was prepared.

The bibliography is now retrievable at the following address:

http://www.icme-organisers.dk/tsg29/BiblTSG.pdf

This bibliography outlined streams in research: transmission and socio-cultural reform movements; aspects of teaching practice (textbooks, methods, teacher professionalization); cultural, social and political functions of mathematics instruction; and comparative studies.

Possible themes to be treated are HISTORY of:

- changes of curricula in the various countries
- changes of mathematics education as a professional independent discipline
- the cultural and social role of mathematics
- policies in teacher education
- changes and roles of teachers' associations
- the situation of journals on mathematics education
- the role of textbooks in the teaching and learning of mathematics
- general trends in the organizing of the lesson
- the overall impact of digital technologies in the learning and teaching of mathematics
- treatment of particular topics (geometry, algebra, etc.)
- interdisciplinarity and contexts
- reforms movements
- methods

Organization of the TSG35

At ICME-12, the TSGs will have four one and a half hour timeslots at their disposal. This makes TSGs the prime forum for participation.

On the website of ICME-12 it will be possible to follow the planning process and eventually access all relevant documents including the timetable for TSG sessions. Participants who would like to present papers in TSG35 are requested to communicate with the team chairs. The TSG teams are responsible for establishing a scheme for paper presentation by distribution. Proposals for contributions should be put forward no later than November 1, 2011. If the proposal is accepted, the final draft should be submitted through on-line no later than April 10, 2102.

To join the group:

The organizing team welcomes significant contributions related to the topics outlined here and to other related issues. Participants are requested to submit a paper to the two team chairs not later than November 1, 2011 via e-mails. The length of the paper should be between 1500 and 2000 words.

Team chairs:

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Liaison:

Evelyne Barbin **(**France)
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Deadline Summary

November 30, 2011
Proposal submission

January15, 2012
Notification of acceptance

April 10, 2012
Submission of Final Draft

Endnotes:

For general congress information
http://www.icme12.org/.
Information about the group is published at the conference site.

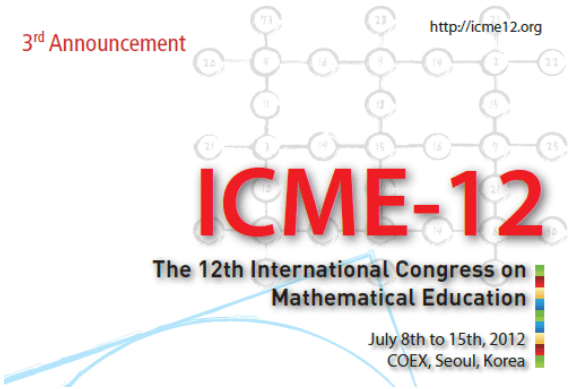
ICME 12

July 8–15, 2012
Seoul, South Korea

http://www.icme12.org/

Participants will find useful information about every aspect of the Congress in this site. The web page is being constantly updated in order to keep participants and interested people informed.

3rd announcement
http://icme12.org/data/3rd_Announcement.pdf



Congress Period and Venue

The Congress is to be held on July 8th to 15th in 2012. All of the Congress activities will take place at the COEX (Convention & Exhibition Center) in Seoul, Korea. COEX, World Trade Center, 159 Samsung-dong,Gangnam-gu, Seoul 135-731, Korea

Important Addresses

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Local Organizing Committee, Chair
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Important Deadlines

Submission of Proposals

Topic Study Group (TSG)
November 30, 2011

Workshops & Sharing Group (WSG)
November 30, 2011

Posters
December 15, 2011

Notification of Acceptance

WSG Acceptance
December 31, 2011

TSG and Posters
January 15, 2012

ICME-12 Grants

Application
February 15, 2012

Notification to Grantees
March 1, 2012

Submission of Final Paper and Description of Programme Items
April10, 2012

Registration Fee

Category	Before April 1, 2012	Before June 1, 2012	From June 2, 2012
General	USD 400	USD 450	USD 500
HPM or MCG Participant	USD 320	USD 360	USD 400
Accompanying Person		USD 130	

What is ICME?

The International Congress on Mathematical Education (ICME) is held every four years under the auspices of the International Commission on Mathematical Instruction (ICMI). It is, however, planned and organized by separate committees, which operate independently of the ICMI: The International Program Committee (IPC), The Local Organizing Committee (LOC), and National Advisory Committee (NAC).
The aim of the Congress is to present the current state of and trends in mathematics education research and in the practice of mathematics teaching at all levels. The Congress will gather a broad spectrum of participants such as researchers in mathematics education, teacher trainers,

practicing teachers, mathematicians and others interested in mathematics education.

The objectives of the ICME are:

- to show what is happening in mathematics education worldwide, in terms of research as well as teaching practices,
- to inform about the problems of mathematics education around the world,
- to learn and benefit from recent advances in mathematics education as a discipline,
- to exchange information on the problems of mathematics education around the world,
- to introduce exemplary cases of domestic classrooms (teaching) in mathematics education, which contributes to improvement of mathematics education around the world or vice versa,
- to improve the quality and professionalism of domestic mathematics teachers through introduction of exemplary cases in mathematics education worldwide.

Topic Study Groups

A Topic Study Group is designed to gather a group of congress participants who are interested in a particular topic in mathematics education. For ICME-12, the Topic Study Group is the major arena for participation. Participants are expected to associate themselves with one TSG and to stay in that group for all four sessions.

The word 'study' suggests that the activities of the groups will include presentations and discussions of important new trends and developments in research or practice related to the topic under consideration. Each TSG will be organised by a team of five to six. Two co-chairs have been appointed for each team. Each TSG will include a local member, who, as well as being a member of the team, will be the liaison with the Local Organising Committee for practical issues.

The purpose of the TSGs is to provide a forum for presentations and discussion on the current state-of-the-art in the topic, seen from an international perspective. One of the special features of ICME is that it is a place where different perspectives are welcomed and can cross-pollinate each other. By their very nature, some of the topics are focused more on research than on practice. For others the opposite will be the case, whereas several topics will have a fairly equal balance of the two.

At ICME-12, the TSGs will have four one and a half hour timeslots at their disposal. This makes TSGs the prime forum for participation. Organising teams are therefore asked to ensure that all participants who submit a contribution are given some way of making a presentation. It is recognised that some submissions are of higher quality than others, and hence may be given more time within the group. But everyone attending ICMI has a right to make a presentation of some kind, be it short oral or poster and the TSG is the only forum available. The International Programme Committee (IPC) may be consulted by Co-chairs who are having difficulty meeting this requirement.

Each TSG organising team will have the responsibility of updating the web site linked to the congress website. The web sites of each TSG will be opened in the middle of May. On this site it will be possible to follow the

planning process and eventually access all relevant documents including the timetable for TSG sessions. Participants who would like to present papers in a TSG are requested to communicate with the team chairs. The TSG teams are responsible for establishing a scheme for paper presentation by distribution, see “How to contribute”. Typically proposals should be put forward no later than November 1, 2011, but specific guidelines, if such apply, will be made available on the web site. If the proposal is accepted, the final draft should be submitted through on-line no later than April 10, 2012.

The themes

TSG 1: Mathematics education at preschool level
TSG 2: Mathematics education at tertiary level and access to tertiary level
TSG 3: Activities and programs for gifted students
TSG 4: Activities and programs for students with special needs
TSG 5: Mathematics education in and for work
TSG 6: Mathematics literacy
TSG 7: Teaching and learning of number systems and arithmetic - focusing especially on primary education
TSG 8: Measurement - focusing especially on primary education
TSG 9: Teaching and learning of algebra
TSG 10: Teaching and learning of geometry
TSG 11: Teaching and learning of probability
TSG 12: Teaching and learning of statistics
TSG 13: Teaching and learning of calculus
TSG 14: Reasoning, proof and proving in mathematics education
TSG 15: Problem solving in mathematics education
TSG 16: Visualization in the teaching and learning of mathematics
TSG 17: Mathematical applications and modelling in the teaching and learning of mathematics
TSG 18: Analysis of uses of technology in the teaching of mathematics
TSG 19: Analysis of uses of technology in the learning of mathematics
TSG 20: The role of history of mathematics in mathematics education
TSG 21: Research on classroom practice
TSG 22: Learning and cognition in mathematics
TSG 23: Mathematical knowledge for teaching at primary level
TSG 24: Mathematical knowledge for teaching at secondary level
TSG 25: In-services education, professional development of mathematics teachers
TSG 26: Preservice mathematical education of teachers
TSG 27: Motivation, beliefs and attitudes towards mathematics and its teaching
TSG 28: Language and communication in mathematics education
TSG 29: Gender and mathematics education
TSG 30: Mathematics education in a multilingual and multicultural environment
TSG 31: Task design and analysis
TSG 32: Mathematics curriculum development
TSG 33: Assessment and testing in mathematics education

TSG 34: The role of mathematical competitions and other challenging contexts in the teaching and learning of mathematics
TSG 35: The history of the teaching and learning of mathematics
TSG 36: The role of ethnomathematics in mathematics education
TSG 37: Theoretical issues in mathematics education

TSG 20: The role of history of mathematics in mathematics education

Co-chairs:
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Liaison IPC Member:
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Aim of TSG 20

The aim of TSG 20 is to provide a forum for participants to analyse issues related to the introduction of a historical dimension in mathematics education. The introduction of such a dimension involves three different areas: mathematics, history and didactics. This TSG aims to find and elaborate on a harmonious, balanced and effective interrelationship among these three scientific areas in a way that is enlightening and fruitful in mathematics education. It is expected that participants will share their ideas and classroom experience in connection with the following main issues:

- Theoretical and/or conceptual frameworks for including history in mathematics education
- The role of the history of mathematics in pre- and in-service teacher education
- The role of the history of mathematics at school
- Original sources in the classroom, and their educational effects
- Design and/or assessment of teaching/learning materials on using history in mathematics education

TSG 35: The history of the teaching and learning of mathematics

Co-chairs:
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Aim of TSG 35

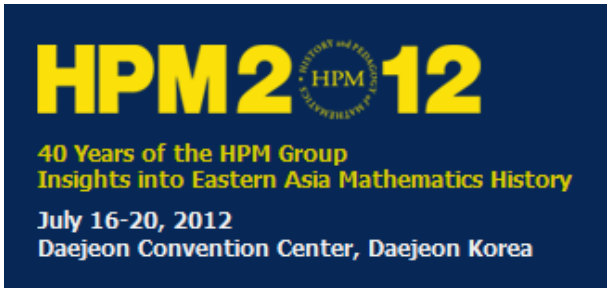
History of mathematics teaching and learning is relatively new as a subject of international attention and research, but it is developing actively and dynamically. It became the first time visible at ICME 10, in 2004, at Copenhagen, as the TSG 29. The success and dynamics of these activities lead to the

launching of the first international journal devoted to this field of study, the International Journal for the History of Mathematics Education, published since 2006. History of mathematics education became then a subject in various international meetings, for instance at the ESU 5 in Prague, in 2007, and at the CERME meetings. As TSG 38 at ICME 11, in Monterrey, research into this subject proved its productivity again, with papers presented on the history of the reform movements, on the analysis of classical textbooks and of historical practice. Recently, the first specialized international research symposium took place, in Iceland, featuring in particular methodological issues.

On the occasion of ICME 10, a first international bibliography of research in the field was prepared. The bibliography is now retrievable at the following address:

http://www.icme-organisers.dk/tsg29/BiblTSG.pdf.

This bibliography outlined streams in research: transmission and socio-cultural reform movements; aspects of teaching practice (textbooks, methods, teacher professionalizations); cultural, social and political functions of mathematics instruction; and comparative studies.



Second announcement HPM 2012

July 16–20, 2012
Daejeon, South Korea

1. Aim and focus

The HPM 2012 is the eighth quadrennial meeting of the International Study Group on the Relations between the History and Pedagogy of Mathematics (the HPM Group), affiliated to ICMI. It is a satellite meeting of the corresponding ICME (International Congress on Mathematical Education) and is scheduled close to ICME. These quadrennial meetings are a major activity of HPM, to bring those together who are interested in the relation between the history of mathematics and mathematics education such as:

- Researchers in mathematics education, and its relation to the history of mathematics;
- Mathematics teachers at all levels who are eager to get insights on how the history of mathematics may be integrated into teaching and help students to learn mathematics;
- Historians of mathematics, who wish to talk about their research;
- Mathematicians, who want to learn about new possibilities to teach their discipline;
- All those with an interest in the history of mathematics and pedagogy.

2. Main themes

The HPM 2012 is a place where mathematicians, educators, historians, researchers and students can make presentations and participate in discussions.

The programme and activities are structured around the following main seven themes:

1. Theoretical and/or conceptual frameworks for integrating history in mathematics education;
2. History and epistemology implemented in mathematics education: classroom experiments & teaching materials;
3. Original sources in the classroom, and their educational effects;
4. Mathematics and its relation to science, technology and the arts: historical issues and educational implications;
5. Cultures and mathematics;
6. Topics in the history of mathematics education;
7. Mathematics from Eastern Asia.

3. Activities during HPM 2012

During HPM 2012 there will be

- one-hour plenary lectures on each of the seven main themes
- two one-hour panel discussions
- parallel sessions of 25-minute oral presentations, followed by 5-minute discussions
- poster exhibitions with discussion sessions
- exhibitions of books and other didactical material
- one day or half-day excursion

A limited number of 1-hour workshops may be included in the program upon special request to be further considered by the Organizers. In such cases, participants are actively participating in studying a specific subject and having a follow-up discussion. The role of the workshop organizer is to prepare, present and distribute the historical, or didactical material, which motivates and orients the exchange of ideas and the discussion among the participants. Participants read and work on the basis of this material (e.g. original historical texts, didactical material, students' worksheets etc).

4. Invited speakers

- Tinne Hoff Kjeldsen (Denmark): "Uses of history for the learning of and about mathematics: towards a theoretical framework for integrating history of mathematics in mathematics education."
- Tsang-Yi Lin (Taiwan): "Using History of Mathematics in High School Classroom: Some Experiments in Taiwan."
- Janet Barnett (USA): "Bottled at the Source: The Design and Implementation of Classroom Projects for Learning Mathematics via Primary Historical Sources."
- Dominique Tournès (France): "Mathematics of the 19th century engineers: methods and instruments."
- Ubiratan d'Ambrosio (Brazil): "Mind and Hand: the complexity and diversity of mathematics in different cultural environments."
- Johan Prytz (Sweden): "Social structures in mathematics education. Researching the history of mathematics education with theories and methods from sociology of education."
- Sung Sa Hong (Korea): "Theory of Equations in the history of Chosun Mathematics."

5. Panels

Panel 1: "Why do we require a "history of mathematics" course for mathematics teacher candidates?":

Kathy Clark (USA) coordinator,
Funda Gonulates (Turkey),
Maria Rosa Massa (Spain),
Frédéric Métin (France).

Panel 2: "Empirical research on history in mathematics education: future challenges for our field":

Uffe Thomas Jankvist (Denmark) coordinator,
Yi-Wen Su (Taiwan),
Isoda Masami (Japan),
David Pengelley (USA).

6. Time and place

HPM 2012 will be held from **Monday 16 July** to **Friday 20 July 2012** in **Daejeon, Korea**.

Sessions will be held on Monday, Tuesday, Thursday and Friday with a cultural tour on Wednesday.

ICME-12 will be held from **Sunday 8 July** to **Sunday 15 July 2012** in **Seoul, Korea**. Its scientific program includes oral presentations and activities on the history and pedagogy on mathematics and on the history of mathematical teaching. It is planned that these activities will take place in the end of this meeting and that a special price for inscriptions will be granted to those who will participate to both ICME-12 and HPM 2012.

7. Official Languages

The official languages are English and Korean.

More specifically:

- All plenary talks and panel discussions will be in English with simultaneous translation if possible.

- Oral presentations will be given in either English, or Korean. For presentations in Korean a second set of transparencies should be, utilizing either two projectors and screens, or two power point computers.

- Chinese and Japanese languages are also acceptable if transparencies are written in English or Korean. (LOC will try to translate them in English.)

8. Submission of proposals

ABSTRACTS

Oral presentations and Workshops

30 November 2011:
deadline for submitting Abstracts
31 December 2011:
notification of acceptance

Posters and Exhibitions

31 December 2011:
deadline for submitting Abstracts
31 January 2012:
notification of acceptance

Note: For abstracts, we recommend English version but Chinese, Japanese, or Korean versions are acceptable. (LOC will translate them in English for review).

Important: Please, use the Application Form and send it in electronic form both to

Evelyne BARBIN, Chair of HPM 2012
email: evelyne.barbin@wanadoo.fr
Sunwook HWANG, Co-chair
e-mail: shwang@ssu.ac.kr
Constantinos TZANAKIS, Co-chair
e-mail: tzanakis@edc.uoc.gr.

The members of the Scientific Program Committee (SPC) will review the submitted abstracts. At this stage, acceptance of a proposal means that the proposed activity will be included in the HPM 2012 Scientific Programme. It is planned to have the proceedings ready at the meeting. For more details, see Proceedings.

9. The (international) Scientific Program Committee (SPC)

- Abraham Arcavi, Weizmann Institute of Science, Israel
- Evelyne Barbin, IREM-Centre François Viète, Université de Nantes, France
- George Booker, Griffith University, Brisbane, Australia
- Renaud Chorlay, IREM, University of Paris 7, France
- Ubiratan d'Ambrosio, Pontificia Universidade, Catolica de São Paulo, Brazil
- Carlos Correia de Sà, Departamento de Matemática Pura da Faculdade de Ciências da Universidade do Porto, Portugal
- Abdellah El Idrissi, Ecole Normal Supérieure, Morocco
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- Fulvia Furinghetti, Department of Mathematics, Universita di Genova, Italy
- Wann-Sheng Horng, National Taiwan Normal University, Taiwan
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- Kathy Clark, Florida State University, Tallahassee, USA
- Manfred Kronfellner, Institut für Algebra & Computermathematik, Technische Universität Wien, Austria
- Ewa Lakoma, Institute of Mathematics, Military University of Technology, Warsaw, Poland
- Snezana Laurence, Bath Spa University, Bath, UK
- Luis Radford, Ecole des Sciences de l' Education, Laurentian University, Canada
- Tatiana Roque, Universidade Federal do Rio de Janeiro, Brazil
- Leo Rogers, Roehampton University, Digby Stuart College, Roehampton University, UK
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- Gert Schubring, Institut für Didaktik der Mathematik, Universität Bielefeld, Germany
- Man Keung Siu, Department of Mathematics, University of Hong Kong, China
- Bjørn Smestad, Faculty of Education, Oslo University College, Norway
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- Constantinos Tzanakis, Department of Education, University of Crete, Rethymnon, Greece
- Jankvist Uffe, Department of Science, Roskilde University, Denmark
- Jan van Maanen, Freudenthal Institute, University of Utrecht, The Netherlands
- Chris Weeks, Downeycroft, Virginstow Beaworthy, UK

The Local Organizing Committee (LOC)

- Sunwook Hwang. chair, Department of Mathematics, Soongsil University, Seoul, Korea.

- Sangki Choi. vice-chair, Department of Mathematics Education, Konkuk University, Seoul, Korea.
- Jinho Kim. secretary, Department of mathematics Education, Daegu National University of Education, Daegu, Korea.
- Sung Sook, Kim. Department of Applied Mathematics, Pai Chai University, Daejeon, Korea.
- Cheong-Soo Cho. Department of Mathematics Education, Yeungnam University, Kyungsan, Korea.
- Kyeonghye Han. Department of Mathematics, Soonchunhyang University, Asan, Korea.
- Wooseok Jang. Department of Mathematics, Sook Myung Girls' High School, Seoul, Korea.
- Sang Sook, Choi-Koh. Department of Mathematics Education, Dankook Univesity, Yongin, Korea.
- Youngmee Koh. Department of Mathematics, The University of Suwon, Suwon, Korea.

The web site

Making known the HPM 2012 in various countries is a major task to be realized by the SPC. To this end, a web site is available at http://www.hpm2012.org.

This is going to be a very efficient tool to make known the HPM 2012 worldwide, allowing online registration etc.

9. Proceedings

Publishing the Proceedings of HPM 2012 is also a major task, and will be available in the meeting.

Each submitted full text for an oral presentation or a workshop will be reviewed by members of the SPC at the usual international standards.

More details on the size of the texts, the format guidelines will be announced in due course from the HPM 2012 and HPM websites, respectively;

http://www.hpm2012.org
http://www.clab.edc.uoc.gr/hpm/.

Oral presentations and Workshops

31 January 2012: **deadline** for submitting Full Texts

20 March 2012: notification of acceptance or not of the submitted texts.

Posters and Exhibitions

15 February 2012: **deadline** for submitting Full Texts

31 March 2012: notification of acceptance or not of the submitted texts.

Note:

- For Full Texts, we recommend English or Korean version (official), but Chinese and Japanese texts are acceptable. (For the latter case, presentation material such as power point materials should be written in English or Korean.)

- All types of Final Draft must be submitted no later than **30 April 2012**.

11. Registration fee

Early registration (before 1 April 2012):
180$ (students 90$)
Regular registration (before 1 June 2012):
230$ (students 130$)
Registration from 1 June 2012, or on the spot:
270$ (students 160$)

Notes:

- On-line registration by credit card on HPM 2012 web site www.hpm2012.org will be available from November 1, 2011.
- In case of paying by Bank Check or Money Order, please contact Sunwook Hwang (shwang@ssu.ac.kr), co-chair of HPM 2012.

- If registering both of ICME-12 and HPM 2012, registration fee of ICME-12 will be discounted by 20%.
- Cancellation of registration can be made through the web site. All cancellation must be made before June 15 and cancellation fee, 20% of the amount paid, will be deducted.

12. Accommodation

Toyoko-Inn Daejeon Government Complex
(http://www.toyoko-inn.com/e_hotel/00234/index.html)

Room Type	Price (including tax)	Maximum Number of Rooms
Single Room	₩60,500	92
Double Room	₩82,500	75
Twin Room	₩82,500	84
Deluxe Twin Room	₩108,900	43

Note:
- All prices include breakfast.
- Current exchange rate (Sept 26, 2011)
  1US$ = ₩1,190; 1EURO = ₩1,602
- Free shuttle service between DCC and Toyoko-Inn during the Conference. (10 minutes)

Dormitory of Chungnam National University

- Room Type: 2 persons in 1 Room
- Rates based on 7 Nights and 10 Meals.

Number of Guests	Price (including tax)	Least Number of Rooms
1 person	₩201,700	30
2 persons	₩123,650 per person	50

Note:
- Current exchange rate (Sept 26, 2011)
  1US$ = ₩1,190; 1EURO = ₩1,602
- Free shuttle service between DCC and the University during the Conference, which depends on the number of guests, will be available. (20 minutes)
- In case of applying the dormitory, please fill out the application form and sent it to Sunwook Hwang (shwang@ssu.ac.kr), co-chair of HPM 2012.

13. Excursion and Sightseeing

The schedule and information about one-day or half-day excursion on July 18 (Wednesday) and extra sightseeing will be announced on the web site www.hpm2012.org.

14. Contact

For further information, please contact:
- Evelyne Barbin, evelyne.barbin@wanadoo.fr
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- Constantinos Tzanakis, tzanakis@edc.uoc.gr

Photo from a meeting of some of the people responsible for the HPM 2012 (from left to right): Sunwook Hwang (chair of the Local Organising Committee (LOC), president of KSME), Jinho Kim (secretary of LOC), Evelyne Barbin (HPM AdB), Pamela Chae (Daejeon Convention Center), Sung Sook Kim (vice-president of KSME and member of LOC), Masami Isoda (HPM AdB), Chang Kyoon Park (president of KSHM and member of LOC), Sangki Choi (vice-chair of LOC).

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If you wish to be a distributor in a new or unstaffed area please contact the editor.

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A note from the Editors

The Newsletter of HPM is primarily a tool for passing on information about forthcoming events, recent activities and publications, and current work and research in the broad field of history and pedagogy of mathematics. The Newsletter also publishes brief articles which they think may be of interest. Contributions from readers are welcome on the understanding that they may be shortened and edited to suit the compass of this publication.

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The views expressed in this Newsletter may not necessarily be those of the HPM Advisory Board.

Please pass on news of the existence of this newsletter to any interested parties.

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Items for the Newsletter should be sent to the editors, preferably by email (see addresses below).

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79	**12 February 2012**	**1 March 2012**
80	12 June 2012	1 July 2012
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