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

No. 52 March 2003

Message from our Chairperson

In this issue of the HPM Newsletter you will notice some new things. Firstly, there are some new members on the advisory board: Evelyne Barbin (France), Masami Isoda (Japan), Luis Radford (Canada) and Gert Schubring (Germany). We thank them for accepting the invitation to join the advisory board.

We now have our own website. The address is http://www.mathedu-jp.org/hpm/index.htm I thank Masami Isoda who is looking after it. Please send your comments and suggestions to us. Of course, among the links of our website there is the link with the American HPM website. We are very grateful to them for hosting us in this period of transition. In particular, thanks to Karen Dee Michalowicz for managing the American website. Now we are really international: the chair is Italian, the newsletter editor is British and the webmaster is Japanese. I hope that this triangulation will work.

We would like to have a section dedicated to research in progress. We hope you will send a short account of your work concerning the themes of HPM. Also we want to publish short reports of dissertations concerning the themes of HPM - Kate Parker's MA Ed features as the start of this section. Again we ask you to collaborate by sending us details of similar works.

The year 2002 was rich with "HPM events". The year 2003 seems to be a year of meditation to prepare us for the Satellite meeting of 2004. Nevertheless if you look carefully at the programs of the various conferences you'll find inspiring initiatives. For example, in the annual conference organised by the international Study Group PME (Psychology of Mathematics Education) affiliated to ICMI (Honolulu, 13-18 July 2003) there will be Discussion Group on Semiotics in Mathematics Education that will treat the historic and semiotic constitution of concepts with students' meaning-making of mathematical symbolisation.

Fulvia Furinghetti

Visit our new website at
www.mathedu-jp.org/hpm/index.htm

HISTORY OF MATHEMATICS AT CONFERENCES IN 2002

2002 was not a year in which we could all meet up as an HPM group, as such, but for numbers of us who are part of HPM it was a year that held opportunities to attend other conferences where the importance of using the various histories of mathematics constructively and naturally – and without thought about the need for justification – was evident in many of the presentations. Fulvia went to Morocco and has written about that for an earlier Newsletter. Others went to other conferences; some named in the Newsletter, others known to individuals. I went to the ICTM2 conference in Crete, a conference on creativity in Latvia, and an institute of mathematics pedagogy in the U.K., and I am glad to be able to report my observations on how the ideas of using histories of mathematics to expand one's thinking and to inform the teaching, learning and experiencing of mathematics were used by various people at each of those events, in the *HPM Newsletter*.

ICTM2 CONFERENCE IN CRETE

Costantinos Tzanakis was one of the two local organisers of the 2nd ICTM (International Conference on the Teaching of Mathematics at the Undergraduate Level) conference in Crete, and I am sure that our thanks are due to him for taking opportunities to see that the programme and goals of the conference encouraged people to take visionary approaches not only in reporting mathematical histories that can be readily incorporated into thinking, teaching and learning about mathematics in tertiary lecture rooms, but also in considering the philosophical implications of both including and omitting to include references to historical contexts and implications when encouraging students in tertiary maths lecture rooms and tutorials. Panel sessions were organised as the afternoon's programme on four of the days of the conference, and Fulvia Furinghetti was invited to chair one of these entitled *On the Role of the History of Mathematics in Mathematics Education*. During this session she spoke herself on the ways in which the embedding of historical context into our thinking about mathematics can allow an increase in the extent to which we internalise mathematical ideas, develop metaphors which aid understanding, and learn to see how the linking of the historical process with the concept becomes an important part of the understanding of how mathematical developments take place at all.

Fulvia had invited Masami Isoda, Man-Keung Siu and Costantinos Tzanakis to be the other members of the panel. Masami spoke of ways in which to make new lessons for classrooms so that they included historical text and information that improved the construction of meaning and of understanding, and reminded students and teachers of the author's (or mathematician's) objective. Man-Keung began his section of the presentation by saying that it is a common fault in us to be only sceptical of what others say but not of what we say ourselves, and then listed (and ably critiqued) fifteen common objections to using historical material in teaching mathematics including boredom, difficulty, and the liability of breeding cultural chauvinism and/or parochial nationalism. Costantinos emphasised his belief that teachers should have a basic knowledge of the crucial steps in the evolution and unfolding of history and spoke first of the extent to which the incorporating of the historical context along with the mathematics provides a suitable environment for the development of new mathematics, and then of the extent to which history lies at the heart of the ability of mathematics (and of students and teachers of mathematics) to make links with other disciplines – including physics, astronomy, computer science, economics, the physical and biological sciences, and the human and social sciences – and at the heart of the ability to make a satisfactory transference of the skills of reasoning, induction, analogy, and experimentation.

Others at the Conference gave presentations, or made comments in their presentations, which were focused on aspects of the history of mathematics and on ways to use such history in tertiary teaching. HPM people at the conference were heartened to hear so many commendations about the importance of using history made in presentations, which were not ostensibly about the history of mathematics. For example the first plenary speaker of the conference, Tosun Terzioglu, began his presentation with an overhead showing Bruegel's painting of the Tower of Babel. What he then said turned out to tie in exactly with the sentiments expressed by the third plenary speaker, Jean-Pierre Bourguignon, on the following day. Both speakers were saying quite clearly that it is important to maintain an historical context in explaining and teaching mathematics for, as the story of the Tower of Babel and other examples show, it is well-known that people do change their minds and that such changes can make them incomprehensible to each other, especially if an understanding of historical context has not been maintained. Both thought this was just as important to understand in regard to mathematics as in regard to anything else. Both thought that knowing the past, knowing the history and context of the development of particular ideas, was important for many reasons including those concerned with

- making decisions about what to teach
- developing cross-disciplinary activities so that whole stories can be brought together
- making proper documentation available to teachers and to students.

CONFERENCE ON CREATIVITY IN MATHEMATICS EDUCATION AND EDUCATION FOR THE GIFTED IN LATVIA

This much smaller conference in Riga in Latvia was also organised by a group of people who have recently established a special interest conference to focus on a particular area of need, just as ICTM does. At the conference a number of people made references to historical developments and procedures in order to illuminate their points, and three people based their entire paper and presentation on using history to both identify and stimulate creativity among mathematicians and mathematics students. Daina Taimina looked at the lives and work of mathematicians through the ages to identify whether or not their work was creative; Karin Richter gave wonderfully graphic examples of ways to develop mathematics lessons through looking at historical instruments and installations (such as stained-glass windows); and Kaarin Riives-Kaagjarv considered the ways in which the inclusion of an historical dimension "might render mathematics for many a student from a bothersome and difficult subject into a natural and necessary part of life".

IMP IN THE UNITED KINGDOM

Anne Watson and John Mason held their second Institute of Mathematical Pedagogy in Oxford in 2002. The group was limited to twenty, and only four of us came from places outside of the U.K. (New Zealand and Jamaica). The main sections of the Institute were, in a 'living' way, based on the idea of using contemporary mathematical thinking (e.g. taxicab geometry) to extend horizons and think in new ways. And just as Ubiratan D'Ambrósio, a former chairperson of HPM, brought a different dimension to HPM through his perseverance in research and talk about the importance of looking at the development of mathematical ideas within the various contexts in which those ideas gained strength, I like to think that happened, too, in a small way, through the presence of some non-Europeans at the Institute in Oxford.

FUTURE CONFERENCES OF THESE GROUPS

The next *ICTM* conference (ICTM3) will be held in Istanbul, in Turkey, in 2006.
The next *Creativity in Mathematics Education and Education for the Gifted* Conference will be held in Rousse in Bulgaria, 3-9 August 2003. (I have been asked to organise a section in this conference on '*Stimulating Creative Thinking by Non-standard Methods*' and would be pleased to hear from anyone wishing to present on this

theme, either through an aspect of history or something else.)
The next *IMP* by Anne Watson and John Mason will be held in Oxford, in the U.K., in August 2003.

WHAT WAS GAINED FROM BEING AT THESE CONFERENCES (BESIDES THE OBVIOUS)?

In his plenary address on the last day of the conference in Crete, Man-Keung used the concept of Ying and Yang to illustrate his point that various approaches to teaching mathematics could be seen in the way that the connection between Ying and Yang is seen: one contains some of the other. His analogy could also be used to summarise messages that came out of all three of these conferences, for me, namely

- that very few mathematical ideas have just one "history" in terms of either the concept or the ways in which the concept has been processed by people in different times and places
- that it is by looking at mathematical ideas and their "histories" that we find out how to see those ideas as part of a much larger pattern and thus how to avoid the repetition of information that could make mathematics reflect cultural chauvinism or parochial nationalism
- that since the first HPM Satellite Meeting was held in Australia in 1984, there has been a double-pronged approach among the group to ensure that the researching of specific histories and the convincing of others of the worth of an historical approach are both valued equally
- that many others, besides our own group, are speaking with us about the importance of understanding the historical contexts and details of mathematical ideas and developments
- and that all of the HPM group met again at conferences in 2002 – Carlos Correia de Sá, Costantinos Tzanakis and Maria Papadaki, Eliane and Alain Cousquer, Ercole Castagnola, Fulvia Furinghetti, Gail and Paul FitzSimons, Greisy Winicki Landman, Gunnar Gjone, Manfred and Juliana Kronfellner, Man-Keung and Fung-Kit Siu, Masami Isoda, Oscar Abdounur, Sten Kaijser, and others in Crete, and Daina Taimina in Latvia – seemed to me to be very encouraged to find that these ideas are increasingly considered important in many classrooms and at other conferences besides our own.

Coralie Daniel
New Zealand

Reviews

In you would like to be involved in reviewing books or magazines for this section, please send your contact details and area(s) of interest to the editor who will forward books or magazines for review as and when they become available.

José Vicente Conçalves: Matemático… porque Professor!
(Contributos para o estudo deste Matemático madeirense. Exemplo de uma aplicação da História da Matemática ao Ensino da Matemática)
by Cecília Costa

I have just received review copies of this book. If you would like to review it, please let me know - especially if you can do it by 14 June so the review can appear in the next HPM Newsletter.
p_ransom@hotmail.com

If you wish for a book to be reviewed, please send it to the editor who will arrange for it to be reviewed.

Visit our new website at
www.mathedu-jp.org/hpm/index.htm

Mathematics in School - History Special

The Mathematical Association of the UK has produced a special edition of *Mathematics in School*. It was assembled by guest-editor John Earle, of the British Society for the History of Mathematics and published in January.

The first was issued in September 1998 and proved to be extremely popular. This time the MA has the added attraction of a quite unmissable opportunity: not only do they have a lead article by the distinguished author and television producer, Simon Singh, but a free CD-ROM of supplementary material is to be included with this particular issue!

The following articles appear.
The History of Cryptography by Simon Singh
Catch a Falling Star: Meteors in 10th Century Persia by Glen Van Brummelen
Crossing the Bridges of Konigsberg in a Primary Mathematics Classroom by Dimitris Chassapis and Maria Kotsakosta
Fractions in Ancient Egyptian Times by Jack Oliver
Fractions at the Dawn of History: How did the Babylonians Cope with Fractions? by Jack Oliver
An Extra Student in your Classroom by Mariolein Kool
The Framework for Teaching Dialling by Peter Ransom
The Hyperbola: Some 17th Century Arguments by Bob Burn
The School of Pythagoras by David Brown
The Rise and Fall of the Decimal Point by Chris Weeks
History as a Crossroads of Mathematical Culture and Educational Needs in the Classroom by Fulvia Furinghetti and Domingo Paola
Stories by Chris Weeks
If you do not subscribe to *Mathematics in School*, single issues are available for you to purchase.

Contact details at the top of the next column.

The Mathematical Association,
259 London Road,
LEICESTER LE2 3BE
UK

Telephone 0116 221 0013 or email office@m-a.org.uk to place your order.

Peter Ransom
Romsey, UK

Awakening of Geometrical Thought in Early Culture

By Paulus Gerdes
2003. ISBN 0-930656-75-X, 200 pages. Cloth only $49.50

Contents:
Foreword by the late Dirk J. Struik (MIT)
Preface
Chapter 1: Mathematicians on the origin of elementary geometrical concepts
Chapter 2: How did people learn to geometrise?
Chapter 3: Early geometrical concepts and relationships in societal activities
Chapter 4: Social activity and the formation of ancient geometry
Chapter 5: Conclusion: Awakening of geometrical thought
Bibliography

ORDERS:
MEP Publications, University of Minnesota, Physics Bldg., 116 Church St. S.E., Minneapolis, MN 55455-0112, USA
Check to MEP; add $3 shipping for 1st book, 50¢ each additional book (USA)
Credit card online only, through PayPal - see website http://umn.edu/home/marqu002

E-mail: marqu002@tc.umn.edu

Paulus Gerdes
Maputo, Mozambique

Visit our new website at
www.mathedu-jp.org/hpm/index.htm

Have you read these?

Dissertations

Parker, Kate: 2002, '*Humanising mathematics: do students benefit from teaching that includes the history of mathematics?*', MA Ed. dissertation, Southampton.

The main premise of this study is that mathematics should be an enjoyable school subject for students. Some research suggests that pupils can see mathematics as a rather mechanical subject, consisting of rules to be learnt. They view it as necessary and useful, but not interesting. If mathematics could be made more interesting to pupils at GCSE level, then take-up rates at A level may improve. There is a particularly poor A level take-up rate amongst girls and thus an important aspect of this study is the consideration of gender.

The method that is considered, as a way of improving pupil enjoyment, is that of humanising the subject. This, it has been suggested, may have a particular impact for girls, and may counter the view that the subject consists of a set of rules to be learnt. In particular, this study considers whether the inclusion of human historical anecdotes improves pupil motivation in mathematics lessons, by providing a cultural dimension and thus an alternative purpose for its study.

Pupil enjoyment of a particular GCSE topic, irrational numbers, was monitored during a series of mathematics lessons that did, and did not, include historical anecdotes. Enjoyment was measured through the use of a Likert scale, interviews and a memory test. The latter was a test of enjoyment in the sense that students will commit to long-term memory, material with which they have made a conscious effort to engage.

The findings of this study suggest that an historical humanistic approach is beneficial to both boys and girls in terms of improving motivation and thus the principal recommendation is that teacher trainees are provided with courses in the history of mathematics and that similar courses are available for teachers in post as part of professional development.

Articles

Gulikers, I.: 2002-03, "The seventeenth-century surveyor in class", *BSHM Newsletter*, 74, 56-63.
This paper refers to a project aimed at teaching similarity. To this purpose the author uses a Dutch book by Cardinael (1610) in which a method to measure the height of a tower with the aid of a mirror is described. Another method to measure this height is used based on the old instrument known as the cross staff as shown in the geometry book of Pierre de la Ramée translated into Dutch in 1622. In the paper the original texts of some problems are reported as well as the pupils' assignments.

Jacqueline Boniface, Norbert Schappacher (eds.): "Sur le concept de nombre en mathématique - cours inédit de Leopold Kronecker à Berlin (1891)", *Revue d'histoire des mathématiques*, 7(2001), 207-275.
The text published, as a small rest of Kronecker's Nachlass, is the last lecture course of Kronecker, on the notion of number in mathematics, taught in Berlin. These lectures, published for the first time, give a comprehensive view on Kronecker's philosophy of mathematics and in particular on his extraordinary notion of number.

Gert Schubring, "A Framework for Comparing Transmission Processes of Mathematics to the Americas", *Revista Brasileira de História da Matemática*, 2 (2002), no. 3, 45-63.
The paper elaborates structural patterns which permit to compare transmission processes of mathematics from different European metropolitan countries to the emerging educational systems at the periphery in North and South America, and the eventual

transformation of some of these systems to new, even metropolitan centres.

Books

Georg Schuppener let us know that the following book is now available.

Georg Schuppener, Karel Macak: *Prager Jesuiten-Mathematik von 1600 bis 1740.* Leipziger Universitätsverlag, Leipzig 2002. Pp. 232, Price 32 euro.

Contact Georg at schuppen@rz.uni-leipzig.de if you want to obtain a copy.

Fulvia Furinghetti, Italy
Peter Ransom, UK
Gert Schubring, Germany
Georg Schuppener, Germany

Have you been here?

The British Society for the History of Mathematics web site at
www.dcs.warwick.ac.uk/bshm/
has many links to related sites.

The Italian Society of History of Mathematics web site at
www.dm.unito.it/sism/index.html

The HPM-Americas web site is up and going. The new web site is
www.hpm-americas.org

The HPM satellite meeting in connection with the Copenhagen ICME-10 in 2004 is planned for Uppsala with Sten Kaijser as the local person in charge. You can find out more about ICME-10 and register for the first announcement now at
www.ICME-10.dk

The AMUCHMA newsletter on the history of mathematics in Africa can be found at
www.math.buffalo.edu/mad/AMU/amuchma_online.html

All the earlier issues are available on the same web page.

For a history of HPM visit
http://mcs.open.ac.uk/puremaths/pmd_department/pmd_fauvel/HPM_%20history.htm

Cari Colleghi, vi segnalo che è stato attivato il nuovo sito: "Syllogismos.it-Storia ed Epistemologia per la Didattica della Matematica" all'indirizzo:
www.syllogismos.it
Nel sito è possibile trovare materiale relativo alla Didattica della Matematica e ad alcuni riferimenti storici utili in campo didattico. Ogni suggerimento per migliorare tale sito, concepito principalmente in termini di servizio per i Colleghi impegnati in Didattica ed in particolare nell'insegnamento, sarà assai gradito.
Dear Colleagues,
I am letting you know that the new site "Syllogismos.it - History and Epistemology for the Teaching of Mathematics" has been activated at the address:
www.syllogismos.it
On the site it is possible to find material relating to the teaching of mathematics and some historical references which will be useful in the field of mathematics. Every/any suggestion to improve such a site, conceived mainly in terms of helping colleagues involved in education and in particular in teaching will also be welcomed.

The editor would welcome information about other sites.

Giorgio Bagni, Italy
Coralie Daniel, New Zealand
Paulus Gerdes, Mozambique

Visit our new website at
www.mathedu-jp.org/hpm/index.htm

Call for papers

ANNOUNCEMENT
Dawn Leigh Anderson Editor of Math Roots, a column in *Mathematics Teaching in the Middle School*, published by the NCTM, has launched the following call for articles: *Mathematics Teaching in the Middle School*. MTMS will be publishing four articles in 2003-2004. If you are interested in submitting an article, please send it to me, Dawn Leigh Anderson, electronically. The deadline for the first article in this volume is February 15. The next two articles are due early April, June, and August. Please contact me directly if you have any questions. I look forward to your submissions.

Dawn Leigh Anderson
Editor, Math Roots, Assistant Professor,
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danderson@exchange.fullerton.edu.

GUIDELINES FOR MATH ROOTS
Purpose:
This department should highlight rich and interesting mathematics topics from the history of mathematics. Although articles may include a few sentences about the lives of mathematicians of the past, this department is not intended to simply present biographies of famous mathematicians.

Articles for this department should be written for teachers to use with students and relate to mathematical topics commonly taught in the middle grades. The articles should be written in a style that is inviting to the average middle school student. Articles will include student worksheets that involve students in actually doing mathematics. The last part of the manuscript will contain teacher notes and solutions to the worksheets. Illustrations or some type of appropriate visuals should accompany the manuscript upon submission. Articles may be about:

- How human understandings of a particular mathematical idea have evolved over time
- How math symbols and other mathematical conventions have changed over time to their present form
- Mathematical tools, their uses in the past, and their present day counterparts
- Other historical perspectives of interest to middle school students and teachers

Articles for this department must be historically accurate and appropriate references should be cited. In the event that there are differing historical views, reference to that fact should be included.

Manuscript Submission:
Manuscripts should be double spaced and 3-5 pages in length. The student worksheet(s) should be 2-3 pages, double-spaced.

Conference reports

Colloquy Ubiratan D'Ambrosio - Commemoration of his 70th birthday

São Paulo, December 9 2002

With a scientific colloquy, the 70th birthday of Ubi D'Ambrosio was commemorated on December 9 2002 in the auditorium of the Faculty of Education of the University of São Paulo.

The program of the colloquy was the following - in the morning: opening section and conferences from: Prof. Dr. Rodney Carlos Bassanezi (UNICAMP), Profa. Dra. Maria Aparecida Viggiani Bicudo (UNESP), Prof. Dr. Júlio Roberto Katisnky (USP).
In the afternoon there was a discussion panel about the contribution of D'Ambrosio to the different areas of the scientific knowledge, with the representation of the Brazilian Society of History of the Science, Brazilian Society of Mathematics Education, Brazilian Society of History of the Mathematics, Society of Studies of the Future, International Study Group on Ethnomathematics and

International Association for Science and Cultural Diversity

Friends, students and members of the family attended the colloquy and they left depositions on the great importance of the Prof. D'Ambrosio for the cultural and academic atmosphere in Brazil. The commemoration ended with a special dinner. The event was organised by the Brazilian Society of History of the Mathematics and Group of Studies and Research in Ethnomathematics -FE/USP

Sergio Nobre
Brazil

Association of Mathematics Teachers of India and Delhi
Delhi, December 27-29 2002

Dr R. C. Gupta gave the Presidential Address entitled "5000 years in the world of mean" at this conference. This was about the history, construction and other exposition of about a score of mathematical means including the classical ones (arithmetic, geometric and harmonic means). The pride of place in the presentation was that of the Arithmetic-Geometric Mean (AGM) which was first announced by J. L. Lagrange in 1784 but was later rediscovered by K. F. Gauss in 1791 at the age of 14. For any two positive numbers a_0 and b_0, the AGM is the common limit of the sequences $a_{n+1} = (a_n + b_n)/2$, $b_{n+1} = \sqrt{(a_n b_n)}$ for $n = 0, 1, 2\ldots$. using a formula based on AGM, Tamura and Kanada computed π to over 16 million decimal places!

There were other references to the history of mathematics in the conference, the main one being the AMTI (R. C. Gupta) Endowment Lecture on History of Mathematics which was given by Dr. N. C. P. Ramacharyulu who spoke on "Pythagorean Triplets, a mine foe mathematical discoveries". We can express the legs a and b, and the hypotenuse c, of a Pythagorean triangle in terms of the generators m and n as $a = m^2 - n^2$, $b = 2mn$, $c = m^2 + n^2$. The speaker illustrated that this is a rich mine of historical study especially in the field number theory using many cases under different conditions. In particular he dealt with the formation of pandigital numbers in which each of the ten digits exactly once e.g. $m = 66$ and $n = 5$ gives us a Pythagorean triangle whose area will be the pandigital number 1476958230. (Readers may like to find another such case - answer at the end of the report.)

In the Valedictory Lecture, Prof. R. C. Gupta narrated a number of historical pieces (from Sanskrit works) which can be used in classrooms. Examples include

- Baudhayana's approximation (about 500BC)
  $\sqrt{2} \approx 1 + 1/3 + 1/(3\text{x}4) - 1/(3\text{x}4\text{x}34) = 577/408$
- Aryabhata's approximation (AD 499) $\pi \approx 62832/20000$
- Brahmagupta's formula (AD 628) for the area of cyclic quadrilaterals Area $= \sqrt{((s-a)(s-b)(s-c)(s-d))}$ where $2s = a + b + c + d$
- The first glimpse of imaginary numbers in Mahavira (AD850) when he stated: "Square of $+a$ as well as of $-a$ is $+a^2$, and so square root of $+a^2$ is $+a$ and also $-a$. But $-a^2$ is non-square in form and so it has no square root."

(The other pandigital number is found using $m = 406$, $n = 279$)

Prof. R. C. Gupta
Jhansi, India

Announcements of events

V Brazilian National Meeting on History of Mathematics - V SNHM

April 13 - 16, 2003
UNESP - Rio Claro - Brazil

Organisation: Brazilian Society on History of Mathematics - SBHMat
Chair: Marcos Vieira Teixeira
The meeting consists of:
- Opening Conference
- 2 Round Table
- 16 Conferences
- Poster Communications
- Oral Communications
-13 Short Courses

Details can be seen at the congress website:
www.rc.unesp.br/igce/matematica/vsnhm
For more information contact.
Marcos Vieira Teixeira : marti@rc.unesp.br

Eighth meeting of the history of mathematics section in the Deutsche Mathematiker Vereinigung

May 28 to June 1 2003

"Politische Akademie Biggesee"
Attendorn/Neu-Listernohl.
This series of meetings is well established and serves for exchanges between mathematics historians and mathematicians and teachers of mathematics interested in the history of their subject.

Particularly welcome are reports on new research findings, commemorations of anniversaries and applications of research on mathematics history to teaching mathematics in schools and universities. Information and registration via the web-page:
http://www.math.uni-siegen.de/geschmath/tagung03.html
or via e-mail:
hein@mathematik.uni-siegen.de

HPM Satellite of the XI Inter-American Conference on Mathematics Education

July 10 - 12, 2003
FURB - Blumenau - Brazil

Organisation: Brazilian Society of History of Mathematics - SBHMat
Chair: Sergio Nobre

Information: sbhmat@rc.unesp.br

Colloque François Viète, un mathématicien en son temps (Fontenay-le-Comte 1540 - Paris 1603)

19 septembre - 20 septembre 2003
Nantes & Fontenay-le-Comte, France
(première annonce)

Le Centre d'histoire des sciences et des techniques François Viète de l'Université de Nantes organise, en collaboration avec l'IREM de Nantes et la Ville de Fontenay-le-Comte, un colloque en commémoration du 400ème anniversaire de la mort du mathématicien français François Viète.
The François Viète Centre for the history of science and techniques of the University of Nantes is organising, in collaboration with the IREM of Nantes and the town of Fontenay-le-Comte, a colloquium commemorating the 400th anniversary of the eath of the French mathematician François Viète.

Le Colloque se tiendra les vendredi 19 septembre et samedi 20 septembre 2003 dans le cadre des Célébrations Nationales du Ministère de la Culture. La première journée aura lieu à l'Université de Nantes, elle concernera l'œuvre scientifique de François Viète. La seconde journée sera organisée à Fontenay-le-Comte avec la collaboration de la Ville de Fontenay-le-Comte, elle situera François Viète en son époque.
The Colloquium will take place on Friday 19 September and Saturday 20 September 2003 under the auspices of the National Celebrations of the Ministry of Culture. The first day will take place at the University of

Nantes, and will deal with the scientific work of Viète. The second day will be organised at Fontenay-le-Comte with the collaboration of the town council and it will contextualise Viète in his time.

Conférenciers prévus: Jacques Borowczyck (IUFM Orléans-Tours), Pascal Brioist (Université de Tours), Louis Charbonneau (UQAM, Canada), Karine Chemla (CNRS, Paris), Giovanna Cifoletti (EHESS, Paris), Hugues Daussy (Université du Maine), Jean-Paul Delahaye (Université de Lille I), Paolo Freguglia (Université de l'Aquila, Italie), Enrico Giusti (Université de Florence, Italie), Didier Poton (Université de Poitiers), Guy Saupin (Université de Nantes), Muriel Seltman (Royaume-Uni).
Presenters envisaged: - as above

Organisation: Evelyne Barbin et Anne Boyé.

Pour plus d'informations ou pour recevoir les formulaires d'inscriptions, s'adresser à evelyne.barbin@wanadoo.fr
For more information on how to receive the application forms contact
evelyne.barbin@wanadoo.fr

The History and Use of Proof in Mathematics

September 20 - 21 2003
Oxford, UK

A joint meeting between the BSHM and Oxford University Department for Continuing Education

Organiser: Raymond Flood
Raymond.Flood@conted.ox.ac.uk

The programme for this two-day conference will cover a variety of aspects of the history and use of proof. Issues addressed will include early examples of proof in mathematics, developments in proof, famous problems and the search for proof, software correctness, and proof in the school mathematics curriculum.

The conference will appeal to those working in mathematics and mathematics education as well as those with a general interest in the subject.

For further details when available please contact Administrator, Day and Weekend Schools, OUDCE, 1 Wellington Square, Oxford, OX1 2JA
telephone (+44) (0) 1865 270368.

American Mathematical Society

December 2003
Bangalore, India

There will be a session on History of Mathematics at this meeting. The coordinator for the session is Professor Gérard Emch. Contact him at the Department of mathematics, University of Florida, Little Hall, P.O.Box 118105, gainesville FL 32611-8105, U.S.A.
Email gge@math.ufl.edu

HPM 2004 satellite conference of ICME-10

July 12 - 17, 2004
Uppsala, Sweden
(First Announcement)

We are happy to inform you that the HPM satellite conference of ICME-10 will take place on July 12 - 17, 2004 in the historic town of Uppsala, Sweden. It will be organised by the department of Mathematics at Uppsala University.
The chairman of the local organising committee is Sten Kaijser who is also the contact person in Uppsala.
A programme committee has been founded consisting of

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About the conference

HPM is the International Study Group on the Relations between History and Pedagogy of Mathematics affiliated to ICMI. Among the activities of the group HPM there is the tradition of organising satellite meetings of the conference ICME. We list below these meetings:
1984 ICME-5 (Adelaide, Australia), satellite meeting in Sturt Campus of the University of Adelaide
1988 ICME-6 (Budapest, Hungary), satellite meeting in Florence (Italy)
1992 ICME-7 (Québec, Canada), satellite meeting in (Toronto, Canada)
1996 ICME-8 (Seville, Spain), satellite meeting in (Braga, Portugal)
2000 ICME-9 (Tokyo-Makuhari, Japan), satellite meeting in (Taipei, Taiwan).
The HPM Satellite conference is a unique occasion to attend lectures, workshops, research reports from all over the world about the use of history in mathematics education, history of mathematics, history of mathematics education. The participants to the HPM meetings are researchers in history, in mathematics education, and teachers who have experimented the use of history in their teaching.

Books or proceedings published after the previous HPM satellite meetings:
- Calinger, R. (editor): 1996, *Vita mathematica*, MAA Notes n.40. (HPM 1992)
- Lagarto, M. J., A. Vieira & E. Veloso (editors): 1996, *Proceedings of Second European summer university and satellite meeting of ICME-8* (Braga, Portugal). (HPM 1996)
- Katz (editor): 2000, *Using history to teach mathematics: An international perspective*, Mathematical Association of America. (HPM 1996)
- Horng, W.-S. & F.-L. Lin (editors): 2000, *Proceedings of the HPM 2000 Conference History in mathematics education. Challenges for a new millennium. A satellite meeting of ICME-9*. (HPM 2000)

About the venue

The city of Uppsala is one of the oldest cities in Sweden. It was once considered the capital of Sweden and it is still the ecclesiastic

capital since the residence of the archbishop of Sweden lies in Uppsala.
Uppsala has a famous university, founded 1477, which is the oldest in Scandinavia. The university has had many famous scholars and scientists of which the founder of botany, Carl von Linne is perhaps the most well known. Also some of Sweden's most prominent mathematicians during the 20th century, foremost among them Arne Beurling and Lennart Carleson, were educated and for a substantial part of their career active in Uppsala.

For further information contact Sten Kaijser <sten@math.uu.se>. There will soon be a web page under
http://www.math.uu.se/hpm

Fulvia Furinghetti & Sten Kaijser
Italy & Sweden

A dodecahedron has 12 faces and there are 12 letters in the word dodecahedron.

What other solid has this property?

• TIME
• A DOZEN DIALS
• MATHEMATICAL TRADITION IN THE NORTH OF ENGLAND

Time by Silke Ackermann and Paul Buck is published by the British Museum at £8.99. This is an A4 book with 32 pages plus 4 pages of press-out-and-make models of a universal equatorial dial (there are two separate models - one for each hemisphere), a nocturnal (again, one for each hemisphere) and a perpetual calendar. It even comes with a small compass on the front for your equatorial dial! I can supply this at £3 (UK only - cash or cheque) or €10 (or a £5 note) (Europe) or $8 (rest of world) in used notes.

A Dozen Dials (published in 1998) by Peter Ransom is a collection of the first 12 sundial articles concerned with the history of mathematics from the BSHM Newsletter with extra illustrations and further details that came to light from correspondence. It is an A5 book with viii + 56 pages. I can supply this at £7 (UK only - cash or cheque) or €10 (Europe) or $13 (rest of world) in used notes.

Mathematical Tradition in the North of England by Wallis, Wallis, Fauvel and Ransom (1991) was published as an A4 66 page book to accompany the exhibition at The Mathematical Association's Annual Conference in Newcastle-upon-Tyne. I can supply this at £6 (UK only - cash or cheque) or €10 (Europe) or $12 (rest of world) in used notes.

It works out cheaper if you buy more than one book! For all orders and costs please contact me at
pransom@btinternet.com
so I can let you know total cost and whether there are any books available.

Peter Ransom

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

History in Mathematics Education

An ICMI Study

edited by

John Fauvel
The Open University, UK
Jan van Maanen
University of Groningen, The Netherlands

This book investigates how the learning and teaching of mathematics can be improved through integrating the history of mathematics into all aspects of mathematics education: lessons, homework, texts, lectures, projects, assessment, and curricula.

Most of the leading specialists in the field have contributed to this ground-breaking book, whose topics include the integration of history in the classroom, its value in the training of teachers, historical support for particular subjects and for students with diverse educational requirements, the use of original texts written by great mathematicians of the past, the epistemological backgrounds to choose for history, and non-standard media and other resources, from drama to the internet.

Resulting from an international study on behalf of ICMI (the International Commission of Mathematics Instruction), the book draws upon evidence from the experience of teachers as well as national curricula, textbooks, teacher education practices, and research perspectives across the world. Together with its 300-item annotated bibliography of recent work in the field in eight languages, the book provides firm foundations for future developments.

Focusing on such issues as the many different ways in which the history of mathematics might be useful, on scientific studies of its effectiveness as a classroom resource, and on the political process of spreading awareness of these benefits through curriculum design, the book will be of particular interest to teachers, mathematics educators, decision-makers, and concerned parents across the world.

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