Message from our Chairperson

A century ago

In the first period of the life of ICMI (International Commission on Mathematical Instruction) from 1908 to 1920, eighteen countries published 187 books or pamphlets on the status of mathematical instruction. One of the 53 reports published by Germany concerned the use of the history of mathematics in teaching (author Martin Gebhardt, Teubner, Leipzig, 1912). I think it may be interesting to know how the subject was viewed in those times, thus I report the review appeared (in French) in the journal *L'enseignement mathématique* (1913, a.15, 345-346) The author of the review is Arnold Reymond (Neuchâtel). The modern readers can consider which questions have been answered or are out of fashion and which are still under discussion.

The history of mathematics in secondary teaching

Die Geschichte der Mathematik im mathematischen Unterricht der höheren Schulen Deutschlands, von Gebhardt Martin. - The history of mathematics does not have the place it deserves in secondary as well as in tertiary education. This is the fact that M. Gebhardt emphasizes in his very rich and precise study on this subject.

By examining the mathematics schoolbooks he shows that, apart from a few exceptions, the historical hints are rare. Nothwistanding the teaching of mathematics based on its history could be made alive and more interesting for pupils, especially for those who dislike the formulas of which they do not see the meaning. Some problems become clear only if they are set in the original context where they are born. To understand the weight of differential and integral calculus it is important to compare Archimedes's methods with the methods created by the mathematicians of the seventeenth century, which are on the ground of modern analysis.

But the history of mathematics may be seen from a more general point of view. It is indispensable for those who like to have a classical and wide culture, because the development of sciences and of philosophy is intimately linked to that of mathematics. It is not necessary to insist on this point. It is very difficult to choose the essential questions in the history of mathematics. To make this choice easier M. Gebhardt put in the last chapter of his book a short analysis of works treating the historical development of mathematics. He also gives a detailed list of references (unfortunately only in German) of studies concerning a period or a particular subject.

Fulvia Furinghetti

The conference celebrating the anniversary of Cardano's birth

"Gerolamo Cardano, a student in Padua, a scientist in Europe" was the title of a conference, organized by the Dept. of Mathematics of the University of Padua (Italy) on Sept. 21-22, 2001, celebrating the fifth centennial of Cardano's birth.

The fame of Gerolamo Cardano (Pavia, 1501 – Rome, 1576) is presently linked to an algebraic formula (the solution by radicals of the equations of degree 3) and a mechanical device (the Cardanic joint or suspension). In his time, however, Cardano was most famous as a physician, invited by kings and Popes at their courts, and as an author of various scientific works. His books and pamphlets touched on the most diversified subjects: philosophy, medicine, natural sciences, mathematics, music, but also astrology and other kinds of divination. Indeed, the Padua conference was aimed at illustrating some little-known aspects of Cardano, emphasizing the broad spectrum of his interests and relating his works and life to that of his teachers and friends at the University of Padua, where he graduated in medicine in 1526.

The first general lecture (P.G. Odifreddi) provided a sketch of Cardano's peculiar character and explained a few technical details of his contributions to algebra. The second lecture (E.Nenci) emphasized the connections between his most popular book, *"de Subtilitate"* (which counted 4 editions and reprints within one year from its appearance) and other scientific authors of his age. The third lecture (A.Olivieri) located Cardano's philosophical and medical thought within the European cultural context, with special regard to the Protestant Reform.

The second day of the conference scheduled a number of short contributions by a dozen University of Padua scholars. These experts in different fields (mathematics, medicine, history) had either examined original documents regarding Cardano's youth (the nine years he spent in Padua area) or translated from Latin and interpreted single pages of his less known books. The audience thus learnt about the complicated procedures of his graduation, his severe criticisms of his colleagues in medicine, his love for games and gambling, his ideas on poisons, his interpretation of dreams as well as his rich musical activity.

Within the program, the conference participants were also able to visit the oldest Botanical Garden in the world (founded in 1545 by F.Bonafede, a friend of Cardano) and to enjoy a short concert by a soprano and a lutist, who performed a moving *Lament*, composed by Cardano (words and music) after his son's tragic death.

In the final session an attempt was made to sketch a balance of Cardano's importance both as a scientist and as a writer. With the exception of his fundamental contributions in algebra, the value of Cardano's work is difficult to assess. All the speakers, however, agreed that Cardano was probably the most successful among the Renaissance writers in spreading and popularizing around Europe the most advanced scientific knowledge of his time.

The conference was accompanied by an exhibition of documents and books, which illustrated – through 16 panels with figures – the main episodes of Cardano's life and the many faces of his scientific curiosity. The last of these panels listed the results of a research on Cardano's books presently available in the main European libraries. The figures came out rather impressive: as an example, London, Cambridge, Paris, München and Rome, each displays more than ten different editions of Cardano's *"de Subtilitate"*.

<div align="right">

Benedetto Scimemi
University of Padua, Italy

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A new formula from Babylonian mathematics

A particular rule for finding the arc length of a bow-figure (i.e. segment of a circle) has been found on an ancient Babylonian tablet.
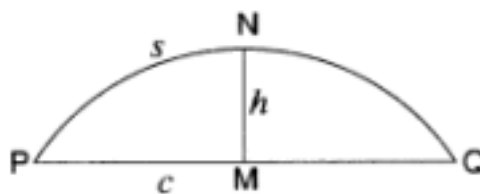

fig.1

Let *s*, *c*, *h* be, respectively, the length of the arc PNQ (see fig.1), chord PQ, and the arrow or height MN of the circular segment (assumed to be not greater than a semicircle). Then the formula extracted from the procedure given in the old Babylonian text BM85194 (dated about 1600BC) is equivalent to

$$s = c + h \qquad (1)$$

Actually, the scribe used (1) for finding *h* (without specifying it so) correctly equal to 10 from given *s* = 60 and *c* = 50. The true formula

is

$s = d\sin^{-1}(c/d)$ (2)

where the diameter is given by the familiar rule

$c^2 = 4h(d - h)$ (3)

But the exact formula (2) is not expected to be known in that remote pre-trigonometric antiquity and the empirical rule (1) can be regarded to be quite practical. Surprisingly the rule (1) is found preserved in some later traditions (see below).

As an application of (1), consider the old common formula

Area $= pw/4$ (4)

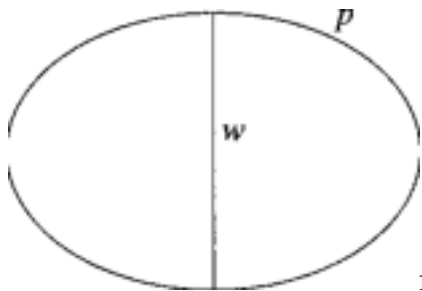for a round closed figure of perimeter p and width w (fig. 2).

fig.2

It gives exact area of a circle (and even of a square!). In India it was used for finding the area of an 'elongated circle' (ellipse or oval) and for 'barley-figure' (or banana leaf) which is regarded as a double segment of a circle. In fact, if we use (1) for finding the area of the double segment ($p = 2s$, $w = 2h$) by (4) we easily get

$A = (c + h)h/2$ (5)

for the area of the circular segment (fig.1)

The empirical formula (5) represents one of the most popular rules of the ancient and medieval mathematics. Since it gave the correct result for a semicircle only when $\pi = 3$, it was often modified in the form

$A = k(c + h)h/2$ (6)

or in the form

$A = (c + h)h/2 + k(c/2)^2$ (7)

where k was suitably selected to suit other values of π. The popularity and universality of (5) or its modified forms (6) and (7) may be shown by the following instances.

i) In Egypt, the rule (5) is found used in the Demotic mathematical *Papyrus Cairo* (JE 89127-30 and 89137-y3) written in the 3rd century BC.

ii) In China, the *Jiu Zhang Suan Shu* ('Nine Chapters of Mathematical Art') of the Han period (between 206 BC and 221 AD) contains (5) with denominator as $(ch + h^2)$. Later on the

Siyuan Yujian (1303 AD) of Zhi Shijie gave (7) for $k = 1/14$ and $k = 7/100$.

iii) The Greek Heron (1st century AD) knew (5), (6) for $k = 17/16$, and (7) for $k = 1/14$ when $c \leq 3h$.

iv) Roman agrimensores Columella (1st century AD) mentioned (7) for $k = 1/14$ like Heron.

v) The Hebrew work *Mishnat ha Middot* (II.4) which is attributed to rabbi Nehemiah (c. 150 AD) also used (7) for $k = 1/14$.

vi) In India several cases are found for the use of (5) and (6). Sridhara (c. 750 AD) in his *Trisatika* (rule 47), Thakkura Pheru (c. 1300) in his *Ganitasara*, and Aryabhata II in his *Mahasiddhanta* (now placed in the 16th century) give (6) with k $= \sqrt{10}/3$. As a practical rule the Jaina writers Mahavira (9th century) and Nemicandra give (5) (10th century). For k $= 19/18$, the rule (6) is found in the anonymous work *Pancavimsatika* (c.1400 or earlier), and for k $= 21/20$, it is given by Visnu Pandita (c.1410), Kesava (c. 1500), and Aryabhata II (as a better rule).

Lastly, but most interestingly, it may be noted that Mahavira used (1) for finding the practical value of the perimeter of an 'elongated circle' (or ellipse) treated as a double segment, and then (4) to find its area (see his *Ganitasara-sangraha*, VII, 21). Five centuries later Narayana Pandita (1356 AD) used directly (1) and (5) to compute the arc length and area of a circular segment (see his *Ganita Kaumudi,* IV, 21).

Many historical, cultural, and pragmatic details about the subject of this note are to appear in some forthcoming papers of the author.

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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.

Have you read these?

This section contains references to books or articles that may be of interest to all those concerned with the history of mathematics. Please send details with complete bibliographic information to the editor for inclusion in future issues.

Arcavi, A., & Bruckheimer, M. (2000). Didactical uses of primary sources from the history of mathematics. *Themes in education*, 1, 55-74.
The authors describe how primary sources can help to trace the development of a topic, in a way in which most sources cannot. Also they analyze how historical sources may provide alternative ways of representing mathematical ideas, and thus of doing mathematics. Sometimes a primary source can even by surprisingly simpler than the much later (and thus supposedly more friendly) elaboration of the presentation of a topic.

Testa, G. (2001) Per un avvio alla ricerca "storica" in campo scientifico: studenti al lavoro. *L'insegnamento della matematica e delle scienze integrate*, 24B, 39-68.

The article contains the results of a research by a group of students in an Italian high school with humanistic orientation (Liceo classico) on the following subjects: Archimedes' life and death, Contributions from the ancients to the study of optics, Foucault's pendulum. The aim was both to guide students' work in internet and to encourage them to read historical-scientific documents in the original, always urging them to be as independent as possible. This work can be considered an example of the use of history of mathematics to foster students' acquisition of competencies and skills useful for other school disciplines, e.g. historical method to look at history, writing, selecting information. Also it provides a nice example of efficient collaborative work.

Gusev, V. A. & Safuanov, I. S. (2000). Some theoretical problems of the development of mathematical thinking. In T. Nakahara & M. Koyama (editors). *Proceedings of the 24th Conference of the International Group for the Psychology of Mathematics Education*, University of Hiroshima, Japan, v.3, 17-24.
This paper deals with some important problems of the development of mathematical thinking.

Among other elements it is considered the genetic approach through history. In this concern there are interesting reference to an old Russian book by N. A. Izvolsky on the didactics of geometry appeared at the beginning of the nineteenth century, which was very appreciated in Europe.

Furinghetti, F. & Somaglia, A. M. (2001). The method of analysis as a common thread in the history of algebra: reflections for teaching. *Themes in education*, 2, 3-14.
This paper describes the main outline of a course for in-service teachers on the teaching of algebra. The aim of this course was twofold: to make teachers aware of students' difficulties in learning, and to discuss the nature of these difficulties. To place teachers in a different perspective, from which to look at didactic problems, passages taken from the history of mathematics were used. The method of analysis was chosen as a common thread of these passages.

G. M. Phillips, *Two Millennia of Mathematics from Archimedes to Gauss*, Springer-Verlag, Berlin, 2000 DM98

Lenart Berggren et al, *Pi: A source book*, Springer-Verlag, New York, Berlin etc. 2nd ed., 2000, US$64·95

T. K. Nag, *The Roots of Civilisation: Reading, Writing and Arithmetic*, T. K. Nag Foundation, Kolkata, 1999, US$14·95

N. K. Jain Chowdhary, *Vedic and Jain Mathematics*, Vishva Punar Nirman Sangh, Nagpur, 2001, Rs.100/-

Padmavathamma (editor) *Ganitasara-sangraha of Mahavisacarya*, with English and Kannada translations, Hombuja Jain Math, Hombuja, 2000, Rs 750/-

K. S. Patwardham et al (ed. and transl.) *Lilavati of Bhaskaracarya*, text and English translation, Motilal Banarsidass, Delhi, 2001, Rs 495/-

Professor R. C. Gupta (R-20, Ras Bahar Colony, P O Lahar Gird, Jhansi - 284003, U.P., India) will be glad to supply information on Indian publications (books and articles) on history of mathematics, and to answer queries about history of mathematics in India. A bibliography of his own publications (1958 to 1995) was published in the *Historia Scientiarum* (Japan), Vol.6, No.1 (1996), 43-53

R. J. Wilson, *Stamping through mathematics*, Springer-Verlag, New York, Berlin etc. 2001 ISBN 0-387-98949-8 £17
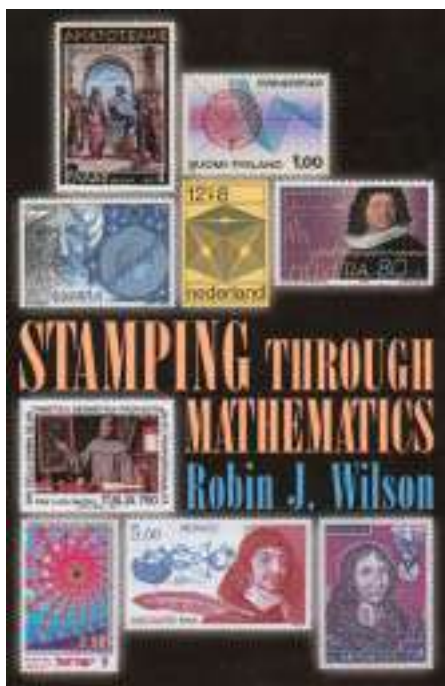
This is a superb book. It is not a conventional history of mathematics book, but the text and sometimes self-explanatory illustrations make this a book suitable for all those interested in the history of mathematics. It contains almost 400 colour enlargements of postage stamps ranging from the earliest forms of counting to the computer age. Influential figures such as Pythagoras, Newton and Einstein feature with areas of study such as Islamic mathematics, Indian mathematics, navigation, astronomy and art. Every school, college, university and individual should have a copy

Contributors to this section:
Fulvia Furinghetti
R. C. Gupta
Peter Ransom

The proceedings of the third European Summer University
held in Louvain-La-Neuve, Leuven (1999) have been just published.
They cost 30 Euros.
Enquiries to
radelet@fyma.ucl.ac.be
(Patricia Radelet de Grave)
Edition Bernoulli, Université de Louvain
2 chemin du Cyclotron,
B-1348 Louvain-la-Neuve,
Belgique

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 editor would welcome information about other sites.

Announcements of events

Conferences and meetings in Italy:

9-10 November 2001
I Convegno della Societa' Italiana di Storia delle Matematiche, Modena, Dipartimento diMatematica, informazioni: Clara Silvia Roero

For details of this meetings contact the Italian Society of History of Mathematics (SISM), via C. Alberto 10, I 10123 Turin (Italy) or check their web site at
www.dm.unito.it/sism/index.html

The First International Conference of the New Millennium on History of Mathematical Sciences
20-23 December 2001
Delhi

The Indian Society for History of Mathematics, is planning to organise 'The First International Conference of the New Millennium on History of Mathematical Sciences' on December 20-23, 2001 at Delhi in collaboration with Ramjas College, Delhi and other national institutions. The precise academic programme and other details will be available by June 15, 2001. The conference will cover all aspects of the history of mathematical sciences, and in particular, the ancient Indian history of the subject, with a forbearance on societal needs.
The official language of the conference will be English.

Offers of papers and enquiries should be made to Professor B S Yadav , Administrative Secretary, INDIAN SOCIETY FOR HISTORY OF MATHEMATICS, Department of Mathematics, Ramjas College, University of

Delhi, Delhi 110007, India. E-mail: indianshm@yahoo.com Tel. (011) 707 3878
For further information about this conference contact
Professor Y. P. Sabharwal, Organising Secretary ICHMS-2001, Dept. of Mathematics and Statistics, Ramjas College, Delhi University, Delhi-110 007 INDIA
Email
ichm2001rjc@yahoo.com or ypsabharwal@yahoo.com

Using the History of Mathematics in the Teaching and Learning of Mathematics, in the Primary and Secondary classroom, in FE and HE and in teacher training "
16 February 2002
Sheffield

A one day conference organised by the British Society for the History of Mathematics (BSHM).

The conference theme is: Resources for the Classroom.

Venue : Sheffield Hallam University, England.

Those wishing to receive further details should contact David Lingard by :
e-mail : d.lingard@shu.ac.uk or
phone : 0114 2252307 or
letter to : SHU, College House, Collegiate Crescent, Sheffield, S10 2BP, UK.

History of Arab Mathematics
30 May - 2 June 2002
Marrakech, Morocco

Introduction

L'organisation d'un colloque international périodique sur l'histoire des mathématiques arabes est d'ores et déjà une coutume. Six colloques ont déjà été organisés : Algérie en 1986, Tunisie en 1988, Algérie en 1990, Maroc en 1992, Tunisie 1994 et Algérie 2000.

Ces colloques ont toujours été un espace pour renforcer l'intérêt pour l'histoire des mathématiques arabes en tant que phase fondamentale dans l'histoire générale des mathématiques. Outre le fait qu'ils permettent la rencontre entre des chercheurs et des spécialistes de différents pays, ces colloques constituent une opportunité pour diffuser et faire connaître les travaux réalisés sur l'histoire des mathématiques arabes. Notamment à travers :

- la découverte, l'édition et la traduction de manuscrits importants

- la mise en valeur de la relation entre les mathématiques et les besoins sociaux et religieux de la société

- l'identification des traditions d'enseignement des mathématiques dans la civilisation arabo-islamique

- la mise en relief des liens entre mathématiques et les autres domaines de la connaissance

- la mise en évidence des contributions de l'Occident musulman, Grand Maghreb et Andalus, dans la construction de l'édifice mathématique.

C'est dans la continuité de cette tradition que le Groupe de Recherche En Didactique de l'Informatique et des Mathématiques (GREDIM) de l'Ecole Normale Supérieure de Marrakech organise le 7e colloque maghrébin sur l'histoire des mathématiques arabes du 30 mai au 02 juin 2002.

Par ailleurs, en plus des résultats au niveau de la recherche, ces colloques contribuent à la prise de conscience du rôle pédagogique de l'histoire des mathématiques en tant qu'outil de formation et d'enseignement. Dans le but de renforcer cette tendance, le comité d'organisation s'est permis d'adjoindre aux thèmes étudiés dans les colloques précédents une session sur l'utilisation de l'histoire des mathématiques dans leur enseignement pour ce 7e colloque.

31 octobre 2001: Date limite d'inscription
30 novembre 2001: Date limite d'envoi des résumés des communications
31 décembre 2001: Notification de l'acceptation ou de refus de la communication
01 mars 2002 : Diffusion du programme
15 avril 2002: Envoi des textes des communication
30 mai -02 juin 2002: Tenue du 7e colloque maghrébin sur l'histoire des mathématiques arabes

Conditions de participation

1. les communications doivent être originales et n'ont jamais fait l'objet de publication

2. le règlement des frais de participations qui valent 300 dirhams. Ces frais couvrent :

- l'hébergement du 29/05/2002 soir au 03/06/2002 matin.

- les repas du matin et de midi durant la période du colloque

- les actes du colloque

3. Le comité d'organisation fait des démarches auprès des organismes nationaux et internationaux pour l'obtention de subventions lui permettant la prise en charge (totale ou partielle) de voyage des participants qui présentent une communication.

Langues du colloque

Les résumés et les interventions peuvent être présentés dans l'une des langues suivantes : Arabe, Français, Anglais

Thèmes du colloque
1. Mathématiques

- Algèbre
- Géométrie
- Arithmétique
- Théorie des nombres
- Analyse combinatoire
- Trigonométrie

2. Astronomie

- Modèles planétaires
- Tables astronomiques
- Sciences du temps
- Instruments astronomiques

3. Mathématiques Appliquées

- Sciences d'héritages
- Architecture
- Optique
- Mécanique d'agréments ou utilitaires
- Astrologie
- Musique

4. Mathématiques et société

- Les manuels mathématiques
- Les infrastructures de l'enseignement
- Mathématiques et environnement culturel et idéologique
- Mathématiques et philosophie
- L'héritage mathématique pré-islamique
- La transmission des mathématiques arabes
- Mathématiques et classification des sciences

5. Session sur l'utilisation de l'histoire des mathématiques dans l'enseignement

- Rôle de l'histoire des mathématiques dans leur enseignement
- Histoire des mathématiques et formation

- Histoire des mathématiques et construction/analyse de concepts
- Histoire des mathématiques et résolution de problèmes
- Histoire des mathématiques et recherche en didactique

Correspondance :
Adresse pour courrier postal:
Ezzaim Laabid ou El Idrissi Abdellah,
ENS , B.P 2400, Marrakech, Maroc
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History and Pedagogy of Mathematics in the 7th Maghrebian symposium on the History of Arabic Mathematics
30 May - 2 June 2002
Marrakech, Morocco

The 7th Maghrebian Symposium on the History of Arabic Mathematics, will be held at Marrakech, Morocco, from 30 May to 2 June 2002. A special session, organized with the collaboration of the HPM group, will be reserved to the history and pedagogy of mathematics.
For details translate the French text above.

Syposium themes
* Mathematics
* Astronomy
* Applied Mathematics
* Mathematics and Society
* History and Pedagogy of Mathematics
For more details, see or contact
www.ensma.ac.ma/comhisma7
e-mail: comhisma7@ensma.ac.ma

Abel Bicentennial Conference 2002
3-8 June 2002
Oslo

The year 2002 marks the bicentennial of the birth of Niels Henrik Abel, 1802-1829. The Norwegian Academy of Science and Letters, The Norwegian Mathematical Society and The Norwegian Mathematical Council with support from the International Mathematical Union and the European Mathematical Society, have taken the initiative to commemorate this event by inviting the international mathematical community to the Abel Bicentennial Conference 2002 to be held at the University of Oslo from Monday, June 3, to Saturday, June 8, 2002.

The Conference will present an overview of the mathematical heritage of Niels Henrik Abel and, based upon this heritage, identify new mathematical trends for the 21st century.
Check it out at
www.math.uio.no/abel/

2nd international conference on the teaching of mathematics (at the undergraduate level)
1-6 July 2002
Chersonisos, Crete, Greece,

Among the conferences themes there is "History of mathematics in curricula innovations". One of the 4 panels is titled "On the role of the history of mathematics in mathematics education" (The presentation of the panel is below). In this conference a section will be organized in collaboration with HPM. Also there will be a meeting of the members of HPM.

Panels "On the role of the history of mathematics in mathematics education"
In the recent years important works on the relationship between history and mathematics education have appeared: the proceedings of the European Summer University (held in 1993, 1996, and 1999), the two books originated by the satellite meeting of HPM (1996 editor R. Calinger, and 2000 editor V. Katz), the ICMI Study book edited by J. Fauvel and J. van Maanen. Journals for mathematics teachers have published special issues on the history of mathematics in mathematics teaching (e.g. *Mathematics in school* in 1998 and *Mathematics teacher* in 2000). The re-born newsletter of HPM (International Study Group on the Relations between History and Pedagogy of Mathematics) is becoming (we hope) a forum where piece of information and ideas are shared.

These materials and the experiments carried out all over the world make possible to go further in the discussion about the role of the history of mathematics in mathematics teaching. In the recent discussions a word is appearing frequently: integration [of history in mathematics teaching]. Which ideas are behind this word? The main idea is that of using history as a mediator to pursue the objectives of mathematics education. This means to develop an analysis of these objectives together with the study of the concepts in history. This work has to be carried out by educators and historians in a collaborative way. Among the benefits we'll have from it there is the new perspective offered by history to consider students' difficulties in learning mathematics. To make teachers active actors in this process we need to give a convenient place to the history of mathematics in pre-service and in-service teacher education.

The Conference aims to bring together university teachers of mathematics committed to introducing innovative teaching methods and researchers in mathematics education. The conference plenary talks, panels, paper presentations and workshops will be centred on the following themes:

Educational research: Results of current research in mathematics education and the assessment of student learning. Access and equity.
Technology: Effective integration of computing technology (Calculators, Computer Algebra Systems, WWW resources) into the undergraduate curriculum
Innovative teaching methods: Innovative ways of teaching undergraduate mathematics, such as cooperative and collaborative teaching. Writing in mathematics; laboratory courses.
Curricula innovations: Revisions of specific courses and assessment of the results. History of mathematics; innovative applications; project driven curricula.
Preparation of teachers: Trends in teacher education. In-service teacher training. Changing needs of teachers.
Mathematics and other disciplines: The effects of changes in the teaching of mathematics on other fields and vice versa. The needs of client disciplines; interdisciplinary courses.
Distance learning: Distance learning technologies (networking, tele-education) for teaching and learning mathematics. Current hardware and software delivery media; educational materials. Visions for the future.

The invited speakers will be:
- Hyman Bass and Deborah Ball, University of Michigan, Ann Arbor, Michigan, USA
- Jean Pierre Bourguignon, Institut des Hautes Etudes Scientifiques, Bures-sur-Yvette, France
- Miguel De Guzman, Universidad Complutense de Madrid, Madrid, Spain
- Oh Nam Kwon, Ewha Women's University, Seoul, Korea
- Joanna Mamona-Downs, University of Macedonia, Thessaloniki, Greece
- Verdiana Masanja, University of Dar es-Salaam, Tanzania
- Alan H. Schoenfeld, University of California, Berkeley, California, USA
- Man Keung Siu, University of Hong Kong, China

- Dave Smith, Duke University, Durham, North Carolina, USA
- Tosun Terzioglu, Sabanci University, Istanbul, Turkey

The organisers of the Conference are
- Ignatios Vakalis (Capital University, USA, chair),
- Deborah Hughes Hallet (University of Arizona, USA),
- Christos Kourouniotis (University of Crete, Greece),
- Constantinos Tzanakis (University of Crete, Greece).

The deadline for electronic submission of abstracts for presentations at the Conference is 10 November 2001, and for early registration to the Conference 31 January 2002.

More information can be found on the web
http://www.math.uoc.gr/~ictm2
 or by contacting
Ignatios Vakalis (ivakalis@capital.edu) or
Christos Kourouniotis (chrisk@math.uoc.gr).

information http://www.math.uoc.gr/˜ictm2

In the conference a section will be organized in collaboration with HPM. Also there will be a meeting of the members of HPM.

Third International Conference on Mathematics Education and Cultural History of Mathematics in the Informatics Society
24-27 July 24 2002
Kyoto, Japan

The conference is composed of 6 sessions.
• Keynote plenary lectures
• Researches on mathematics education
• Researches on cultural history of mathematics and history of mathematics
• Researches on the role of informatics
• Celebrating the 80th birthday of Prof. Yokochi
• Forum on recent education in China

Any participant has a chance of presenting their work by oral presentation or distributing their paper at parallel sessions through the acceptance of the organising committee. The deadline for papers is November 30 2001

The official language of the conference is English.

For more information contact:
Masahiko Suzuki

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Geometry and Mathematics Competitions
August 4-11 2001
Melbourne, Australia

The Fourth Congress of the World Federation of National Mathematics Competitions (WFNMC Congress-4)

You are invited to participate in the above event. The topics expected include the following.
Interesting applications of geometry
New fields in geometry
History of problems in geometry.

Please send the title and an abstract of each proposal, as soon as possible, no later than January 15, 2002.

The address that you may contact or send your proposals to, is:
Ali Rejali
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The 5th International Symposium On the History of Mathematics and Mathematical Education Using Chinese Characters (ISHME5)
9-12 August 2002
Tianjin Normal University, Tianjin, China

Symposium themes are:
1) Mathematics of using Chinese characters: Transformation from traditional mathematics to modern mathematics
2) Studies on the history of mathematics of Korea and Viet Nam
3) Exchange and comparison between mathematics of using Chinese characters and mathematics of India and Arab
4) Mathematical education of using Chinese characters: A comparative approach.

For more information, contact:
Organizing Committee of the 5th ISHME
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e-mail: zelinxu@eyou.com
Website: duheng.qzone.com/ISHME

International Colloquium on the History of Mathematics
August 15-18 2002
Xi'an, China

The ICM-2002 (International Conference of Mathematicians) will be held in Beijing on August 20-28 2002. Some 30 satellite conferences on various topics of mathematics will be held outside Beijing. The Northwest University will hold such a conference on the History of Mathematics.

Topics
• Transmission and transformation of mathematics: east and west
• Mathematical thought on the 20th century
• Mathematics in China and neighboring countries and mathematics in Islamic countries

The official language of the conference is English or Chinese.

31 December 2001 is the deadline for the first receipt.

Contact:
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In the last day of the third *European Summer University on History and Epistemology in Mathematics Education* held in Louvain-La-Neuve, Leuven (Belgium) it was announced that the fourth University would have been organized in 2002 by our colleagues of Strasbourg (France) and Heidelberg (Germany). Unfortunately they have written to me they are not able to accomplish this task. I think that all of us are sad about this news because since the first edition of the University in 1993 it was created a tradition of sharing ideas and experience among teachers and researchers. Participants came all over the world, especially in 1996 when the satellite meeting of HPM was organized jointly with University. The proceedings of those meeting are a precious reference point for HPM members.

The University was also an important occasion to discuss the development of HPM group and general business of organization. In order to keep members of HPM involved in all these problems I have asked to the organizers of the *Colloque Maghrébin sur l'Histoire des Mathématiques Arabes* (30 May - 2 Jun 2002) and of the *2nd International Conference on the Teaching of Mathematics* (Crete, 1-6 July 2002) to have a section organized in collaboration with HPM and to have a meeting among the members of HPM participating in the conference. I hope I'll meet a lot of you.

Fulvia Furinghetti

Interesting old books!
The North American Sundial Society is in the process of reprinting some old and rare works on dialling. As mathematicians wrote these works they are of interest to the readers of the HPM Newsletter. It is an opportunity to acquire them at a very reasonable cost.
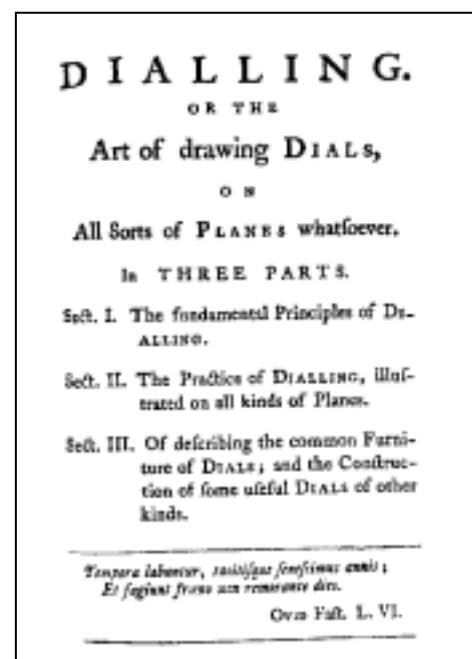
I. Samuel Foster. *The art of dialling; by a new, easie, and most speedy way*. 1638.

II. Samuel Foster. *The description of a ruler, Upon which is described divers scales: and the vses thereof*: 1652.

III. William Emerson. *Dialling. or the art of drawing dials, on all sorts of planes whatsoever. in three parts*. 1770.

IIII. Gilbert Clerke. *The Spot-Dial* 1687.

For further details contact Fred Sawyer at fwsawyer@aya.yale.edu. or look at the NASS web site at www.sundials.org

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OR THE
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ON
All Sorts of PLANES whatsoever.

In THREE PARTS.

Sect. I. The fundamental Principles of DI-ALLING.

Sect. II. The Practice of DIALLING, illustrated on all kinds of Planes.

Sect. III. Of describing the common Furniture of DIALS; and the Construction of some useful DIALS of other kinds.

Tempora labentur, taxitifque fenfibus annis ;
Et fugiant freno non remorante dies.

Ovis Fast. L. VI.

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A Great Seaman

Jean-Charles de Borda was born in Dax, France in 1733. He was a marine engineer, mathematician, surveyor and all-round seaman, worthy of being the name-sake of ships serving in the Navy school until the beginning of the century.

Borda made great progress in nautical calculation and observations. He was part of a mission directed by the Constituent Assembly, which included Méchain and Delambre charged with establishing the metric system and measuring the meridian arch between Dunkirk and Barcelona. The museum is named after him and his statue stands in the Place Thiers.