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

No. 69 November 2008

This and earlier issues of the Newsletter can be downloaded from our website
http://www.clab.edc.uoc.gr/hpm/

Address from the new Chair

Evelyne Barbin, the new chair of HPM spoke a little about her view of the challenges facing HPM when she addressed the HPM group in Mexico City, 18 July 2008.

As the new chair of the HPM Group, I want to speak about the future. But, as we are historians, it is interesting for us to know about the past of HPM, so I encourage those who do not know the history of HPM to read about it on our website. But as you know, before the birth of HPM, it was a tradition among mathematicians and mathematics teachers to be interested to the history of mathematics. The most recent we have in France was the famous mathematician of the Bourbaki Group, namely Jean Dieudonné.

We are interested to the past, not for nostalgia, but so as to better understand the present and to anticipate the future. So, for the future of HPM, I think we have at least three challenges.

The first one concerns the situation of mathematical education, because in many countries the amount of mathematical education decreases and fewer and fewer students want to continue with mathematical studies in universities. As you know, one of the reasons for this arises from the belief that school mathematics is disconnected from mathematical knowledge in general and from other subject specialities, and this view leads to a weakening of the legitimacy and the interest in mathematics for all. History of mathematics is a tool to see mathematics not as an independent and scholarly knowledge, but as a human activity linked to other disciplines, invented to help humanity to solve many kinds of problems and to make sense of the world.

The second challenge is for the HPM group to be open to new ideas and new experiences but, at the same time, to construct a common culture. The third challenge is to expand and, at the same time, to be able to know more about each other and what we are doing. As you can imagine, this was easier at the ICME-4 meeting at Berkeley in 1980, where the HPM group gathered only about twenty or thirty persons.

So the idea to have regular meetings every two years seems to be necessary. Beyond HPM satellite meetings, there are also meetings which have become gradually international. This is the case for the ESU, the European Summer Universities on History and Epistemology of Mathematics in Mathematical Education. These meetings began in France in 1993. The particularity of the European Summer Universities is the large amount of time devoted to workshops, where we can learn from each other.

The tradition is that the European Summer Universities take place every three years, which does not fit very well with the HPM Meetings which take place every four years. To have regular meetings, we propose

alternatively that ESU should meet once every four years, so we would then have an HPM satellite meeting of ICME alternating with an ESU. So, we invite all of you to join us in these meetings: the first ESU to be in 2010, probably in the Netherlands, and then the HPM satellite to ICME-12 somewhere in Korea or in Japan.

Between these meetings, do not forget to report and read information on other activities, publications, etc. which are given in the HPM Newsletter and on the website of HPM.

Evelyne Barbin

HPM Activities 2004-2008

A report from the former chair, Costas Tzanakis

Over the past four years, since *ICME 10* in Copenhagen and the *HPM Satellite Meeting* in Uppsala, Sweden, there have been several activities, which either continue work that has been in progress, or constitute new ones based on initiatives by people active in this area. These include both conferences and publications, as well as the improvement of the *HPM Newsletter* (NL) and the HPM websites, by making systematic use of the Internet. There has been an effort

- to regularly publish and continuous enrich the *HPM NL*, as well as, constantly improve and update the *HPM websites*. Both the *NL* and the *websites* have been developed as important tools complementary to each other, for making easier the contact among the members of the group and for increasing its visibility.
- to actively support magazines, or journals related to the *HPM* perspective and encourage, or motivate the publication of special issues of other journals devoted to themes that emphasize the historical dimension in Mathematics Education.
- to collaborate in the organization of local, or international activities (meetings, conferences, colloquia etc) that provided the opportunity to bring together people, who are interested in integrating history into Mathematics Education. Such activities stimulate new collaborations and foster further initiatives that bring closer, mathematicians, historians of Mathematics and mathematics educators, who are eager to contribute to the improvement of Mathematics Education around the world.

Costas Tzanakis (right) addressing the HPM Conference in Mexico City, with Ricardo Cantoral and the new chair, Evelyne Barbin.

1. *The structure of HPM*

The *HPM* Advisory Board has been enlarged and consisted of 23 persons from 19 different countries worldwide in order to have a sufficiently good geographic representation and a balanced representation of the three dimensions of *HPM* (*H*istory, *P*edagogy, *M*athematics); see any issue of the *HPM NL* (No 57 to 68). In addition, having appreciated the importance of the *HPM NL* as a basic tool to realize the aims and the associated activities of the Group – especially during the preceding period, chaired by F. Furinghetti – the *NL* has been successfully prepared and edited by three co-editors: B. Smestad (Norway), N. Kastanis (Greece), Ch. Weeks (UK).

2. *The HPM Newsletter*

In the last few years, the *HPM NL* has evolved into an informative document, published three times a year and distributed worldwide via a network of distributors, who are in charge of

sending the *NL* either in paper or in electronic form to interested people of a particular region in the world. In addition the *NL* is available on the web through the two main websites of the HPM Group (see below).

Since 2004, each issue of the *NL* has 24 to 28 pages, including some standard sections, namely, (often annotated) recent publications, list of relevant websites, book reviews, presentations of recently completed PhD theses, announcement of events (conferences, meetings, workshops etc), conference and meetings' reports, interviews with leading scholars in this area. In addition there are texts that are devoted to special subjects, in the history of mathematics, the history of mathematics education, or the integration of a historical dimension in mathematics education. Since July 2004, 12 issues have been published (No 57 to No 68).

3. *The HPM websites*

Information on the HPM Group, its aims, history and activities, together with details on relevant documents and resources can be found in the HPM official website http://www.clab.edc.uoc.gr/HPM/ and the website of the *Americas Section of the HPM Group* http://www.hpm-americas.org/ All issues of the HPM NL since 2000 (from No 45 onwards) are available for download. In addition, details on conferences and meetings, as well as links to societies, unions, other groups, resources in several languages, journals etc are also available there.

4. *Conferences and Meetings*

4.1 The HPM Group at ICME

(a) *ICME 10, Copenhagen, Denmark, 4-11 July 2004*

Activities of the HPM Group during ICME 10:

- *Topic Study Group 17*: *The role of the history of mathematics in mathematics education*

For more details see the HPM NL no57 pp.13-16. The work in this group led to the publication of a special issue; see §5.2(a).

- *Topic Study Group 29*: *The History of the Teaching and Learning of Mathematics*

For more details see the HPM NL no57 p.16. The work in this group led to the publication of a special issue; see §5.2(b).

- *The ASG meetings of HPM in ICME-10*

There were three sessions with an equal number of talks discussing the identity of the group. For more details see the HPM NL no57 pp.17-18.

- *Regular Lectures related to the HPM Group*: There were three such lectures by V. Katz (USA), L. Puig (Spain) and E. Shchepin (Russia).
- *Workshops and Sharing Experience Groups (SGA)*: One workshop (by V. Katz & K.D. Michalowicz^{+} (USA)) presented the material referred to in §5.1(a); one SGA (by A. Gazit (Israel)) was devoted to history in pre-service Mathematics Teachers Education.
- *Poster Round Table*: Four posters related to HPM issues were discussed in a Round Table.

(b) *ICME 11, Monterrey, Mexico, 6-13 July 2008*

Activities of the HPM Group during ICME 11

- *Topic Study Group 23*: *The role of history of mathematics in mathematics education*

Organizing Team: A. Elidrissi (Morocco), A. Miguel (Brazil), E. Barbin (France), A. Garciadiego (Mexico).

- *Topic Study Group 38*: The History of the Teaching and Learning of Mathematics

Organizing Team: R. d'Enfert (France), Á. Ruiz (Costa Rica), L. C. Arboleda (Colombia), R. Cambray (Mexico), W-S. Horng (Taiwan).

- *The ASG meetings of HPM in ICME-11*:

There were talks and discussions to report on the work that has been done in the last four years, the future perspectives and ways to arouse further the interest on the activities of the group and increase its visibility. They

concerned
(i) The history of Mathematics Education;
(ii) Women's role in Mathematics Education since ICMI was founded;
(iii) A tribute to J. Cabillon and his discussion list *Historia Matematica*;
(iv) The future of the group with focus on its activities so far, their further development and new possibilities.

- *Regular Lectures related to the HPM Group*: There were three such lectures by K. Bjarnadóttir, (Iceland), G. Schubring (Germany) W. Rodrigues Valente (Brazil & Portugal),
- *Workshops*: Two workshops (by E. de Souza Lodron Zuin and J. C. Barreto Garcia) were related to the HPM interests.
- *Poster exhibition*: Two posters related to HPM Issues were included in the programme.

4.2 The HPM Satellite Meetings of ICME

(a) HPM 2004 & ESU 4 (ICME 10 Satellite Meeting of HPM & 4th European Summer University on History and Epistemology in Mathematics Education), Uppsala, Sweden, 12-17 July 2004

Main Themes:

1. The history of mathematics
2. Integrating history of mathematics into the teaching of mathematics
3. The role of the history of mathematics in teacher's training
4. The common history of mathematics, science and technology
5. Mathematics and different cultures
6. The philosophy of mathematics

Structure of The Programme

1. Six plenary sessions, including: 6 invited lectures (one per day), 2 Panel discussions
2. Sessions consisting of: 9 workshops (from one to two hours), 59 paper presentations (in 3 parallel sessions).

Participation: 120 participants from 32 countries

(b) HPM 2008 (ICME 10 Satellite Meeting of HPM 11), Mexico City, 14-18 July 2008

Main Themes:

1. Integrating the History of Mathematics in Mathematics Education.
2. Topics in the History of Mathematics Education.
3. Mathematics and its relation to science, technology and the arts: historical issues and educational implications.
4. Cultures and Mathematics.
5. Historical, philosophical and epistemological issues in Mathematics Education.
6. Mathematics from the Americas

Structure of The Programme

1. Four plenary sessions, including: 7 invited lectures and 1 Panel discussion (2 per day),
2. Sessions consisting of: 5 one-hour workshops, 69 paper presentations (in 4 parallel sessions).

Participation: 132 participants from 28 countries worldwide.

4.3 The European Summer University on History and Epistemology n mathematics Education (ESU)

(a) ESU 4 took place conjointly with HPM 2004; see §4.2(a) above.

(b) ESU 5 (5th European Summer University on History and Epistemology in Mathematics Education), Prague, Czech Republic, 19-24 July 2007.

Main Themes

1. History and Epistemology as tools for an interdisciplinary approach in the teaching and learning of Mathematics and the Sciences

2. Introducing a historical dimension in the teaching and learning of Mathematics
3. History and Epistemology in Mathematics teachers' education
4. Cultures and Mathematics
5. History of Mathematics Education in Europe
6. Mathematics in Central Europe

Structure Of The Programme

1. Six plenary sessions, including: 6 invited lectures (one per day), 2 Panel discussions

2. Sessions consisting of: 19 2-hour workshops (based on didactical and pedagogical material), 25 3-hour workshops (based on historical and epistemological material), 44 oral presentations and 26 short announcements, in six parallel sessions.

Participation: 192 participants from 33 different countries.

4.4 HPM in CERME

CERME 6: Université de Lyon 1 (France) January 27 - February 1, 2009. Website: http://cerme6.univ-lyon1.fr/

A Working Group (WG 15) entitled *The Role of History of Mathematics in Mathematics Education: Theory and Research* has been included in CERME 6 (Congress of the European Society for Research in Mathematics Education). Work in this context is under progress.

This Working Group aims to provide a forum primarily dedicated to theory and research on the role of history in mathematics education. It is particularly interested in theoretical and empirical studies (including work-in-progress) that address one or more of the following themes:

- Theoretical and/or conceptual frameworks for including history in mathematics education.
- The role of history of mathematics at primary and secondary level, both from the cognitive and affective points of view.
- The role of history of mathematics in pre- and in-service teacher education, both from the cognitive, pedagogical, and affective points of view.
- Possible parallelism between the historical development and the cognitive development of mathematical ideas.
- Ways of integrating original sources in classrooms, and their educational effects, preferably with conclusions based on classroom experiments.
- Surveys on the existing uses of history in curriculum, textbooks, and/or classrooms in primary, secondary, and university levels.
- Design and/or assessment of teaching/learning materials on the history of mathematics.

Organizers of the group: J-L. Dorier (France), F. Furinghetti, chair (Italy), U. Th. Jankvist (Denmark), C. Tzanakis (Greece), J. van Maanen (The Netherlands).

4.5 Regional and other meetings pertaining to HPM

(a) "History of Mathematics, History of Mathematics Education and their didactical implications", 14-15 April, 2006 Department of Mathematics, University of Thessaloniki, Thessaloniki, Greece.

Motivated by the activities and results of the ICME 10 Topic Study Groups TSG 17, and

TSG 29, Greek researchers interested in the HPM perspective, organized a regional meeting at the University of Thessaloniki, Greece, aiming to present current international trends on important issues relevant to the HPM perspective, with reference to all educational levels, and in this way to give an opportunity to the Greek educational community to be informed about those issues that are of great importance nowadays.

(b) "Mini-Workshop: Studying Original Sources in Mathematics Education", Mathematisches Forsschunsinstitut Oberwolfach, Germany, 1-5 May 2006. Organisers F. Furinghetti (Italy), H. N. Jahnke (Germany), J. van Maanen (The Netherlands). This Workshop aimed at investigating the benefit that the teaching and learning of Mathematics may have on the basis of studying original texts; in particular it made focus on some ideas, which are specifically supported by reading mathematical sources:

- to see mathematics as an intellectual activity;
- to place mathematics in the scientific, technological and philosophical context of a particular period in the history of ideas;
- to participate in an activity oriented more to processes of understanding, than to final results;
- to appreciate the role and importance of the different languages involved; those of the source, of modern mathematics and of everyday life;
- to see what is supposed to be "familiar", becoming "unfamiliar".

There have been 17 contributions from 16 contributors coming from 10 different countries, who gave detailed presentations on particular cases concerning the points mentioned above. These presentations were followed by lively discussions, in which participants were given the opportunity to elaborate on their ideas further. Each presentation and the follow-up discussion were based on material (original texts, students' worksheets, etc) distributed in advance, or on the spot.

5. *Publications*

5.1 Proceedings of Conferences and other collective volumes

(a) *Historical Modules for the Teaching and Learning of Mathematics* Editors: V. J. Katz (USA) & K. D. Michalowicz (USA), The MAA, Washington DC, 2005 (in electronic form).
This is an outcome of the "Historical Modules Project", co–directed by V. Katz and K. D. Michalowicz, a special activity of the "Institute in the History of Mathematics and its Use in Teaching" (IHMT)[1], where about 30 high school and college teachers of mathematics teamed up to produce this didactical material organized in 11 modules. For a recent review see G.E. FitzSimons, "Review of Historical Modules for the Teaching and Learning of Mathematics" *Australian Senior Mathematics Journal*, **20** (2), 62-64, 2006.

(b) *Proceedings of HPM 2004 & ESU 4* Editors: F. Furinghetti (Italy), S. Kaisjer (Sweden), C. Tzanakis (Greece), University of Crete, Greece, 2006, ISBN 960-88712-8-X (676 pages).
This is the revised edition of the Proceedings of the HPM Satellite Meeting of ICME 10 and the 4th European Summer University on the History and Epistemology in Mathematics Education, which took place co-jointly in Uppsala, Sweden, in 2004 (see §4.2(a) above). It consists of 78 papers divided into 6 sections, corresponding to the 6 main themes of this

[1] For details on IHMT, see the HPM NL, no 62 (2006), pp.17-21. Two of the three directors of IHMT have been active members of the HPM; V. Katz, University of the District of Columbia and F. Rickey, now of the United States Military Academy, West Point, New York. Another member of the Group and one of its former chairs, F. Fasanelli served as MAA liaison and was instrumental in obtaining the National Science Foundation grants that funded the Institute.

meeting

(c) *History and Mathematics Education* Editors: Y. Thomaidis, N. Kastanis, C. Tzanakis. Ziti Publications, Thessaloniki, Greece 2006 (287 pages, in Greek). ISBN 960-431-997-3.
This volume consists of the Proceedings of the regional meeting of the HPM Group of §4.5(a). It includes 14 papers divided into three sections: (i) On the History of ancient Greek Mathematics, (ii) On the History of Mathematics Education (iii) On the relations between History of Mathematics and Mathematics Education.

(d) *History and Epistemology in Mathematics Education: Proceedings of the Fifth European Summer University (ESU 5)* Editors: E. Barbin (France), N. Stehlikova (Czech Republic), C. Tzanakis (Greece), Vydavatelsky servis, Plzeň, Prague, Czech Republic, 2008. ISBN 978-80-86843-19-3 (902 pages).
This volume consists of 120 peer reviewed papers and abstracts, based on the activities during ESU 5 (see §4.3(b)), divided into six sections corresponding to the six main themes of this Summer University.

5.2 Special issues of scientific journals related to the HPM perspective

(a) "The role of the History of Mathematics in Mathematics Education" *Mediterranean Journal for Research in Mathematics Education* special double issue, vol 3, nos 1-2, 2004 (166 pages). Guest Editors: M-K. Siu (China), C. Tzanakis (Greece)
This is a special double issue based on peer-reviewed papers that have been originally presented in TSG 17 (The role of the History of Mathematics in Mathematics Education) at ICME 10. There are 10 papers divided into 4 sections: (i) Epistemological issues, (ii) Teachers' education, (iii) Didactical material, (iv) Particular Examples.

(b) "History of Teaching and Learning Mathematics" *Paedagogica Historica. International Journal of the History of Education* vol. XLII, nos IV&V, August 2006. Guest Editor : G. Schubring (Germany).
This is a special double issue based on peer-reviewed papers that have been originally presented in TSG 29 (The history of the Teaching and learning of Mathematics) at ICME 10. There are 9 papers divided into three sections: (i) Transmission and Modernizations of Mathematical Curricula, (ii) Teaching Practice, Textbooks, Teacher Education (iii) Cultural, Social and Political Functions of Mathematics Instruction.

(c) "The History of Mathematics in Mathematics Education: Theory Practice." *Educational Studies in Mathematics*, special issue, vol.66, no2, 2007 (164 pages). Guest Editors: F. Furinghetti (Italy), L. Radford (Canada), V. Katz (USA).
This is a special issue, which consists of 10 peer-reviewed papers. According to the editors, "the papers seek to deepen our understanding of the pedagogical role that the history of mathematics may play in contemporary mathematics education. Some of the papers provide examples of the use of the history of mathematics in school practice and in teacher education. Other papers address theoretical questions that have become crucial to understanding the profound intertwining of past and present conceptual developments from spreading new epistemologies and theories of learning" (p.109).

5.3 Scientific journals/bulletins/newsletters pertinent to the HPM perspective

(a) *The "HPM Tongxun" and the Tongxun Group in Taiwan*. Editor: W-S Horng, Department of Mathematics, National Taiwan Normal University, Taiwan.
This is a publication in the context of the HPM Group, published in Chinese since 1998 on a monthly basis. Contributors to this NL are mathematics teachers, postgraduate students or researchers in this area. This collaboration encourages them to promote the HPM

activities – some of them even become local leaders for both the HPM and mathematics teaching. They become very enthusiastic about the HPM perspective, contributing to this NL just to share their ideas and vision with their colleagues. Despite the fact that no formal organization, such as a society, is to be expected for "up-scaling" development, a total of about forty correspondents plus ten editorial members is a strong indication that an active local HPM group could emerge.
For details see
http://www.math.ntnu.edu.tw/~horng

(b) *International Journal for the History of Mathematics Education*. Chief Editor G. Schubring (Germany), Managing Editor: A. Karp (USA/Russia), published by COMAP Inc. USA. (two issues per year, available in printed form and online).

The rousing success of the Topic Study Group 29, *The History of Learning and Teaching Mathematics,* at ICME 10 in Copenhagen in 2004, demonstrated the need for a permanent and stable international forum for scholarly research in history of mathematics teaching. Therefore, a new journal has been established. The first issue appeared in September 2006. The journal is supported by Teachers College, Columbia University, USA Its website is http://www.tc.edu/centers/ijhmt/

(c) The *Bulletin of the British Society for the History of Mathematics* (*BSHM Bulletin*) Published as a NL until 2004 when its 50th issue became Bulletin 1. Under the influence of the late John Fauvel, who was President of BSHM from 1992–1994, editor of its NL from 1995–2001, and chair of the HPM Group from 1992-1996, the NL changed from being an information advice to members to a publication of serious articles. This change strengthened under Jackie Stedall who took over as editor in 2002. The Bulletin is now much more of a scientific journal particularly since 2004 when it started to be published by Taylor & Francis three times a year. Since the summer of 2002 (issue No 46) the Bulletin has had a regular Education Section, directly related to issues relevant to the HPM interests and perspective.

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Conference reports

Symposium Celebrating the Centennial of the ICMI (International Commission on Mathematical Instruction)

Rome 5-8 March 2008

In 1908, during the fourth International Congress of Mathematicians, which took place in Rome from 6 to 11 April, was created the International Commission on the Teaching of Mathematics (Commissione Internazionale per l'insegnamento matematico, Commission Internationale de l'Enseignement Mathématique, Internationale Mathematische Unterrichtskommission). The first to formulate a proposal for the institution of an organisation of this type was David Eugene Smith, a professor at Teachers College of New York, who was profoundly interested in education and in the history of mathematics. The first president was Felix Klein, eminent mathematician and promoter of significant reforms in the teaching of mathematics in Germany. Klein was an unflagging and enthusiastic promoter of the commission during its early period.

The initial goal of the commission was to "promote an inquiry and publish a general report on current trends in secondary teaching of mathematics in the various countries". From that time, the Commission, which since 1954 has been known as the "International Commission on Mathematical Instruction" (ICMI), has gone through successive periods of more or less intense activity (connected with the dramatic events of the first half of the

twentieth century) before arriving to the end of the 1960s, when it experienced a veritable renaissance based on new aims and work methodologies. In the last quarter of a century its activities and the lines of research have broadened and diversified, and have contributed to the construction of a new discipline, research in the teaching of mathematics.

To celebrate the Centennial of the founding of the ICMI, an international symposium, entitled "The First Century of the International Commission on Mathematical Instruction: Reflecting and Shaping the World of Mathematics Education", was held in Rome, 5-8 March 2008 (http://www.unige.ch/math/EnsMath/Rome2008/). The International Programme Committee (IPC), was composed of sixteen members, with Ferdinando Arzarello as its president, while Marta Menghini represented the Organising Committee within the IPC. Palazzo Corsini, home of the Accademia Nazionale dei Lincei, and Palazzo Mattei di Paganica, home of the Enciclopedia Italiana, were the splendid venues for the symposium.

Taking as a point of departure the themes connected to ICMI activities over the course of its hundred year history (reforms in teaching of the sciences, teacher education, relationships between mathematicians and researchers in mathematics education, etc.), the symposium sought to identify the future directions of research in didactics and possible initiatives for improving the level of mathematics culture in the various countries.

The symposium was subdivided into ten plenary talks, eight talks in parallel, five working groups. and an afternoon reserved for Italian teachers, with lectures by scholars from Italy and abroad, see Menghini et al., 2008; Symposium …, 2008). The activities of the "Italian afternoon" were broadcast via videoconference to fifty schools throughout Italy.

The talks dealt with a wide variety of topics: the origins of the ICMI and the roles played by Klein and Smith; ICMI's renaissance at the end of the 1960s and the emergence of a new field of research; the dialectic between rigour and intuition in the teaching of mathematics; the relationships between pure and applied mathematics and the emphasis that should be given to modelling in teaching and learning of the mathematics; the interactions between research and practice; the relationship between centres and peripheries of the world; teacher training; the relationships between mathematics and teaching of mathematics and between mathematics education and technology, society, and other disciplines.

Some 200 participants from 43 countries the world over took part in the congress. The symposium ended with an excursion which, like a hundred years ago, took participants to visit the Villa d'Este at Tivoli and Hadrian's Villa, both rich in historical grandeur.

The website on the history of ICMI

On the occasion of the congress a website dedicated to the history of ICMI was created under the direction of Fulvia Furinghetti and Livia Giacardi (http://www.icmihistory.unito.it/). It delineates the most significant events and key figures of the life of ICMI through documents, images and interviews. The site is divided into six sections: *Timeline*; *Portrait Gallery*; *Documents*; *The Affiliated Study Groups*; *The International Congresses on Mathematical Education*; *Interviews and Film Clips*. The section *Timeline* marks the most important moments in the history of the ICMI, with each fact documented with references to the original sources. The *Portrait Gallery* contains biographic cameos of those who have passed away, with the aim of making evident their roles within the ICMI, their contributions to the study of problems inherent in mathematics teaching, and their publications that are expressly dedicated to mathematics teaching. The sections of the *Affiliated Study Groups* contains the short history of these groups, with particular reference to the motivations and the circumstances that fostered their creation. The section *International Congresses on Mathematical Education* gathers the main information about the congresses since the beginning (1969). Some important witnesses

of the most recent events in the life of ICMI were interviewed. The videotapes of the interviews are available in the section *Interviews and Film Clips*.

References

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Permanent website of the Symposium: http://www.unige.ch/math/EnsMath/Rome2008/welcome.html

Ferdinando Arzarello, Fulvia Furinghetti, Livia Giacardi, Marta Menghini

Some impressions from TSG 23 at ICME11

The role of the Topic Study Group (TSG) on "The role of history of mathematics in mathematics education" in the ICMEs needs to be reconsidered. As it is so close to the HPM conference the week after, there are some who prioritizes other TSGs at ICME and there are others that cannot afford the time and/or money to go to two conferences in the same month. Thereby, the number of actual participants does not reflect the number of potential participants. On the other hand, the TSG could possibly function as a PR tool to draw more people into the HPM community – in which case the TSG should perhaps be designed with that in mind.

That said, the meetings of the TSG at ICME11 were interesting. In the first meeting, Costas Tzanakis gave a talk on how history of mathematics may throw light on the problems pupils face when trying to learn the concept of variance. One particularly striking point (to me) was how educators have tried to make the topic "soft" by including examples from social sciences instead of from physics and geometry, but have ended up making it harder. This is because the terms mean - and even variance – have clear, concrete interpretations in certain examples from physics and geometry, and because they offer the possibility of experiments. In the social sciences, the terms tend to have more abstract meanings.

In the second meeting, Louis Charbonneau talked about "Astronomical and mathematical instruments as pedagogical tools", putting emphasis on the emotional aspects of being able to touch instruments that have been used to measure heaven and Earth. It was a very interesting and enthusiastic talk. Snezana Lawrence talked about what we can do to make teachers able to include history of mathematics in their teaching. Lawrence has used history of mathematics as the focus of a teacher development program that seemed very good. I was motivated to learn more about this project, of which more can be read on her website, mathisgoodforyou.com. In the third talk of the day, Liliana Milericich read the paper "The teaching and learning of integral calculus from a historical perspective", which pointed to some pitfalls in the teaching of integral calculus.

In the third meeting, Uffe Thomas Jankvist gave a talk titled "On empirical research in the field of using history in maths education". He argues that the HPM group engages in too little "empirical research". Moreover, he presented a very interesting example of such research, which seems very good. His paper had a combination of being practical and theoretical at the same time. My only "protest" was that he used the phrase "armchair research" as the opposite of "empirical research". I think this gives the wrong impression. In the history of HPM, it is true that there has not been much empirical research, but the papers have been divided into (at least) TWO other categories – the papers that have indeed been empirical (but not research) and the ones that may have been research, but not empirical. There have been lots of papers discussing individual

experiences from the classrooms, as well as lots of papers discussing theoretical issues without the important empirical components. A discussion of the virtues of empirical research should at least take both of these other types of work into account.

There was also a paper by Lenni Haapasalo from Finland.

In the final session of the TSG23, Bjørn Smestad (who happens to be me) gave a talk on three years of student projects on history of mathematics. There was nothing new for me in this talk.

Afterwards, there was more discussion on the way forward. For me, it is even clearer than before that we have to treat two issues separately: on the one hand how we – as educators who are very interested in the history of mathematics – may include history of mathematics in our teaching, and on the other hand how we can help other teachers include history of mathematics in their teaching, preferably on a large scale (that is, not only five or six teachers supported by an expert, but thousands of teachers...) Both issues are very interesting, but it is not at all obvious that what a specialist can do in his classroom, can be replicated by less knowledgeable teachers. On the other hand, neither is it clear that history of mathematics has a place in the teaching of teachers uninterested in the topic.

In addition to these talks from the TSG, I would like to mention Peter Ransom's very interesting and enthusiastic workshop on sundials. If you have a chance to hear him, grab it. This advice holds even if you're not interested in sundials – you will be…

Bjørn Smestad,
Norway

Report on the ASG[2] meeting of the HPM Group at ICME 11,

Monterrey, Mexico, 6-13 July 2008

The integration of the history of mathematics in mathematics education has received increasing attention during the last decades. This attention is reflected in the many publications in journals and books, the activities at international conferences and meetings, and the content and structure of the *HPM Newsletter*, which has evolved into an informative document.

During the two 2-hour sessions of the ASG meeting of the Group at ICME 11, there were three invited talks and a discussion on the work done over the last few years and about the further development of the group activities and structure. These sessions were attended by many people coming from at least 17 different countries and functioned as an introduction to the activities of *HPM 2008*, the ICME 11 Satellite Meeting of the HPM Group, that took place in Mexico City from 14 to 18 July 2008 (visit its website at http://www.red-cimates.org.mx/HPM2008.htm):

Gert Schubring (Germany): *Researching into the History of Mathematics Education - an HPM Perspective*: This talk referred to this field, which is an emerging research area, in which there are leading scholars within the HPM group and several of its members are active (cf. TSG 38 and the new *International Journal for the History of Mathematics Educatio*n).

Fulvia Furinghetti (Italy): *Women in the international arena of mathematics education in the first hundred years of ICMI*: This talk surveyed the emergence of women in mathematics education at an international level.

Ubiratan d' Ambrosio (Brazil): *Tribute to Julio Cabillon*: J. Cabillon was the creator and moderator of the excellent discussion list

[2] Affiliated Study Group.

Historia Matematica (http://www.chasque.net/jgc/historia.html). The ASG Meeting of the HPM Group was the appropriate occasion to recognize an important contribution to the world-wide community of historians of mathematics. For over 10 years, J. Cabillon was running this exemplary discussion list. It reached the entire world and we got used to see, regularly, a very well moderated weekly synthesis of e-mails, from most distinguished historians, discussing very relevant issues of the history of mathematics and of mathematics education, very much in the spirit of HPM.

Discussion (Constantinos Tzanakis, coordinator): *The HPM Group: Past, present and future*: In the period 2004-08 there have been several activities by the HPM Group (conferences and publications, the improvement of the HPM Newsletter and the HPM websites etc), which either are work in progress, or constitute new ones based on initiatives by people active in this area. There was a report on what has been done over the last four years (cf. the quadrennial report in this issue) and suggestions where to put the emphasis in the next few years. There was a lively follow-up discussion among participants on the future of the group with focus on its activities so far, their further development and new possibilities. Among the issues that were raised (and further discussed in Mexico City in informal meetings of the HPM Advisory Board members, who were present there) are the following:

(a) About the structure and function of the group:

- Procedure for the enrichment and renewal of the HPM Advisory Board;
- The effectiveness of the innovative *Newsletter* co-editing scheme;
- The current state of the distributors network: Its effectiveness; regions that are not served;
- Making the Newsletter's issues before 2000 available online;

(b) About the academic and scientific activities of the group:

- To keep (and possibly introduce new) *Topic Study Groups* related to the HPM Group in the context of the ICME's;
- To improve the function and content of the *ASG Meetings* of the HPM Group at ICME's;
- To reconsider the form, place and duration of the *HPM Satellite Meetings*;
- To ensure the regular organization of the *European Summer University on the History and Epistemology in Mathematics Education* (ESU); in particular, to specify the time and place of ESU 6;
- To organize Working Groups and encourage participation in *CERME*;
- To ensure or encourage publication of the proceedings of all major activities of the group (ICME Satellite Meetings & ESU's), and/or collective volumes based on such activities (e.g. TSG's, volumes with selected peer-reviewed papers presented in meetings etc), special issues of (international) scientific journals (e.g. the collective volume based on recent activities by the HPM Group; see this issue p. 18)
- To actively support scientific journals that are devoted and/or interested in publishing papers relevant to the HPM perspective.

Constantinos Tzanakis
Greece

Thème 3: Intégration des dimensions historique et culturelle des mathématiques dans leur enseignement at EMF 2006

The proceedings of the EMF 2006 Meeting, held at Sherbrooke, Canada on May 2006 have been edited in a digital version. The Summary of the Working Group 3 titled "The integration

of the historical and cultural dimensions of mathematics in their teaching" is as follow:

Présentation. *Abdellah El Idrissi, Mohamed el-Mahdi Abdeljaouad et Louise Poirier.*

Bloc 1- Intégration des dimensions historiques dans l'enseignement et la formation des enseignants.

1. Enseigner l'histoire des mathématiques : De la quête de l'universel à la dérive chauvine. *Mohamed el-Mahdi Abdeljaouad,* Université de Tunis, Tunisie
2. La multiplicité des points de vue en analyse comme construit historique. *Philippe Brin et Renaud Chorlay,* IREM Paris 7, France
3. L'utilisation de manuscrits historiques authentiques comme déclencheur de l'activité de résolution de problèmes mathématiques en primaire. *Françoise Cerquetti-Aberkane,* IUFM de Créteil, France
4. Les nouveaux programmes de formation au Québec et l'histoire des mathématiques. *Louis Charbonneau,* Université du Québec à Montréal, Canada
5. L'histoire des mathématiques dans les manuels scolaires. *Abdellah El Idrissi,* École normale supérieure Marrakech, Maroc
6. L'histoire des mathématiques dans le cadre de la pluridisciplinarité : le cas des mesures. *Konstantinos Nikolantonakis,* Université de la Macédoine de l'Ouest, Grèce
7. Capsules historiques, compétences réflexives et site interactif. *Richard Pallascio,* Université du Québec à Montréal, Canada
8. Un enseignement renouvelé du nombre irrationnel. *Matthieu Petit,* Université Bishop et Université de Sherbrooke, Canada

Bloc 2- Ethnomathématiques et regard sur l'enseignement des mathématiques et la formation.

1. Intégrer les dimensions historique et culturelle dans l'enseignement des mathématiques : Peut-on faire autrement qu'un placage de connaissances? *Annie Savard et Lucie DeBlois,* Université Laval, Canada
2. La problématique d'une voie africaine en didactique des mathématiques : vrais et faux enjeux. *Kalifa Traoré et Souleymane Barry,* Université du Québec à Montréal, Canada
3. Mathématiques mobilisées dans la vente des céréales et de néré par des paysans et des commerçants siamous illettrés au Burkina Faso. *Kalifa Traoré et Nadine Bednarz, Université du Québec* à Montréal, Canada

Synthèse- Bilan du groupe de travail.
Abdellah El Idrissi, Louise Poirier et Mohamed el-Mahdi Abdeljaouad.

A report on the HPM conference in Mexico City will be included in the next issue of the newsletter.

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.

New Books

J. Stedall, Mathematics Emerging: A Sourcebook 1540-1900

Oxford University Press, 2008

Aimed at students and researchers in Mathematics, History of Mathematics and Science, this book examines the development of mathematics from the late 16th Century to the end of the 19th Century. Mathematics has

an amazingly long and rich history. This book will focus on just a small part of the story, in a sense the most recent chapter of it: the mathematics of western Europe from the sixteenth to the nineteenth centuries. Almost every source is given in its original form, not just in the language in which it was first written, but as far as practicable in the layout and typeface in which it was read by contemporaries. This book is designed to provide the reader with some historical background to the material that is now taught universally to students in their final years at school and the first years at college or university: the core subjects of calculus, analysis, and abstract algebra, along with others such as mechanics, probability, and number theory. All of these evolved into their present form in a relatively limited area of western Europe from the mid sixteenth century onwards, and it is there that we find the major writings that relate in a recognizable way to contemporary mathematics.

Have you read these?

Ackerberg-Hastings, Amy (2008). John Playfair on British decline in mathematics. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 23 (2), 81-95.

Blackburn, Simon R. (2008). A mathematical walk in Surrey. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 23 (3), 178-180.

Centina, Andrea Del (2008): Unpublished manuscripts of Sophie Germain and a revaluation of her work on Fermat's Last Theorem, Archive for History of Exact Sciences 62 (4): 349-392.

Ceres Amson, John (2008). Gregory's meridian line of 1673–74: a St Andrews detective story. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 23 (2), 58-72.

Clark, Kathleen & Robson, Eleanor (2008). Ancient accounting in the modern mathematics classroom. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 23 (3), 129-142.

de Jesus Brito, Arlete: A Geometria de Euclides a Lobatschweski. Um esstudo histórico-pedagógico. Natal/RN: Editora da UFRN. ISBN 85-7273-310-8 [in Portuguese]. An excellent exposition of the history and of the concepts of non-Euclidean geometry, designed for teacher education in the Lakatosian dialogical style of a classroom discussion.

Duke, D. (2008). "Mean motions and longitudes in indian astronomy." Archive for History of Exact Sciences 62(5): 489-509.

De Bruin, Boudewijn: Wittgenstein on Circularity in the Frege-Russell Definition of Cardinal Number. Philosophia Mathematica 2008 16(3):354-373

Jankvist, Uffe Thomas (2008). A teaching module on the history of public-key cryptography and RSA. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 23 (3), 157-168.

Neumann, Peter M. (2008). The history of symmetry and the asymmetry of history. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 23 (3), 169-177.

Pritchard, Chris (2008). Mistakes concerning a chance encounter between Francis Galton and John Venn. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 23 (2), 103-108.

Schubring, Gert: "Documents on the mathematical education of Edmund Külp (1800-1862), the mathematics teacher of Georg Cantor", ZDM The International Journal for Mathematics Education, 2007, 39: 107-118.

Schubring, Gert: „Der Briefwechsel Quetelet - Gauß: Magnetismus und Sternschnuppen. Eine Edition", Mathematics Celestial and Terrestrial. Festschrift für Menso Folkerts, Hrsg.J. W. Dauben, St. Kirschner, A. Kühne, P.Kunitzsch, R. P. Lorch. Acta Historica Leopoldina Nr. 54 (Halle/S.: Deutsche Akademie der Naturforscher, 2008),

789-807.

Schubring, Gert: „La diffusion internationale de la géométrie de Legendre: différentes visions des mathématiques“, Raisons – Comparaisons – Éducations. La Revue française d'éducation comparée, 2007, 2: 31-54.

Seltman, Muriel (2008). The Artis analyticae praxis of Harriot and Warner in focus. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 23 (2), 73-80.

Simmons, Charlotte (2008). William Rowan Hamilton and George Boole. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 23 (2), 96-102.

Smith, Fenny (2008). The influence of Amatino Manucci and Luca Pacioli. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 23 (3), 143-156.

Wußing, Hans: 6000 Jahre Mathematik : Eine kulturgeschichtliche Zeitreise 1. Von den Anfängen bis Leibniz und Newton. Berlin, Heidelberg: Springer-Verlag, 2008. ISBN 978-3-540-77189-0 [in German] First volume of a two-volume universal history of mathematics, conceptualized as a cultural history of mathematics. Richly provided with illustrations.

Have you been here?

New links in this issue

Flickr group for HPM related photos
http://www.flickr.com/groups/812621@N24/

Societies and organisations

Commission on the History of Mathematics in Africa (including newsletter)
http://www.math.buffalo.edu/mad/AMU/amuchma_online.html

Association des Professeurs de Mathematiques de l'Enseignement Public [APMEP] History site:
http://www.apmep.asso.fr/BMhist.html

British Society for the History of Mathematics [BSHM]
http://www.bshm.org

HOMSIGMAA - History of Mathematics Special Interest Group of the MAA
http://www.maa.org/sigmaa/hom

HPM Americas
http://www.hpm-americas.org/

Italian Society of History of Mathematics
http://www.dm.unito.it/sism/indexeng.html

Association pour la Recherche en Didactique des Mathématiques:
http://www.ardm.asso.fr/

Commission Française pour l'Enseignement des Mathématiques: http://www.cfem.asso.fr/

Instituts de Recherche sur l'Enseignement des Mathématiques (IREM):
http://www.univ-irem.fr/

Canadian Society for History and Philosophy of Mathematics
http://www.cshpm.org

Sociedade Brasileira de História da Matemática SBHMat

Brazilian Society for History of Mathematics
http://www.sbhmat.com.br

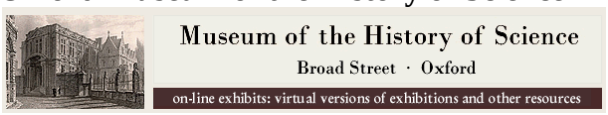
***Nuncius* Newsletter**
http://brunelleschi.imss.fi.it/nuncius/inln.asp?c=5302

International History, Philosophy and Science Teaching Group
www.ihpst.org

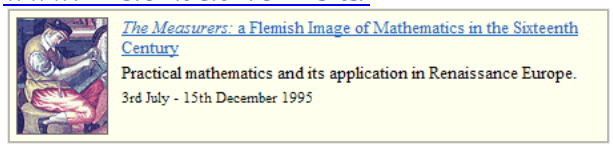
Centre for the History of the Mathematical Sciences.
The Open University, UK

http://purematths.open.ac.uk/pmd_research/CHMS/index.html

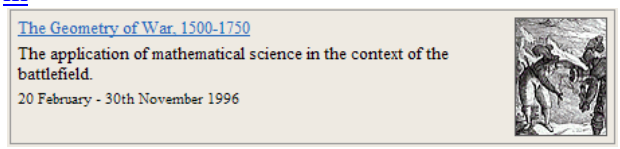
Oxford Museum of the History of Science



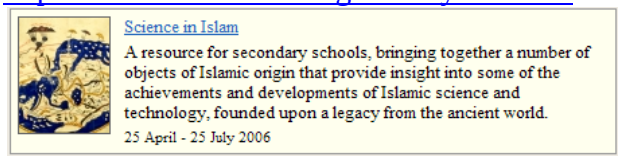
www.mhs.ox.ac.uk/exhibits/



http://www.mhs.ox.ac.uk/measurer/text/title.htm



http://www.mhs.ox.ac.uk/geometry/title.htm



http://www.mhs.ox.ac.uk/scienceislam/

Topics and Resources

MATHS for EUROPE: The history of some aspects of mathematics like: history of mathematical persons, symbols, algorithms...
http://mathsforeurope.digibel.be/index.html
http://mathsforeurope.digibel.be/list.htm
http://mathsforeurope.digibel.be/olvp.htm
http://mathsforeurope.digibel.be/olvp2.htm
http://mathsforeurope.digibel.be/olvp3.htm

Ethnomathematics on the Web
http://www.rpi.edu/%7Eeglash/isgem.dir/links.htm

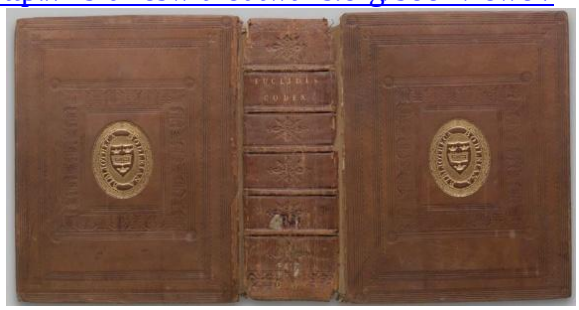
About Medieval Arabic Numbers
http://www.geocities.com/rmlyra/Numbers.html
http://www.geocities.com/rmlyra/arabic.html

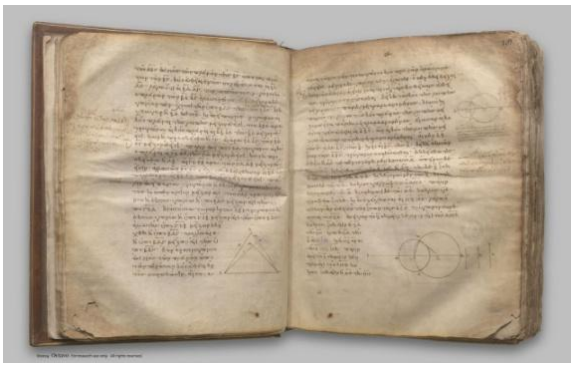
Annotated Bibliography on Proof in Mathematics Education
http://fcis.oise.utoronto.ca/~ghanna/educationabstracts.html

BibM@th
http://www.bibmath.net/dico/index.php3?action=rub&quoi=0

Centro Virtual de Divulgación de las Matemáticas, esta siendo desarrollada por la Comisión de Divulgación de la *Real Sociedad Matemática Española (R.S.M.E.)*
http://www.divulgamat.net/index.asp

Digitization of the oldest extant manuscript of Euclid's *Elements*
http://librarieswithoutwalls.org/bookviewer/





History of Statistics
http://www.stat.ucla.edu/history/

Images of Lobachevsky's context
http://www.ksu.ru/eng/museum/page0.htm

Images of Mathematicians on Postage Stamps
http://members.tripod.com/jeff560/index.html

Photos of Mathematicians
http://www.math.uni-hamburg.de/home/grothkopf/fotos/math-ges/

Numdam-Digitization of ancient mathematics documents
http://www.numdam.org/en/ressnum.php

The Montana Mathematics Enthusiast (journal)
http://www.montanamath.org/TMME/

Convergence: an online magazine of the MAA providing resources to teach mathematics through its history
http://convergence.mathdl.org/

International Journal for Mathematics Teaching and Learning,
http://www.cimt.plymouth.ac.uk/journal/default.htm

Homepage of International Journal for the History of Mathematics Education
http://www.tc.edu/centers/ijhmt/index.asp?Id=Journal+Home

Documents for the History of the teaching of mathematics in Italy
http://www.dm.unito.it/mathesis/documents.html

Ethnomathematics Digital Library
http://www.ethnomath.org/

Some Japanese Mathematical Landscapes: The results of wandering in a beautiful country, with a mathematical eye, aided by a digital camera, by A. Arcavi
http://math.criced.tsukuba.ac.jp/museum/arcavi/arcavi_english/index.html

Wann-Sheng Horng's webpage
with HPM related materials in Chinese.
http://math.ntnu.edu.tw/~horng/

Fred Rickey's History of Mathematics Page
http://www.dean.usma.edu/math/people/rickey/hm/default.htm

Culture*MATH*. Ressources pour les enseignants de Mathématiques
www.dma.ens.fr/culturemath/actu/livres.htm

The French INRP (National Institute for Pedagogical Research) is developing a website on questions related to mathematics teaching: EducMath
http://educmath.inrp.fr

Homepage of Albrecht Heeffer
http://logica.ugent.be/albrecht/

Homepage of Jens Høyrup
http://www.akira.ruc.dk/~jensh/

***L'Enseignement Mathématique*, Archive**
http://retro.seals.ch/digbib/vollist?UID=ensmat-001

Homepage of Prof. Leo Corry
http://www.tau.ac.il/~corry/

Opera Mathematica of Christoph Clavius
http://mathematics.library.nd.edu/clavius/

Geometrical books and instruments from 15th to 18th century
http://www.geometricum.com/

David Henderson' s Home Page [Educational and Historical Topics on Geometry]
http://www.math.cornell.edu/~dwh/

Archimedes Project [Some famous mathematical books of the Renaissance period are available on line, i.e. Pacioli's *Summa*]
http://archimedes2.mpiwg-berlin.mpg.de/archimedes_templates

Simon Stevin's *De Meetdaet* [The Practice of Measuring]
http://www.math.leidenuniv.nl/~wiskonst/meetdaet/index.html
and *The Principal Works of Simon Stevin*
http://www.historyofscience.nl/works_detail.cfm?RecordId=2702

Mathematicians Gallery
http://www.math.uconn.edu/MathLinks/mathematicians_gallery.php?Rendition=printerfriendly

History of Mathematics
http://www.otterbein.edu/resources/library/libpages/subject/mathhis.htm

The Garden of Archimedes. A museum for Mathematics
http://web.math.unifi.it/archimede/archimede_NEW_inglese/

Mathematical instruments
http://brunelleschi.imss.fi.it/museum/esim.asp?c=500164
and
http://web.mat.bham.ac.uk/C.J.Sangwin/Sliderules/sliderules.html
and
http://www.mhs.ox.ac.uk/epact/catalogue.php?ENumber=52265

Homepage of Eleanor Robson
http://www.hps.cam.ac.uk/dept/robson.html

We would like to provide a more comprehensive list of websites containing resources useful to researchers and students (not necessarily in English). If there are any you use, or you know are useful for students or researchers, please send your recommendations to the editors.

Notices

CALL FOR PAPERS

Collective volume with selected papers based on contributions to recent activities of the HPM international study group

Given the need to distribute more widely in the mathematics education community the ideas discussed at various meetings and activities in progress of the *International Study Group On the Relations between History and Pedagogy of Mathematics* (the HPM Study Group) affiliated to ICMI, the publication of a book based on contributions to these meetings and activities dealing with the integration of a historical dimension in mathematics education is being planned. This book will be similar in nature to the books published after the HPM Group Satellite Meetings of ICME 8, *HEM Braga 96* in Braga, Portugal and ICME 7, *HPM-92* in Toronto, Canada.

Therefore, all presenters at

- the *5th European Summer University on the History & Epistemology in Mathematics Education* (ESU 5), in Prague, Czech Republic, 19-24/7/2007;
- the Topic Study Group 23 (TSG 23) of ICME 11 on *The Role of History of Mathematics in Mathematics Education*, in Monterrey, Mexico, 6-13/7/2008;
- the ASG (Affiliated Study Groups) meeting of the HPM Group at ICME 11, Monterrey, Mexico, 6-13/7/ 2008;
- the *HPM Group Satellite Meeting of ICME 11* (HPM 2008) in Mexico City, Mexico, 14-18/7/2008;
- the Working Group 15 (WG 15) on *The Role of History of Mathematics in Mathematics Education: Theory and Research* of the Congress of the European Society for Research in Mathematics Education (CERME 6), in Lyon, France, 28/1-1/2/2009[3],

are welcome to submit papers to the editors for acceptance in this book. The submitted papers will be peer-reviewed to international standards and then revised before final acceptance. This volume aims to constitute an all-embracing outcome of recent activities within the HPM Study Group, thus reflecting the spirit of coherence and openness that characterizes this Group since its original formation.

Provisional Title: Recent developments on introducing a historical dimension in mathematics education

Main Themes*:* Although papers are welcome

[3]Since CERME 6 is still an activity in progress, papers based on contributions to WG 15 should have been accepted in CERME, before they are considered further for publication in the present volume.

dealing with any aspect of introducing a historical dimension in mathematics education, the editors particularly welcome papers dealing with

- theoretical and/or conceptual frameworks for integrating history in mathematics education;
- history and epistemology as tools for an interdisciplinary approach in the teaching and learning of mathematics and the sciences;
- the results of actual classroom experiments in the implementation of history in the teaching of mathematics, both from the cognitive and affective points of view, at all levels of education, including in-service teacher education;
- ways of integrating original sources in the classroom, and their educational effects, preferably with conclusions based on classroom experiments;
- design and/or assessment of teaching & learning materials on the history of mathematics;
- the exploration of possible analogies and parallelism between the historical development and students' cognitive development of mathematical ideas;
- surveys on the existing uses of history in curriculum, textbooks, and/or classrooms in primary, secondary, and university levels.

Submission of papers

Submitted papers should be prepared using either MS Word or LaTeX as a word processor and must be written in English. Therefore, papers originally written in another language should be translated into English. However the editors will work with the authors to make sure that the English version is in good English style. Papers should be sent electronically to both of the editors of this volume:

Victor Katz, vkatz@udc.edu
Constantinos Tzanakis, tzanakis@edc.uoc.gr

More details on the style and format can be found in the HPM website http://www.clab.edc.uoc.gr/HPM/ (go to About HPM).

Time schedule

January 5, 2009: Deadline for submitting full papers.
March 15, 2009: Reviewing reports returned to the editors.
March 30, 2009: Notification of authors.
June 15, 2009: Deadline for submitting papers for which revision has been requested.
July 30, 2009: Reviewing reports on the revised versions of the papers returned to the editors.
August 15, 2009: Final notification of authors.
December 15, 2009: Final editing completed; the book goes to the publisher.

Editors and contact: For any further questions, please contact the editors of this volume:

- *Victor Katz*, University of the District of Columbia, Washington, DC, USA
  Postal address: 841 Bromley St., Silver Spring, MD 20902, USA
  e-mail: vkatz@udc.edu
- *Constantinos Tzanakis*, Department of Education, University of Crete, Greece
  Postal address: Dep. of Education, University of Crete, 74100 Rethymnon, Crete, Greece
  e-mail: tzanakis@edc.uoc.Victor J. Katz and Constantinos Tzanakis

Proceedings of ICMI Symposium

The proceedings of the Symposium held on the occasion of the Centennial of ICMI in Rome, from March 5th to March 8th, 2008, are now being published.

The price of the volume comes to 60 Euros (about 90 USD) shipping fees included.

Participants of ICME's and of conferences of the affiliated groups of ICMI, in the period 2004 – 2008, may enjoy a special 33 % reduction.

The request form is available at the Symposium's website: http://www.unige.ch/math/EnsMath/Rome2008

Contents:

Announcements of events

Colloque International Gabriel Lamé

January 15-17, 2009
MSH de Nantes

An international colloquium on Gabriel Lamé, to mark the 150th anniversary of the publication of his ground-breaking work on curvilinear coordinates, will take place in Nantes in January 2009. Lamé himself described the work as 'advent of a unique rational science' and speakers will present papers on the contributions Lamé made to many branches of engineering and mathematics. The colloquium will be in French. Further information and registration details will be found in the website listed below.

Il y a 150 ans paraissaient les *Leçons sur les coordonnées curvilignes et leurs diverses applications* (1859) de Gabriel Lamé, ouvrage dans lequel cet ingénieur, professeur, mathématicien et physicien appelait à « l'avènement futur d'une science rationnelle unique ».
Gabriel Lamé(1795-1870) a été élève de

Polytechnique et professeur de cette École, ingénieur du corps des Mines et professeur à la Sorbonne. À partir de lui nous évoquerons aussi bien les prouesses techniques du XIXe siècle (les ponts suspendus), que les nouvelles conceptions physiques (sur l'élasticité en particulier), que des investigations mathématiques (sur la fameuse conjecture de Fermat par exemple).
Ce colloque est organisé par le Centre François Viète d'histoire des sciences et des techniques de l'université de Nantes et la Maison des Sciences de l'Homme Ange Guépin de Nantes.

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programme, inscription, renseignements pratiques : http://www.sciences.univ-nantes.fr/cfv/colloques/lame/lame.html

adresse du colloque : colloque.gabriel.lamé@univ-nantes.fr

HPM-Americas: Second Annual Carriage House Meeting

March 13-14, 2009
Washington, DC, United States

Those interested in speaking should notify Bob Stein (bstein@csusb.edu), describing the subject of the proposed talk and giving contact information (name, affiliation, address and e-mail address, and phone number).

EMF 2009: GT4 Dimensions linguistique, historique et culturelle dans l'enseignement des mathématiques

April 6-10, 2009
Dakar
For more information, including call for papers, see
http://fastef.ucad.sn/emf2009/groupe4.htm

Models in Developing Mathematics Education

September 11–17, 2009
Dresden, Germany
For all conference details and updates please email alan@rogerson.pol.pl .

ESU 2010

To be announced

ICME 12

2012
Seoul, South Korea

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

The Newsletter appears three times a year with the following deadlines for next year.

No.	Deadline for material	Sent to distributors
70	12 February 2009	1 March 2009
71	12 June 2009	1 July 2009
72	12 October 2009	1 November 2009

The Newsletter is the communication of the International Study Group on the Relations between the History and Pedagogy of Mathematics, an affiliate of the International Commission on Mathematical Instruction.

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