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

No. 51 November 2002

Where is it?
The answer is on the back page, but see how well you know your mathematical heritage before looking at the answer!

Message from our Chairperson

And the winner is …

At the top of this Newsletter we have the new logo. In the previous issue of the Newsletter we listed the names of the applicants. Their works were judged by the participants to the Abel-Fauvel Conference held in June 2002 in Kristiansand (see Newsletter 50). Since it appeared that there were some technical problems in reproducing the given materials, Staffan Rhode offered to contact a professional designer (Eva-Lotta Karlsson) for us. We (Peter and me) both trusted our colleague and the famous tradition of Swedish design and agree. Thus we have a logo which comes from outside our community and represents how people see mathematicians. Also the logo is austere and simple, i.e. it contains only essential information without extraneous details. I like it because it is politically correct:

1. It is black and white thus it can be seen also by people who don't have a colour screen or colour printer. Thus it is easy to be reproduced.

2. It is round, so it has not orientation (no left, no right, no East, no West).

3. There is no reference to any particular culture.

I hope that our readers like it. We encourage you to use it freely in the activities linked to HPM (email Peter if you want a copy of it). It will make it easier to recognize the cultural background and to acknowledge the cultural net created by our international group. My thanks to all those who submitted designs and gave us the pleasure of judging them.

Fulvia Furinghetti

Logo by Eva-Lotta Karlsson of
Eva-Lotta Karlsson Design , Ringvägen 2, SE-185
32 Vaxholm, Sweden Phone: +46-(0)8-541 754
22 E-mail: eva_lotta_karlsson@hotmail.com

A new Sundial Group in Iran

Friday 27 September 2002 was the first day of establishment and formal activity of a "Sundial Group" as a working branch of the THAQIB Astronomical Society in Rasht (center of the Gilan province in northern Iran, on the southern coast of the Caspian Sea). The seat of the Society is in a newly built beautiful park, which is planned to become a "Sundial Park".

At present there is an analemmatic sundial (shown above) in this park that attracts many visitors to the park. The members of the Sundial Group (mostly young schoolgirls) plan to study the history along with mathematical, astronomical and artistic aspects of sundials, which provide them with a concrete application of the mathematical courses, especially trigonometry. They are supposed to be in charge of designing several sundials for the cultural buildings in the whole province in future. Any comments or communications may be sent to to:
Sundial Group, Thaqib Astronomical Society,
P.O. Box 13145-1785, Tehran, IRAN

The seat of Thaqib Astronomical Society in Mellat park, Rasht, Iran

Mohammad Bagheri
Tehran, Iran

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.

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

Mathematics in School - History Special

The Mathematical Association of the UK is again producing a special edition of *Mathematics in School*. It is being assembled by guest-editor John Earle, of the British Society for the History of Mathematics.

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! So look out for the January 2003 issue of *Mathematics in School*, the second History Special. If you do not subscribe to *Mathematics in School*, single issues will be available for you to purchase.
Please contact
The Mathematical Association,
259 London Road,
LEICESTER LE2 3BE.

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

Peter Ransom
Romsey, UK

The journal John Fauvel projected: History of Mathematics in Education

The last email John Fauvel sent me, on the typical email date Tue Oct 10 17:14:49 MET 2000, contained the text of a proposal that John and I had been working on in the months after finishing the ICMI Study about the role of the history of mathematics in the teaching and learning of mathematics. The proposal was still a draft, but we had discussed it already with quite a few colleagues, and also with Michel Lokhorst of Kluwer's who had published the ICMI Study book.

John's idea and great wish was to have a journal about the overlap of history, mathematics and education, a field that he had cultivated since the early 1990's, in his publications but most importantly in his organisational work for the History and Pedagogy of Mathematics (HPM) Study Group, which he chaired in the years 1992 to 1996.

This note presents the proposal, and ends with a call to all of you, hoping that together we can make John's vision to some extent come true.

The proposal, some extracts

John started with informing the reader about the field, and the need for the journal. His text is intended for a person in a publishing house who was responsible for the decision about establishing a new journal.

For the past thirty years there has been increasing interest in and enthusiasm for the contribution the history of mathematics can make, in a number of ways, to mathematics education. This enthusiasm has come from teachers, education researchers, historians of mathematics and others, and has in turn provoked an increasing body of work in the field, which presently appears sporadically in a variety of journals whose prime focus is other matters. The time is ripe for a refereed journal in which work in this area would appear.

As a title for this "new academic journal" he proposed *History of mathematics in education*. He went on to discuss the "Recognition of the field". It is interesting to read how he conceived of what had happened in the last decades:

In 1976 ICMI (the International Commission on Mathematical Instruction, a commission of the International Mathematical Union) approved the setting up of an International Study Group on the Relations between History and Pedagogy of Mathematics. This study group (called HPM) has since 1984 held quadrennial gatherings as satellite meetings of ICME (the four-yearly International Congress of Mathematics Education) as well as a number of other meetings across the world, at which a large number of teachers, researchers, teacher educators, historians and others have shared research and experiences. HPM is not the only organisation with such interests. Many meetings of mathematicians across the world (from the quadrennial International Congress of Mathematicians to national and regional gatherings) regularly include sections or sessions on history of mathematics and its relations with mathematics teaching. A number of national initiatives have been started, notably in France (the inter-IREM Commission), UK (the BSHM's annual HIMED meetings) and the USA (the Washington Institute, funded by the National Science Foundation) which have increased enthusiasm for and activity in the field.

Increasingly, papers reflecting this activity are appearing in a range of mathematical and educational journals. Furthermore, a number of collections of papers in the field have appeared (a recent bibliography lists eight special issues of journals since 1986 and thirteen books since 1990). A most important area of growth for the field is activity in teacher education establishments. Many

normal universities and teacher training colleges now incorporate study of history of mathematics within the curriculum for future mathematics teachers, together with study of how teachers and learners can benefit and continue to benefit in a number of ways from historical resources.

The most recent evidence of recognition of the field is the Study set up in 1996 by ICMI to report on The role of the history of mathematics in the teaching and learning of mathematics, under the chairmanship of John Fauvel and Jan van Maanen. Following a Study Conference in 1998 some sixty scholars from around the world worked to produce a book, which has now been published: *History in mathematics education, the ICMI study*, Kluwer 2000, 437 pages. The appearance of this report, which has aroused considerable interest, is expected to consolidate progress in the field thus far and provide a jumping-off point for future studies in the area.

John and I had designed the structure of the journal to a rather detailed level, and I repeat this section of the proposal explicitly, since we can use it as an inspiration for our current plans, to be set out at the end of this note.

Most papers published in the journal would fall into one of two categories.

1 'Empirical' papers describing ways in which history has been used or integrated within mathematics education at all levels, together with evidence of the student response or benefit.

2 'Theoretical' papers about the use or integration of history in mathematics education: philosophical studies, scientific studies and evaluations &c.

These categories are sometimes not in practice quite clearly demarcated, but through the contributions of referees and the editorial board the criteria for quality and usefulness will rapidly evolve. Papers would be considered about the relations of history of mathematics to science education (or indeed art education or other interdisciplinary studies). In addition, there are four further categories, which would be represented occasionally.

3 Bibliographical papers describing historical resources for teachers.

4 Occasional reprinting of classic historic texts on the relations between history and mathematics education.

5 While we would not rule out articles submitted on the history of mathematics education, that is not the prime focus of HME; acceptance of such papers would depend on their containing clear pedagogical benefit.

6 Book reviews, thesis reviews and the like on books or theses relating to the field. Again, not in general of history of mathematics books unless the book or the reviewer sees clear pedagogical reverberations.

The proposal is also explicit about what articles would fall outside the scope of the journal:

• Papers of historical research into mathematics, with no pedagogical dimension.

• Papers of research in mathematics education with no historical dimension.

• Papers about the history or philosophy of science in science education, unless there are clear mathematical connotations.

And in order to emphasise that the journal would sell, there is a discussion of the expected readership: mathematics educators, mathematics education researchers, mathematics teachers (at all levels), student teachers, and historians of mathematics. Also libraries would buy the journal since, although no universities have departments in the combined fields of history and mathematics education almost all universities and colleges have mathematics education

departments, where the journal would be welcome as a source of inspiration.

Then the proposal continues with more practical things, as I shall do now myself Since my plan - and happily also the wish of Jackie Stedall, who succeeds John as the editor of the *BSHM Newsletter* - is to revive the Education Section of the *BSHM Newsletter* and to follow the ideas from John's proposal. This implies that the Education section from now on will publish articles in the vein as sketched in the quotes above.

As John and I found out when we were surveying the field for the ICMI Study, many colleagues have experience with the integration of history in mathematics education. They can now communicate with fellow teachers and researches through this section.

Articles, up to 10 pages long, are welcome through the email or ordinary mail Send one copy to <maanen@math.rugnl> or Jan van Maanen, Department of Mathematics, University of Groningen, P.O. Box 800, 9700 AV Groningen, The Netherlands, and one copy to Jackie Stedall at <jackie.stedall@queens.ox.ac.uk> or Jackie Stedall, The Queen's College, Oxford, OX1 4AW, UK

Jan van Maanen
Groningen, The Netherlands

Have you read these?

Articles

We consider as a whole the following four articles (by Dias, Furinghetti and Radford, Kronfellner, Safuanov). They share the common interest of the relationship between the historical development and the development in the individual. The discussion of Dias, Furinghetti and Radford is mainly based on theoretical works, while the papers of Kronfellner and Safuanov consider the genetic approach in specific cases.

… Dias, I.C.: 2002, 'History of mathematics in mathematics secondary education. An historical research', in Proceedings of ISCHE XXIV-2002 (Paris)

… Furinghetti, F. & Radford, L.: 2002, 'Historical conceptual developments and the teaching of mathematics: rethinking phylogenesis and ontogenesis', in L. English (editor), Handbook of international research in mathematics education, L. Erlbaum Associates, Mahwah, New Jersey, 631-654.

… Kronfellner, M.: 2002, 'A genetic approach to axiomatics', in I. Vakalis, D. Hughes Hall, C. Kourouniotis, D. Quinney & C. Tzanakis (editors), Proceedings of ITCM2 (Hersonissos, Crete, Greece), CD-Rom, J. Wiley & Sons.

… Safuanov, I.S.: 2002, 'Design of the system of genetic teaching of algebra at universities', in I. Vakalis, D. Hughes Hall, C. Kourouniotis, D. Quinney & C. Tzanakis (editors), Proceedings of ITCM2 (Hersonissos, Crete, Greece), CD-Rom, J. Wiley & Sons.

Books

Stillwell, John, *Mathematics and its History*. 2nd edition, Springer-Verlag, Berlin, Heildelberg, New York, 2002. Pp xviii+542; price €59.95, US$54.95
This treasure-book is quite suitable for adoption as an undergraduate text. The edition includes new chapters on Chinese and Indian number theory, on hypercomplex numbers etc.

Arild Stubhaug, T*he mathematician Sophus Lie (1842-1899): It was the Audacity of my thinking*. Springer-Verlag, Berlin, etc., 2002. Pp xi+555; price €39.95, US$44.95

Gurajada S. Murty: *Paratattva-ganita-dassanam. Egometry or Principles of Transcendental Philosophy of Mathematical Truth*. Motilal Banarsidass, Delhi, 2002. Pp 400; price Rs. 495/-. (India's Scientific Heritage No.8)

R. Sarva Jagannadha Reddy: *A Proof for the Exact Value of π (A Canto Edition)*. Chittoor (India), 2001. Pp iv+80; price unknown

S. S. Demidov (editor), *Istoriko matematicheskie issledovaniya* ("Research in the history of mathematics"). 2nd series, issue 6(41), Janus Publishing House. Moscow, 2001; Pp 400
This issue of the famous Russian serial has two dozen papers including "On the application of Newton's polygon method in the XVIIIth century" (by M. G. Sorokova, pp 232-245), and "Egyptian geometry and Greek Science" (by S. N. Bychov. Pp 277-284)

Fulvia Furinghetti
Genoa, Italy
Prof. R. C. Gupta
Jhansi, India

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 editor would welcome information about other sites.

Items for sale or exchange

Professor R C Gupta offers the following items for sale from his private collection.

Proceedings of International Seminar on Jaina Mathematics and Cosmology (1985). Meerut, 1991, Pp260 US$ 30

T. K. Nag, *The Roots of Civilisations: Reading, writing and arithmetic.* Calcutta, 1999. Pp116 US$ 14.95

History in Mathematics Education: Proceedings of a Workshop (1983). Paris, 1987. Pp208 US$ 20

The Crest of the Peacock: Non-European Roots of Mathematics. (scholars from developing countries may enquire about this book)

L. C. Jain & A. Jain, *Philosopher-Mathematicians: The Jaina School of Mathematics*. Meerut, 1985. Pp50 US$ 10

Postal charges US$ 5 for each book.
All orders and enquiries to Professor R. C. Gupta, Ganita Bharati Academy, R-20, Ras Bahar Colony, Jhansi-284003, India

Mohammed Bagheri informs us of the following.

Copies of Kushyar ibn Labban's *Principles of Hindu Reckoning*, Arabic text with Persian translation, ed. & tr. M. Bagheri, published in Iran, 1988, 100 pp. are available.
Kushyar was an Iranian mathematician and astronomer who lived around 10 centuries ago.

Requests may be sent to M. Bagheri (P.O. Box 13145-1785, Tehran, IRAN). You may put a 5 Euro note in the envelope or 10 postcards from your country, or a book on history of mathematics relating your country. If none of these is possible for you just let him know, and he will send it for free.

Neil Bibby

Neil Bibby had a lively interest in the history and pedagogy of mathematics and his many talents were brought into play when he helped to organise the first BSHM conference for mathematics teachers who were interested in the history of the subject and who wished to incorporate history into their teaching. This conference at Leicester in 1990, known as HIMED90, was an enormous success and many similar conferences followed. The success was in no small part due to Neil's hard work and also to the contacts he had already established in The Mathematical Association. For Neil, BSHM and other organisations such as the MA and the HPM, provided a wide community of people who worked in mathematics teaching at all levels, from the primary school to university level. This community provided a range of contacts, both in the UK and abroad, that lay outside any administrative working environment and where contact and discussion was based on mutual interests, the excitement of the subject and, especially for Neil, a desire to get to the detail of a mathematical historical story.

One of the reasons these contacts were so important to Neil was that he did not find it easy to work within the constraints of formal organisations. However, his time at Dr. Challenor's Grammar School, Amersham, where he enjoyed contributing so much to choral work, was probably among his happiest. Neil took a year out from teaching to study for a Master's degree at the University of Sussex, after which he took a temporary one-year post at King's College, London and began to extend his wide circle of professional colleagues. Later, when he came to Exeter University, he had already begun work as an examiner in mathematics for the International Baccalaureate and his experience in international mathematics teaching helped him later to get a post at the International School in Milan and then to continue with other IB work. His brief periods of teaching at British Universities, such as Lancaster and Nottingham, made him rather depressed about the nature of teacher education in this country. Neil went to the Netherlands and, while doing some teaching there, also began his own organisation to support teachers and students of mathematics, largely aimed at international schools and IB teachers and students. For the past two or three years he has moved between his very nice house in Brighton and rooms in The Hague.

My own meetings with Neil were often abroad. We frequently found ourselves to be the only British members of conferences in France and when I found myself the only English speaking participant at such a conference I sorely missed his company. Neil represented The Mathematical Association on a committee of European mathematics teachers and his journeys to Paris or to the Netherlands were usually interrupted by an overnight stay in Lille. It was in Lille in 1990 that we had both attended a Université d'été on the history of mathematics and he instantly fell in love with the city.

Neil spoke to the BSHM Christmas Meeting 2001 on Bernoulli, Pearson, Percy Nunn and the Normal Distribution. He had recently finished editing a chapter in a book on mathematics and music, under the editorship of Robin Wilson, due to be published soon by OUP.

Neil Bibby 1946–2002 died at home in Brighton.

Neil Bibby and FulviaFuringhetti on the round table at Montpellier, July 1993

Chris Weeks
Beaworthy, UK

Conference reports

ICTM2 1-6 July 2002, Crete

The second International Conference of the Teaching of Mathematics (ICTM2) was organised by the University of Crete in the village of Hersonissos on this beautiful island. This conference was mainly devoted to undergraduate level and touched on a range of themes (educational research, technology, innovative teaching methods, curricular innovations, preparation of teachers, mathematics and other disciplines, distance learning). One of the panels was organised in connection with the activities of HPM. It was titled "On the role of the history of mathematics in mathematics education". The participants were Fulvia Furinghetti (coordinator), Masami Isoda, Man-Keung Siu, Costas Tzanakis).

Furinghetti introduced the discussion by emphasing the need of establishing links between the history of mathematics and mathematics education to study the role of the history. Siu played the role of the devil's advocate and focused on the cons in using history in the classroom. Tzanakis considered the relation of mathematics with other disciplines and discussed what history has to say on the relation between mathematics and other disciplines and the related implications. Isoda presented the main lines of a project carried out in Japan, which has history as a leading element.

Fulvia Furinghetti

Le septième colloque maghrébin sur l'histoire des mathématiques arabes Marrakech du 30 mai au 1 juin 2002

The seventh North African symposium on the history of Arabic mathematics. Marrakech 30 May - 1 June 2002

Le septième colloque maghrébin sur l'histoire des mathématiques arabes (COMHISMA7) s'est déroulé à l'Ecole Normale Supérieure de Marrakech, Maroc du 30 mai au 1r juin 2002. Le colloque dont la séance d'ouverture a été honorée par la présence du Ministre de l'Education Nationale, a connu la participation de quarante conférenciers. Les travaux du colloque ont été suivis par près d'une centaine de personnes, intéressées par l'histoire des mathématiques ou par leur utilisation dans l'enseignement. Les thèmes abordés ont été très diversifiés et l'HPM a été représenté par six communications ainsi qu'une table ronde.

The 7th North African Symposium on the History of Arabic Mathematics took place at the Marrakech Education Training School in Morocco from 30 May - 1 June 2002. The symposium, whose opening meeting was graced by the presence of the Minister for Education, comprised 40 lecturers. The work of the symposium was followed by almost a hundred people interested in the history of mathematics or by its use in teaching. The subjects dealt with were very varied and six talks as well as a round table represented the HPM.

Jeudi 30 mai 2002 (*Thursday 30 May*)
Conférence d'ouverture: M. A. TAZI (Membre de l'Académie du Royaume du Maroc) L'activité intellectuelle dans le Maghreb Médiéval (En arabe)
Opening lecture M.A. TAZI (member of the Royal Academy of Morocco) Intellectual Activity in medieval North Africa (in Arabic)
Mr. Paul Kunitszch (Univ. de Munich, Allemagne): Quelques observations sur les nombres hindou-arabes à partir d'un nouveau manuscrit du Kitab Al Bayab d'Al-Hassar
A few observations on hindu-arabic numbers based on a new manuscript from Kitab Al Bayab d'Al-Hassar
Mr. Mahdi Abdeljaouad (I.F.C, Tunis, Tunisie) Le manuscrit mathématique de Jerba: une pratique des symboles algébriques maghrébins en pleine maturité
The mathematical manuscript of Jerba: the use of N.African algebraic symbols at the height of their education
Mme. Elena Ausejo et Mr. Mariano Hormigon (Univ. Saragosse, Espagne) La

question des influences arabes sur l'œuvre mathématique de Ramon LULL.
The question of Arabic influences on the mathematical works of Ramon Lull
Mr. Louis Charbonneau (UQAM, Montréal, Canada) L'histoire des mathématiques peut-elle changer l'attitude des élèves face aux mathématiques ?
Can the history of mathematics change the attitude of pupils towards mathematics?
Mr. Bilani Hassan (Univ. Alep, Syrie) Utilisation des techniques contemporaines pour la reconstitution des instruments astronomiques anciens : l'exemple de l'astrolabe (En arabe)
The use of contemporary techniques in the reconstruction of ancient astronomical instruments: the astrolabe (in Arabic)
Mr. Lorch Richard (Univ. Munich, Allemagne) Le traité d'al-Farghani sur la construction de l'astrolabe
The treaty of al-Farghani on the construction of the strolabe
Mr. Danoun Abd l-wahid (Univ. Mawsil, Iraq) Les contributions des astronomes de l'Andalus dans le développement des tables astronomiques (En arabe)
The contribution of Andalusian astronomers to the development of astronomical tables (in Arabic)
Mr. Michel Guillemot (Univ. Paul Sabatier, Toulouse, France) Des fragments de Berlin aux relations de Pythagore
Fragments of Berlin in Pythagoras' relations
Mr. Abbdellatif El-Houta (Délgation M. E.N, El-Jadida, Maroc) La science du temps et l'astronomie populaire
The science of time and popular astronomy
Mr. Abdelmalek Bouzari (ENS Kouba Alger, Algérie) Quelques aspects des coniques dans la tradition mathématique andalouse
A few aspects of the conics in Andalusian mathematical tradition
Mme. Kheira Megri (CNRS, Paris, France) Comment Ibn al-Haytam et Kamal ad-dine al-Farissi ont révolutionné l'optique?
How did Ibn al-Haytam and Kamal ad-dine al-Farissi revolutionise optics?
Mr. Angel Ramirez, (I.E.S La Riojo, Espagne) La philosophie dominante au XXe siècle sur les mathématiques et la marginalisation concernant l'histoire des apports mathématiques des cultures non européennes.
The main 20th century philosophy on mathematics and marginalisation concerning the history of mathematical benefits for non-European cultures
Mr. Abdellah El Idrissi (ENS, Marrakech, Maroc) L'histoire des mathématiques arabes dans la formation des enseignants: exemples inspirés de la trigonométrie.
The history of Arabic mathematics in the training of teachers, examples inspired by trigonometry

Vendredi 31 Mai 2002 *(Friday 31 May)*
Mme. Puig Roser (Univ. Barcelone, Espagne) La sphea (safiha) d'az-Zarqali d'après le Kitab Djamii Al-Mabadi Wa'lghayat fi Ilm Al Miqat d'Abu al-Hasan al-Murrakushi
The safiha of d'az-Zarqali according to the Kitab Djamii Al-Mabadi Wa'lghayat fi Ilm Al Miqat d'Abu al-Hasan al-Murrakushi
Mr. J. Len Berggren (Univ. Fraiser, B.C, Canada) Abou l-Jud's contributions to mathematics
Mr. Gert Schubring (Univ.Bielefeld, Allemagne) Méthodes d'analyse des manuels historiques des mathématiques
Methods of analysis in ancient mathematical textbooks
Mr. Hoyrup Jens (Univ.Roskilde, Danmark) Early abbaco algebra as a source of indirect information about little known Arabic traditions
Mr. Azzedine Lazrak et Mr. Khalid Sami (Univ. Cadi Ayyad, Marrakech, Maroc) La notation symbolique, le tournant de la mathématique arabe
Symbolic notation, the pivot of Arabic mathematics
Mr. Menso Folkerts (Univ. Munich, Allemagne) La relation des nombres hindou-arabe et l'abaque médiéval
The relationship between hindu-arabic numbers and the medieval abacus
Mme. Yvonne Dold-Samplonius (Univ. Heidlberg, Allemagne) Magic of Muqarnas with video
Mr. Hmida Hadfi (I.F.C, Tunis,Tunisie) Etude du commentaire d'Ibn al-Haim sur al-

Yasminia et précisions de ces sources (maghrébines et orientales) (En arabe)
Study of the commentary of Ibn al-Haim sur al-Yasminia and details of these sources
Mr. Spagnolo Philipo (Univ. Palermo, Italie) Research in mathematic education and history : an semiotic approach
Mr. Bachir Ould Sidaty (I.N.P, Nouakchot, Mauritanie) Mathématique à travers les héritages : problème de la Mecque (En arabe)
Mathematics through heritage: the problem of Mecca
Mr. Randy K. Schwartz (C.Schoolcraft, Michigan, Etats Unis) Introducing Arab Historical Methods to a Two-Year College in the U.S
Mr. Sahli BelKacem (ENS, Kouba, Alger, Algérie) Les nombres amiables dans la tradition mathématique maghrébine (En arabe)
Amicable numbers in N. African mathematical tradition
Mme. Comes Mercé (Univ. Bacelone, Espagne) The localities in al-Maghrib and the meridian of water in the "Taj al-azyaj"
Mme. Emlia Calvo (Univ. Barcelone, Espagne) La permanence des traités de *miqat* au Maghreb aux VIII-IX/XIV-XV siècles : Ibn al-Banna et al-Djadari
The study of the treatises of miqat *in N. Africa in the 8/9th and 14/15th centuries: Ibn al-Banna and al-Djadari*
Mme. Brentjes Sonja (Univ. Franckfort, Allemagne) Les dictionnaires biographiques musulmans comme sources pour une histoire socio-culturelle des sciences anciennes
Muslim biographical dictionaries as sources for a socio-cultural history of the ancient sciences

Samedi 01 Juin 2002 *(Saturday 1 June)*
Mr. Pierre Pinel (Univ.Paul Sabatier, Toulouse, France) L'interprétation astronomique des sphériques de Ménélaos par Abu Nasr et at-Tusi
The astronomical interpretation of the spheres of Menelaus by Abu Nasr and at-Tusi

Mme. Fulvia Furinghetti (Univ. Geneva, Italie) History as a Tool For mathematics Education And For Research in Mathematics
Mr. Driss Lamrabet (Univ.Mohammed V, Rabat, Maroc) Les devinettes mathématiques dans la tradition mathématique maghrébine: exemple d'Ibn Haydur
Mathematical puzzles in N. African mathematical tradition: an example from Ibn Haydur
Mr. Ulrich Rebstock (Univ.Fribourg, Allemagne) Quelques remarques sur al Kitab al-Hawi li al-a'mal as-sultania wa rusum al-hisab ad-diwaniyya
A few comments on al Kitab al-Hawi li al-a'mal as-sultania wa rusum al-hisab ad-diwaniyya
Mme. Anissa Harbilli (ENS, Kouba , Alger, Algérie) Quelques procédés d'approximations dans les écrits mathématiques maghrébins des XIIe-XIVe siècles
A few approximation processes in N. African mathematical writings of the 12th to 14th centuries
Mr. Rouan Omar (ENS, Marrakech, Maroc) Evolution historique des programmes marocains de probabilité et de statistique aux niveaux secondaire et collégial
Historical evolution of Moroccan programmes for probability and statistics at secondary and tertiary levels
Mr. Ezzaim Laabid (ENS, Marrakech, Maroc) Les problèmes d'héritage et les mathématiques au Maghreb des XIIe-XIVe siècles : essai de synthèse
A synthesis of the problems of tradition and mathematics in N Africa from the 12th to 14th centuries
Mr. Taha Abd al-Quddous (Univ. Paul Sabatier, Toulouse, France) Remarques sur quelques termes employés dans les premières traductions des sphériques de Ménélaos
Comments on a few terms used in the first translations on Menelaus' spheres
Mr. Abdelaaziz Razzouki (ENS, Marrakech, Maroc) Les arts de la Guerre dans l'Occident musulman : Etude bibliographique
The Arts of War in the Muslim West: a bibliographic study
Table ronde: Histoire et Pédagogie des Mathématiques (HPM), Animée par F. Furinghetti (Italie), avec la participation de G. Schubring (Allemagne), L. Charbonneau

(Canada), I. Cristina Dias (Portugal) et A. El Idrissi (Maroc).
Round table - History and Pedagogy of Mathematics (HPM)
Conférence de clôture: Mr. Ahmed Djebbar (Université de Paris Sud, Orsay, France): Les mathématiques dans le Maghreb impérial du XIIe-XIIIe siècle
Closing lecture: Mr. Ahmed Djebbar: mathematics in the N. African Empire of the 17th/18th centuries
Le colloque a par ailleurs été marqué par deux événements, qui n'ont pas manqué d'émouvoir tous les participants
1- L'hommage rendu à Mme Yvonne Dold-Samplonious, de l'université de Heidlberg, en Allemagne, à l'occasion de son soixantième anniversaire
2- L'hommage rendu par le professeur Ahmed Djebbar, lors de la conférence de clôture à deux des grands historiens des mathématiques arabes : Mohamed El Manouni du Maroc et Ahmed Salim Saïdan de Palestine.
Pendant la clôture du colloque, rendez-vous a été donné pour le Huitième Colloque Maghrébin sur l'Histoire des Mathématiques Arabes en novembre 2004 en TUNISIE.
Les organisateurs tiennent à présenter leurs remerciements à tous ceux qui ont contribué à la réussite du colloque, notamment au Ministère de l'Education Nationale Marocain, à l'Agence Universitaire de la Fancophonie et à tous les participants.
In addition, the symposium was marked by two events that did not fail to move all the participants.
1 - The tribute paid to Mme Yvonne Dold-Samplonious on the occasion of her 60th birthday.
2 - The tribute paid by Professor Ahmed Djebbar during the conference's closing lecture to two of the great historians of Arabic mathematics: Mohamed El Manouni of Morocco and Ahmed Salim Saïdan of Palastine.
During the final session of the symposium, the date was set for the 8th North African Symposium on the history of Arabic mathematics in November 2004 in Tunisia.
The organisers wish to thank all those who contributed to the success of the symposium. Especially to the Moroccan Minister for Education, and the University Agency for French speaking countries and all the participants.

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GREDIM- ENS- Marrakech
Translated by Janet Ransom
Ferndown Upper School, UK

II CIEM: Report on the International Congress on Ethnomathematics in Ouro Preto, Brazil

The 2nd International Congress on Ethnomathematics (II CIEM) met 5-7 August 2002 at Ouro Preto, Brazil. Over 300 participants from 19 countries came from South Africa, Germany, Brazil, Canada, Denmark, Spain, United States, Greece, Guatemala, India, Italy, Japan, Mexico, Mozambique, New Zealand, Peru, Portugal, United Kingdom and Zimbabwe. The conference began with a moving tribute to Paulo Freire: entitled: "Paulo Freire's Contribution to the Epistemology of Ethnomathematics". During the conference four lectures were given: Terezinha Rios spoke about the "Philosophy of Education and Ethnomathematics Perspectives"; Emmanuel Lizcano talked was titled "The Mathematics of the European Tribe: A Case Study; Prof. Eduardo Sebastiani shared his experience with Ethnomathematics in national perspective of Brazil. The conference ended with a moving lecture given by Ubiratan D'Ambrosio entitled "Ethnomathematics an Overview". The conference was also organised around 6 Round Tables:

1 Ethnomathematics and Indigenous: Coordinated by: Bill Barton, New Zealand:
2 Ethnomathematics and Rural Education: Coordinated by: Gelsa Knijnik, Brazil
3 Ethnomathematics and its Theory: Coordinated by: Maria do Carmo Domite, Brazil
4- Ethnomathematics Urban Education: Coordinated by: Arthur Powell, United States;

5 Ethnomathematics and Teaching Qualification: Coordinated by: Lawrence Shirley, United States;
6 Ethnomathematics through History: Coordinated by: Franco Favilli, Italy

Two poster sessions allowed over 90 posters to be presented and discussed by conference participants. The posters showed the real diversity found in the emerging field of ethnomathematics. II CIEM also added a new activity, the presentation of the 1st Ubiratan D'Ambrosio Prize, which was awarded for the most significant work in ethnomathematics. The award was given for work in:

• Teacher Education: Helena Dória de Oliveira
• Rural Education: Franco Favilli, Laura Maffei and Irene Venturi
• Indigenous Education: Ieda Maria Giogo
• Urban Education: Josinalva Menezes, Simone da Silva and Rosália da Silva
• History /Epistemology: Roseli Correa, Caroline dos Passos and Dirceu dos Santos.

The III International Congress on Ethnomathematics will take place in Auckland, New Zealand in 2006. For further information related to future ethnomathematics activities we invite the reader to go to: ISGEm International Study Group on Ethnomathematics (http://www.rpi.edu/%7Eeglash/isgem.htm). For more information and a copy of the CD Rom, contact Prof. Eduardo Sebastiani at: sebastiani@uol.com.br.

Daniel Clark Orey
California State University, Sacramento
http://www.csus.edu/indiv/o/oreyd/

Announcements of events

International Conference on the History and Heritage of Mathematical Sciences

December 19-22, 2002
Cochin, India

This conference is being organised by the Indian Society for History of Mathematics and the Sukrtindra Oriental Research Institute at Cochin in collaboration with other institutions and organisations.
The conference will cover all aspects of the history and heritage of mathematics including mathematics, operational research, statistics, astronomy, and other disciplines.

The organising secretary is Dr. V. Madhukar Mallayya, e-mail <ichm2sori@hotmail.com> for further details.

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

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

- Fulvia Furinghetti (chairperson) <furinghe@dima.unige.it>, Dipartimento di Matematica, Università di Genova, Italy
- Sten Kaijser (secretary) <sten@math.uu.se>, Department of Mathematics, University of Uppsala, Sweden
- Abraham Arcavi <abraham.arcavi@weizmann.ac.il>, Weizmann Institute of Science, Israel
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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

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This house, in Pithiviers, (Loiret) France was where Denis Poisson was born.