



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

No. 94

March 2017

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

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

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

<http://grouphpm.wordpress.com/>

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

A MESSAGE FROM THE CHAIR OF HPM



Welcome to Newsletter 94! Here in Florida we have been completely entrenched in all things “spring” – though this is easy to do since we did not experience any version of a season that resembled winter. In reality, I cannot believe it is already March, as my “To Do” list stays perpetually filled with things I should have already completed – like NL 94!

That aside, it really has been a busy year already. There are several HPM-related activities that have taken place or that are ongoing, and many of them are described or advertised in this installment of the HPM newsletter. In my comments below, I mention two additional items which are not included in separate announcements that you will read about in this newsletter. As well, I would like to update you on the evolving structure of the HPM Group.

First, approximately 25 colleagues participated in the Thematic Working Group (12 TWG 12), “History in Mathematics Education,” at CERME 10 (1-5 February 2017, Dublin, Ireland). Included in the seven ‘working sessions’ at the conference were presentations on 16 papers and 2 posters, which you can find in their pre-conference form here: <https://keynote.conference-services.net/programme.asp?conferenceID=5118&language=en-uk>. Additionally,

Michèle Artigue and Uffe Thomas Jankvist led participants in a discussion of the forthcoming ERME chapter on TWG 12 (http://cerme10.org/wp-content/uploads/2017/01/TWG12_ERME_Book_Ch17_History_Draft.pdf).

In reflecting on CERME 10 I was reminded that working in the field of history in / of mathematics education energizes me in two ways. In the one sense, I enjoy coming together and seeing familiar faces and reconnecting with them about shared ideas and further following their work. On the other, I am energized by the newcomers (not necessarily new to the field, but perhaps new to the HPM community or activities) whom I get to meet and to learn about the exciting work and scholarship taking place around the world. I believe the working group activities were well received by participants of TWG 12, and I thank **Renaud Chorlay** (France) and **Katalin Gosztonyi** (Hungary) for their leadership during the working group at CERME 10.

Secondly, I wanted to make sure that I reminded you all that the International HPM Group is an affiliated study group of the International Commission on Mathematical Instruction (ICMI), which is an official commission of the International Mathematics Union (IMU). The ICMI leadership encourages members of the affiliated study groups to remain informed by subscribing to the **ICMI News**. You can read more about the ICMI News here: <http://www.mathunion.org/index.php> (and at the bottom of the page you will find directions for subscribing to the ICMI News).

Finally, I would like to take this opportunity to inform you about the shape of the formal operating structure of the HPM Group. Over the past several months I have been in contact with Advisory Board members and the previous Executive Committee (2012-2016), and after conducting a vote of the Advisory Board members I have established the Executive Committee for the 2016-2020 term and updated the Advisory Board membership. I have also established an Honorary Advisory Board (HAdB), but at the time of this writing I am still waiting to hear back from all of the inaugural invitees. Consequently, I hope to announce the first HAdB in the July newsletter (NL 95).

You will find the updated Advisory Board at the end of this newsletter (pp. 26), and I hope that you will join me in welcoming three new members:

Michael N. Fried (Israel),
Helder Pinto (Portugal), and
Leo Rogers (UK).

The Executive Committee (ExC) for the 2016-2020 term is:

Évelyne Barbin (France),
Fulvia Furinghetti (Italy),
Uffe Thomas Jankvist (Denmark),
Tinne Hoff Kjeldsen (Denmark), and
Costas Tzanakis (Greece).

I should also state that for the next major HPM-related conference activities (ESU-8, HPM 2020, and ICME-14), there will be additional ExC members who will serve as liaisons to the Group (for example, **Bjørn Smestad** will serve in this capacity for ESU-8).

As I write this, I realize I have much to learn and to do to serve the HPM Group in the best way possible. One of the reasons I asked the Advisory Board to vote on five members to comprise the Executive Committee was because I felt I needed additional assistance in learning about how best to serve the HPM community. The Advisory Board is also a vital component of informing and guiding the Chair and the HPM Group, and consistent and timely participation is a critical contribution of an Advisory Board member. There are exciting decisions that need to be made in the coming months, related to the smooth running of ESU-8, as well as to begin planning for HPM 2020. I ask for your support in these activities, and welcome your comments and active participation.

Kathy Clark
HPM Chair
Florida State University, USA

Practitioner's Corner

An Example of Using the History of Iranian Mathematics for the Math Classroom

Dividing a right angle into five equal angles with only a straightedge and a compass is used to construct particular tiling patterns in Islamic arts, and one of these patterns is presented in figure 1 (10-petal rose construction). The methods and ideas that I explain in this paper were obtained from Iranian math history (Jazbi, S. A. (translator), *Applied Geometry*, appendix2. Soroush Press, ISBN 964 435 201 7, Tehran 1997). All figures have been created by the author using the Geometer's SketchPad (GSP) software program. These samples have been used at the Isfahan Math House (IMH) in workshops for teaching math history to secondary students and mathematics teachers.

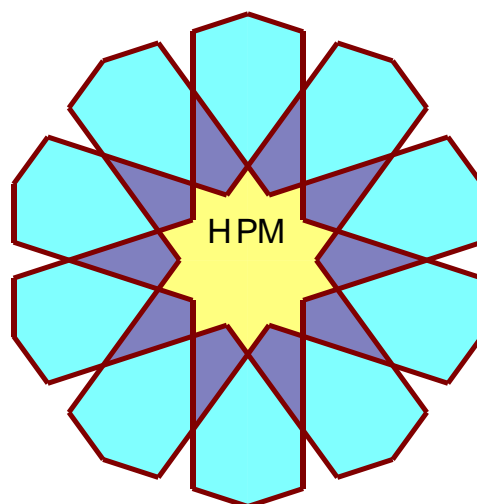


Figure 1. 10-petal rose construction (girih construction)

1) **Task 1: Dividing a right angle into five congruent angles with only a straightedge and a compass**

Construct arbitrary arc OAB (figure 2).

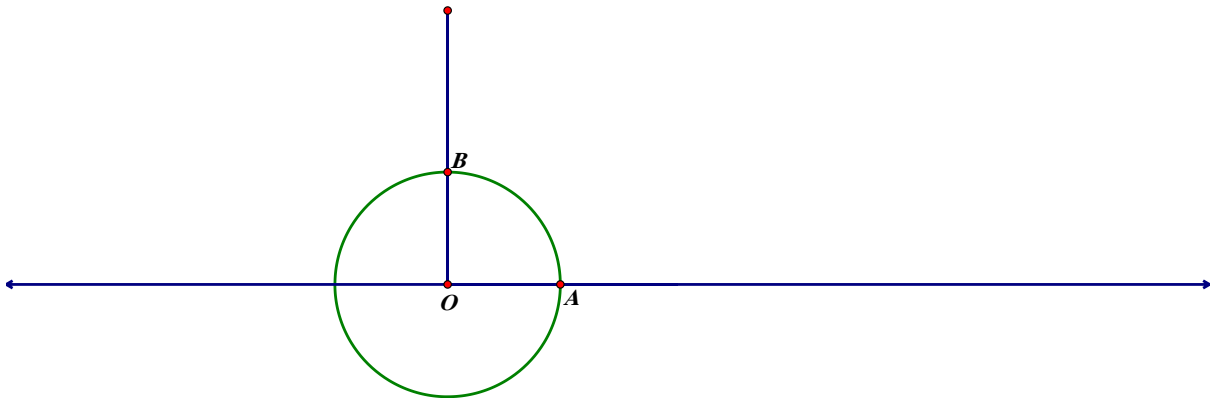


Figure 2.

2) Construct D the midpoint of OA then find D' as $OD = OD'$ (figure 3).

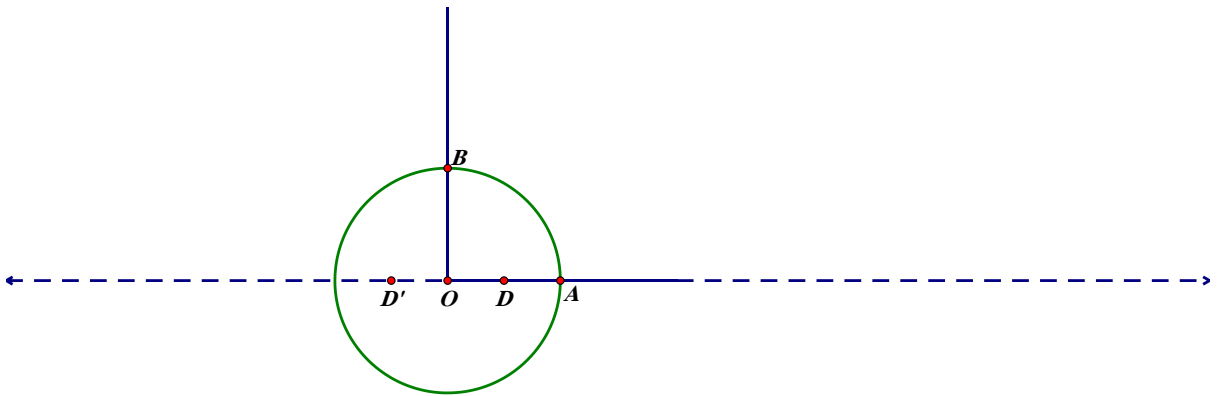


Figure 3.

3) Then construct a circle with center D' and radius $D'B$. This circle cuts OA at point E (figure 4).

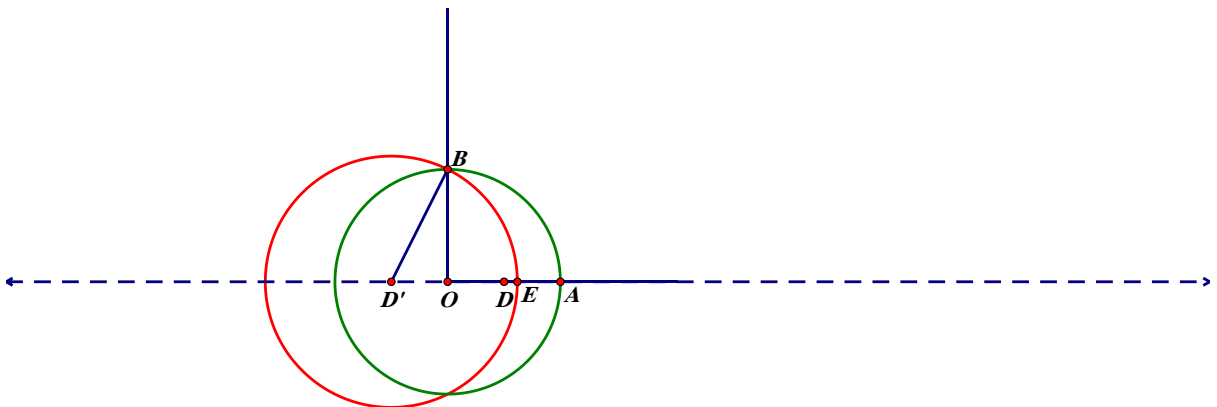


Figure 4.

4) Now construct segment BE (figure 5).

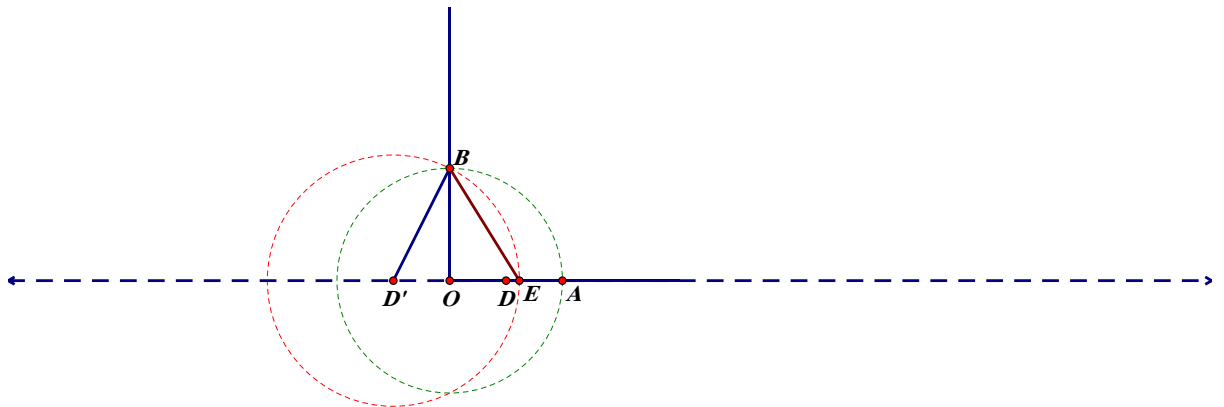


Figure 5.

5) Finally, construct a circle with center B and radius BE , and label the intersection point of the green circle and new circle (in magenta), F (figure 6).

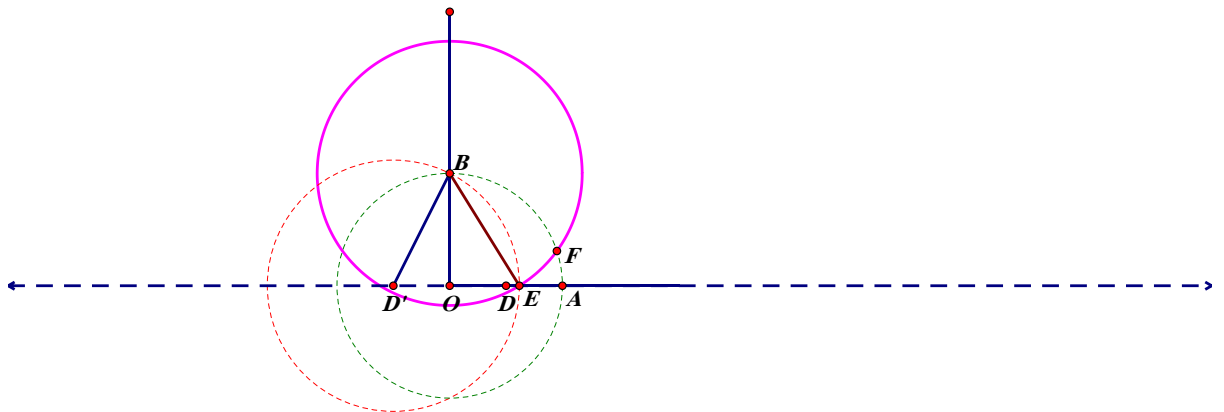


Figure 6.

6) Construct segment OF , and then $\widehat{FOA} = 18^\circ$ (figure 7). (Prove it!)

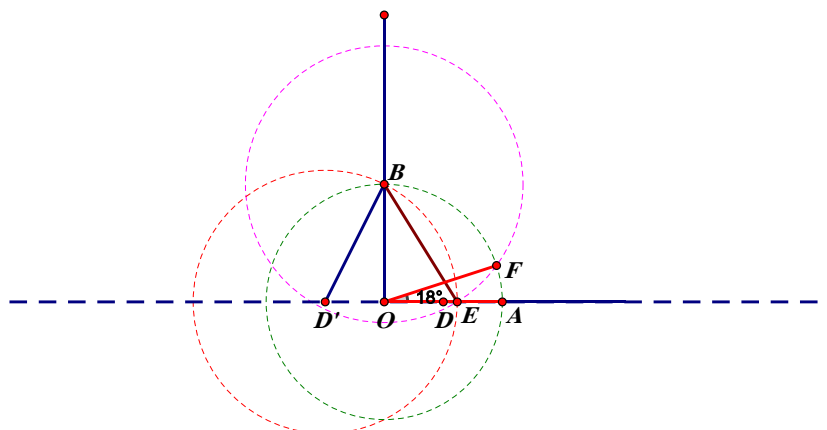


Figure 7.

7) Now divide \widehat{BOF} into four equal angles (explain your work!). Now you have five 18° angles.

a) **Task 2: Dividing a right angle into six congruent angles with only a straightedge and a compass**

- 1) Construct a circle with center O and radius OB (figure 8).

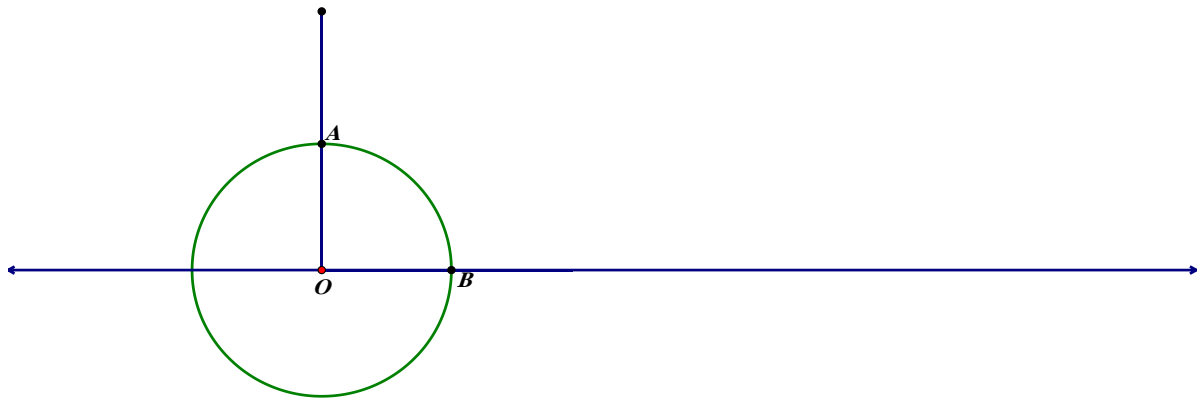


Figure 8.

- 2) Construct a circle with center B and radius BO . Label the intersection point of the two circles, D (figure 9).

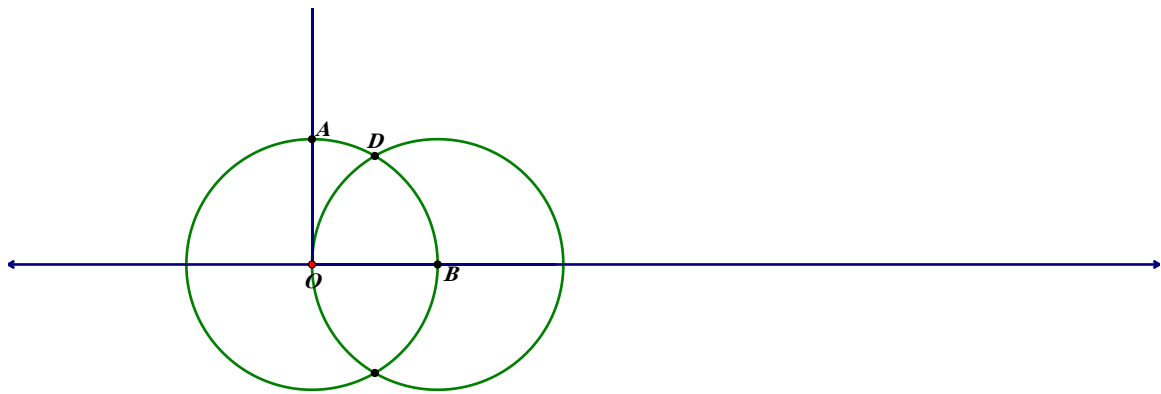


Figure 9.

- 3) Construct segment OD , then $\widehat{DOB} = 60^\circ$. Why? (figure 10)

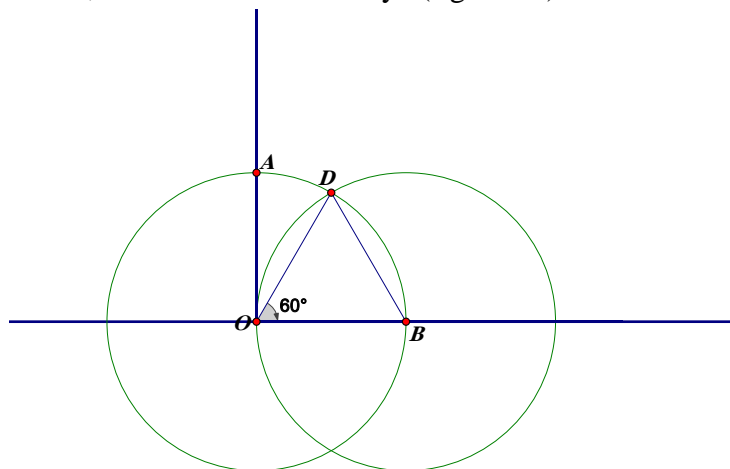


Figure 10.

- 4) Construct the \widehat{DOB} bisector, and repeat again for created angles. Construct \widehat{AOD} bisector, then you have six 15° angles (figure 11).

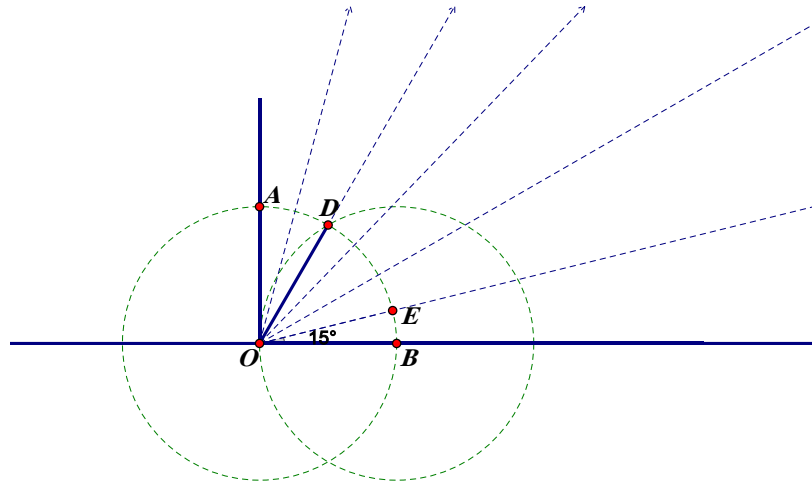


Figure 11. *Dividing a right angle into six 15° angles.*

Dividing a right angle into six equal angles can be used to construct Islamic art patterns. One of them is named a 12-petal rose pattern like the one shown in figure 12.

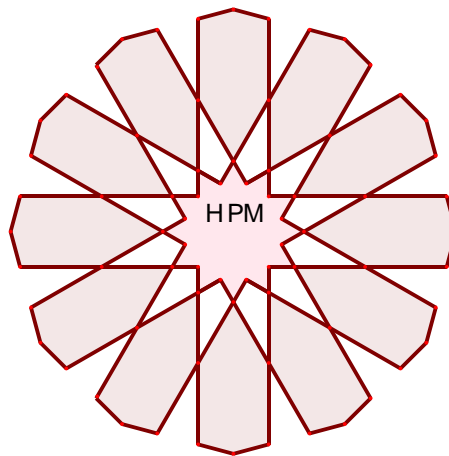


Figure 12. *12-petal rose pattern*

Narges Assarzaghan,
Math teacher, math history researcher,
Isfahan Mathematics House (IMH) (Iran)

MAA Convergence Introduces Interactivity to Mathematics History

MAA Convergence is both an online journal on the history of mathematics and its use in teaching and an ever-expanding collection of online resources to help its readers teach mathematics using its history. Founded in 2004 by well-known mathematics historians and educators Victor Katz and Frank Swetz, *Convergence* brings you a variety of interesting articles and teaching tools. It is freely available from the Mathematical Association of America (MAA) website: <http://www.maa.org/press/periodicals/convergence>

We highlight here some of our newest articles and resources for use in your classroom. Many of them use interactive features to help students understand and explore historical mathematical ideas.

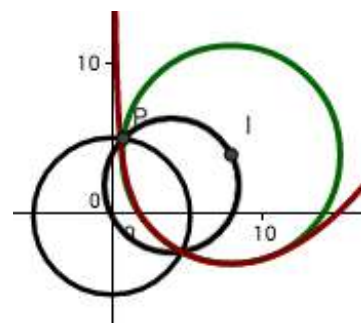
In “**Ancient Indian Rope Geometry in the Classroom,**” Cynthia Huffman and Scott Thuong offer information, activities, and applets to help you and your students explore the geometry of altar construction in ancient India. In the photograph, boys work on a model of the bird-shaped fire altar in an *Agnicayana* ritual in Panjal, Kerala, India in 2011. (Photo courtesy of Professor Michio Yano.)



In “**Geometrical Representation of Arithmetic Series,**” Gautami Bhowmik explores a geometric tradition in Sanskrit arithmetic texts from Medieval India and shares problems from these texts for your students.

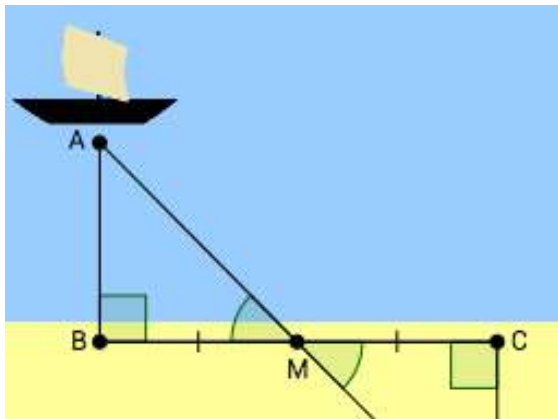
“**Historical Activities for the Calculus Classroom,**” by Gabriela Sanchis, presents curve-sketching, tangent lines, and optimization in the context of historical problems, and is illustrated by 24 interactive applets and 10 animations.

In “**Descartes’ Method for Constructing Roots of Polynomials with ‘Simple’ Curves,**” Gary Rubinstein explains and derives Descartes’ methods from his 1637 *Geometry* and illustrates them using interactive applets. The diagram shows a step in the construction of roots of sixth degree polynomials using a ‘Cartesian parabola’ and circles (from GeoGebra applet by Gary Rubinstein).



In “**Pythagorean Cuts,**” Martin Bonsangue and Harris Shultz answer the question ‘Can Euclid’s proof of the Pythagorean Theorem be adapted to shapes other than squares?’ and encourage you to pose it to your students.

“**Some Original Sources for Modern Tales of Thales,**” by Michael Molinsky, features earliest known sources for stories about Thales, and applets illustrating methods attributed to him. The diagram shows how Thales might have measured the distance from ship to shore (from GeoGebra applet by Michael Molinsky).



“**A GeoGebra Rendition of One of Omar Khayyam’s Solutions for a Cubic Equation,**” by Deborah Kent and Milan Sherman, explains and illustrates how the 11th century Persian mathematician, philosopher, and poet *geometrically* determined a positive real solution to a cubic equation.

“**Edmund Halley, 1740**” is an historical poem in which Halley reflects on his role in publishing Newton’s *Principia*, by award-winning Oxford poet Andrew Wynn Owen.

“**D’Alembert, Lagrange, and Reduction of Order,**” by Sarah Cummings and Adam Parker, offers two historical approaches, one familiar and one unfamiliar, to enrich your differential equations course.

In “**Euler and the Bernoullis: Learning by Teaching,**” author Paul Bedard reflects on lessons he has learned about mathematics teaching and learning from these great mathematicians.

In “**Can You Really Derive Conic Formulae from a Cone?**” Gary Stoudt uses 17 interactive applets to explain how attempts to double the cube led ancient Greek mathematicians to discover and develop the conic sections.

Finally our “**Index to Mathematical Treasures**” includes hundreds of images for use in your classroom, including photographs of “**The Cambodian (Khmer) Zero**” (of 683 CE) by Amir and Debra Aczel.

See all of these articles and more at *MAA Convergence*:
<http://www.maa.org/press/periodicals/convergence>

Join us at the *Convergence* of mathematics, history, and teaching!

Janet Beery
 Editor, *MAA Convergence*
 University of Redlands
 (USA)

Theme 5: Topics in the history of mathematics education;

Theme 6: History of mathematics in the Nordic countries.

Emphasis is put on work and conclusions based on actual classroom experiments and/or produced teaching & learning materials, but insightful theoretical ideas and/or historical analysis with visible didactical implications are also welcome.

3. Activities during ESU-8

All activities should refer to the ESU-8 *main themes*. Its scientific program will be structured along these themes, consisting of a few *plenary lectures* and *panels*, as well as, parallel sessions of *oral presentations*, *short communications* and *posters*, for participants, who want to speak about their own experience, or research. A major part of the programme, however, consists of *workshops*.

4. Target population

The majority of the participants is expected to be (elementary or secondary) schoolteachers, who may wish to gain new ideas on how they can integrate the history of mathematics into their teaching. Special effort will be made so that each session includes activities relevant and interesting for schoolteachers; for instance activities with focus on useful resources and didactical material available in Norwegian, or other national languages. However, there will be also university teachers and students, interested in the integration of the history and epistemology of mathematics into mathematics education, as well as,

historians of mathematics, who may give a limited number of lectures to inform others about recent developments in their domain, and mathematicians with an interest in the relation between mathematics, its history and epistemology, and its role at present and in the past.

5. Time and place

The ESU-8 will take place from **20 to 24 (Friday to Tuesday) July 2018** at the **Oslo & Akershus University College of Applied Sciences**, Oslo, Norway.

6. Official Languages

The official languages of ESU-8 are English, Norwegian and French: All plenary talks and panel discussions will be in English. Other activities can be delivered in any of the official languages. However, presenters and workshop organizers should keep in mind that all activities should in principle be targeted to an international audience and that many participants will not be native speakers of any of these languages. Consequently, for activities not in English, the **presenters** will be asked to use **two sets of transparencies**, one being in **English**, while **workshop organizers** are strongly advised to prepare **copies in English of their material**. This will increase participation and will greatly facilitate communication among participants.

7. Submission of proposals

31 October 2017: **deadline** for submitting **Abstracts** of proposals for all types of activities.

15 December 2017: Notification of acceptance or not of the submitted proposals.

The members of the *Scientific Program Committee* (SPC) will review the submitted abstracts. Acceptance of a proposal means that the proposed activity will be included in the ESU-8 Scientific Programme. Full texts for inclusion to the ESU-8 *Proceedings* will be submitted after ESU-8 and will be further reviewed by members of the SPC at the usual international standards.

Important: Submissions of proposals and full texts, the reviewing process, and authors' notification will be realized online via <https://esu8.edc.uoc.gr/submission> and following the guidelines therewith.

8. Proceedings

Publishing the Proceedings of ESU-8 is a major task. They will appear **after** ESU-8, so that authors are given the opportunity to enrich their text as a result of the feedback they will gain during ESU-8. Details on the procedure and the deadline for submitting full texts, their size, the format guidelines and the expected date by which the proceedings will be available to all registered participants, will be announced in due course from the ESU-8 and HPM official websites

<https://esu8.edc.uoc.gr>

<http://www.clab.edc.uoc.gr/hpm/meetings>

9. The web site

Making known the ESU worldwide, is a major task. To this end, a web site is being developed under the URL <http://esu8.edc.uoc.gr> It will be regularly updated as an effective tool for providing updated practical information, allowing

for online registration, submission of proposals and full texts, supporting the reviewing process, etc.

10. For further information, contact

Constantinos Tzanakis, Dep. of Education, Univ. of Crete, 74100 Rethymnon, Greece, esu8.tzanakis@edc.uoc.gr (chair)

Bjørn Smestad, Dep. of Primary and Secondary Teacher Education, Oslo & Akershus Univ. College of Applied Sciences, Oslo, Norway, esu8.smestad@edc.uoc.gr (chair of Local Organizing Committee)

Evelyne Barbin, IREM et LMJL, UFR des sciences et des techniques, Univ. de Nantes, 2 rue de la Houssinière, BP 92208, 44322 Nantes Cedex, France, evelyne.barbin@wanadoo.fr (co-chair)

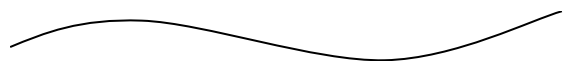
Uffe Thomas Jankvist, Dep. of Education, Aarhus University, Campus Emdrup. Tuborgvej 164, DK-2400 Copenhagen NV, utj@dpu.dk (co-chair)

Tinne Hoff Kjeldsen, Dep. of Mathematical Sciences, University of Copenhagen, Universitetsparken 5, DK-2100 Copenhagen Ø, thk@math.ku.dk (co-chair)

For more detailed and regularly updated information, visit

<https://esu8.edc.uoc.gr>

<http://www.clab.edc.uoc.gr/hpm/meetings>





Have you read these?

- Aydın, E., Delice, A., & Demiroğlu, D. (2016). An analysis of history of mathematics research literature in Turkey: the mathematics education perspective. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 31(3), 215-229.
- Barrow-Green, J., & Siegmund-Schultze, R. (2016). “The first man on the street” — tracing a famous Hilbert quote (1900) back to Gergonne (1825). *Historia Mathematica*, 43(4), 415-426.
- Beeley, P. (2017). ‘To the publike advancement’ John Collins and the promotion of mathematical knowledge in Restoration England. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(1), 61-74.
- Biggs, N. (2017). More seventeenth-century networks. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(1), 30-39.
- Brioschi, A., & Rosso, R. (2016). Eugenio Beltrami's courses on the analytic and mechanical theory of heat. I. Analytic theory of heat. *Historia Mathematica*, 43(4), 399-414.
- Capobianco, G., Enea, M. R., & Ferraro, G. (2017). Geometry and analysis in Euler's integral calculus. *Archive for History of Exact Sciences*, 71(1), 1-38.
- Clark, K. M., & Harrington, E. P. (2016). The Paul A M Dirac papers at Florida State University: a search for informal mathematical investigations. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 31(3), 205-214.
- De Risi, V. (2016). The development of Euclidean axiomatics. *Archive for History of Exact Sciences*, 70(6), 591-676.
- Del Centina, A. (2016). On Kepler's system of conics in *Astronomiae pars optica*. *Archive for History of Exact Sciences*, 70(6), 567-589.
- Fiocca, A. (2017). The *Bullettino di Bibliografia e di Storia delle Scienze Matematiche e Fisiche* (1868–1887), an example of the internationalisation of research. *Historia Mathematica*, 44(1), 1-30.
- Goldstein, B. R., & Chabás, J. (2017). Analysis of the astronomical tables for 1340 compiled by Immanuel ben Jacob Bonfils. *Archive for History of Exact Sciences*, 71(1), 71-108.
- Goulding, R., & Schemmel, M. (2017). The manuscripts of Thomas Harriot (1560–1621). *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(1), 17-19.
- Haffner, E. (2017). Strategical use(s) of arithmetic in Richard Dedekind and Heinrich Weber's *Theorie der*

algebraischen Funktionen einer Veränderlichen. *Historia Mathematica*, 44(1), 31-69.

Harper, J. F. (2016). Defining continuity of real functions of real variables. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 31(3), 189-204.

Lê, F. (2017). Alfred Clebsch's "Geometrical Clothing" of the theory of the quintic equation. *Archive for History of Exact Sciences*, 71(1), 39-70.

Massa-Esteve, M. R. (2017). Mengoli's mathematical ideas in Leibniz's excerpts. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(1), 40-60.

Moyon, M. (2016). *Fibonacci. Extraits du Livre du calcul (Liber Abaci)*. Collection «Classique Kangourou», Paris, ACL-Les éditions du Kangourou, 64 p.

Parshall, K. H. (2017). A plurality of algebras, 1200–1600: Algebraic Europe from Fibonacci to Clavius. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(1), 2-16.

Pisano, R., & Bussotti, P. (2016). A Newtonian tale details on notes and proofs in Geneva edition of Newton's Principia. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 31(3), 160-178.

Rauff, J. V. (2016). The algebra of marriage: an episode in applied group theory. *BSHM Bulletin: Journal of the*

British Society for the History of Mathematics, 31(3), 230-244.

Rodhe, S. (2017). A forgotten booklet by Goldbach now rediscovered and three versions of its contents. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(1), 75-90.

Schubring, G. (2017). Searches for the origins of the epistemological concept of model in mathematics. *Archive for History of Exact Sciences*, (not assigned to a number).

Sharp, J. (2016). Folding the regular pentagon. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 31(3), 179-188.

Sonar, T. (2017). ... in the darkest night that is ... Briggs, Blundeville, Wright, and the misconception of finding latitude. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(1), 20-29.

Verburgt, L. M., & Hoppe-Kondrikova, O. (2016). On A.Ya. Khinchin's paper 'Ideas of intuitionism and the struggle for a subject matter in contemporary mathematics' (1926): A translation with introduction and commentary. *Historia Mathematica*, 43(4), 369-398.

Wardhaugh, B. (2017). Charles Hutton: 'One of the greatest mathematicians in Europe'?. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(1), 91-99.





Announcements of events



Forthcoming BSHM meetings

(The British Society for the History of Mathematics)

<http://www.bshm.ac.uk/#forthcoming>

1. Beyond the Academy. The Practice of Mathematics from the Renaissance to the Nineteenth Century

6-7 April 2017
York

In the history of mathematics, no less than in the study of history more generally, much attention has traditionally been given to the major figures like Newton, Euler, or Cauchy. However (again, as in history more generally), there is much to be gained from studying the ‘minor’ figures in the story of the development of mathematics: people whose names are not associated with any groundbreaking discoveries or who have not proved any major theorems, but who nevertheless employed mathematics on a daily basis, and who thus contributed in a broader sense to mathematical progress. This two-day conference is dedicated primarily to the life and works of such ‘Mathematical Practitioners’. Who were they? In what milieus did they move? How did they make their living? A secondary, closely

related theme is ‘mathematics beyond the universities’: just as a great deal of attention has been focused on high-profile figures, so too has there been an emphasis in scholarly work on the pursuit of mathematics within major metropolitan or academic centres. The role of women in this story is a particularly important consideration. Our aim with this conference is also to provide a forum for investigating the history of mathematical practice in non-academic or non-urban settings.

Confirmed invited speakers:

- Angela Axworthy (Technische Universität Berlin)
- Philip Beeley (University of Oxford)
- Jim Bennett (University of Oxford)
- Sloan Despeaux (Western Carolina University)
- Boris Jardine (University of Cambridge)
- Leo Rogers (Independent Researcher)

2. A History of Mathematical Logic in honour of Ivor Grattan Guinness

27 May 2017
London

<https://www.eventbrite.co.uk/e/the-history-of-mathematical-logic-tickets-28504021295>

Each year since 2015 we have run a one-day conference on mathematics and its history at Birkbeck (University of London) organised by the British Society

for the History of Mathematics (BSHM), and supported by the Department of Economics, Mathematics and Statistics at Birkbeck.

This year's event will be on the history of mathematical logic. We chose this theme to honour the eminent mathematical historian Ivor Grattan-Guinness, former President of the BSHM, who died at the end of 2014. So this will be a particularly special conference. We are privileged to have an excellent line-up of speakers: **Adrian Rice, Apostolos Doxiadis, Volker Peckhaus, John Dawson, Amirouche Moktefi, Susanne Prediger, and Michel Serfati.**

3. Picturing Mathematics

24 June 2017
Oxford

A day on the ways mathematicians have expressed their ideas in picture-form. Learn how these mathematical tools were invented with an enjoyable view of the beauty of mathematics.

There are many instances in the history of mathematics when equations or symbols were not the best means of conveying ideas and concepts, and new ways of communication were devised. We are now familiar with the beautiful butterfly patterns associated with chaos theory, the E8 geometry of string theory, and the fractal patterns of Mandelbrot. These esoteric examples from the last century joined earlier mathematical visualisation in the form of surface models, Venn

diagrams, and presentations of probability. The day will investigate how these mathematical tools were invented, and provide an enjoyable view of the beauty of mathematics.

Programme:

The Painter's Eyes In Albrecht Dürer's Geometrical Diagrams - Professor Jeanne Peiffer

Florence Nightingale's Statistical Diagrams - Hugh Small

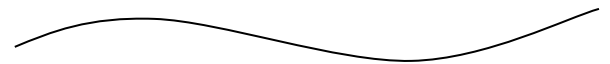
Venn Diagrams - Professor A.W.F Edwards

From Skeleton Structures To Geometrical Surfaces: The Mathematical Models Of Olaus Henrici - Professor June Barrow-Green

Symmetry, Patterns And Groups - Professor Sarah Hart

Fractals – Simple Or Complex? - Professor Kenneth Falconer

Picturing Chaos - Professor Ian Stewart





ICMT2

II International Conference on Mathematics Textbook Research and Development (2nd announcement)

7-11 May 2017
Rio de Janeiro, Brazil

(II Conferência Internacional em Pesquisa e Desenvolvimento de Livros Didáticos de Matemática)

www.im.ufrj.br/ictm2
icmt2@im.ufrj.br

Research focused on the analysis and development of textbooks (in conventional format or digital media) has recently gained great prominence in the international arena of research in mathematics education. This prominence is reflected, for example, in the *International Conference on School Mathematics Textbooks (ICSMT)*, held in Shanghai in 2011, and in the ZDM special issue (Volume 45, Issue 5, September 2013), on textbooks research in mathematics education.

Also reflecting this trend, the first *International Conference on Mathematics Textbook Research and Development* (ICMT-2014) took place at the University of Southampton (UK), from 29 to 31 July 2014. About 180 participants, from 30 different countries, attended ICMT-2014. ICMT-2014 proceedings are available on <http://eprints.soton.ac.uk/374809/>. Visit

also ICMT-2014's official website on: <http://blog.soton.ac.uk/icmtrd2014/>.

It is our pleasure to announce the *II International Conference on Mathematics Textbook Research and Development / II Conferência Internacional em Pesquisa e Desenvolvimento de Livros Didáticos de Matemática* (ICMT2), to be held from 7 to 11 May 2017, at the Federal University of Rio de Janeiro (UFRJ) and at the Federal University of the State of Rio de Janeiro (UNIRIO), Brasil.

The conference is organized by the Federal University of Rio de Janeiro (Universidade Federal do Rio de Janeiro, **UFRJ**), the Federal University of the State of Rio de Janeiro (Universidade Federal do Estado do Rio de Janeiro, **UNIRIO**), the State University of São Paulo (Universidade Estadual Paulista, **UNESP**) and the Federal University of Pernambuco (**UFPE**). It is supported by the Brazilian Mathematics Education Society (**SBEM**), the Brazilian Society of Mathematics (**SBM**), and the Brazilian Society of Applied and Computational Mathematics (**SBMAC**).

ICMT2 will feature different activities, including plenary lectures, symposia, workshops, oral presentations, posters and special activities addressed to teachers. Accepted and presented papers will be published after a peer-review process in Proceedings following the Conference.

International Programme Committee (IPC)

- Rúbia Amaral (UNESP, Brazil) – **Secretary**

- Ubiratan d'Ambrosio (UNIAN, Brazil) – **Honorary President**
- Marcelo Borba (UNESP, Brazil)
- Rute Borba (Universidade Federal de Pernambuco, Brazil)
- Marcos Cherinda (Universidade Pedagógica de Moçambique)
- Lianghuo Fan (University of Southampton, UK) – **Co-chair**
- Victor Giraldo (Universidade Federal do Rio de Janeiro, Brazil) – **Local Chair**
- Patricio Herbst (University of Michigan, USA)
- Marja van den Heuvel-Panhuizen (Universiteit Utrecht, Netherlands)
- Abdellah El Idrissi (École Normale Supérieure de Marrakech, Morocco)
- Diana Jaramillo Quiceno (Universidad de Antioquia, Colombia)
- Cyril Julie (University of the Western Cape, South Africa)
- Gabriele Kaiser (Universität Hamburg, Germany)
- Alexander Karp (Teachers College, Columbia University, USA)
- Jeremy Kilpatrick (University of Georgia, USA)
- Jian Liu (Beijing Normal University, China)
- Eizo Nagasaki (National Institute for Educational Policy Research, Japan)
- Michael Otte (UNIAN, Brazil)
- Johan Prytz (Uppsala Universitet, Sweden)
- Sebastian Rezat (Universität Paderborn, Germany)

- Angel Ruiz (Universidad de Costa Rica, Costa Rica)
- Kenneth Ruthven (University of Cambridge, UK)
- Gert Schubring (UFRJ, Brazil/Universität Bielefeld, Germany) – **Chair**

Local Organization Committee (LOC)

- Lourdes Werle de Almeida (UEL)
- Rúbia Amaral (UNESP) – **Co-chair**
- Franck Bellemain (UFPE)
- Marilena Bittar (UFMS)
- Victor Giraldo (UFRJ) – **Chair**
- Verônica Gitirana (UFPE)
- Carmen Mathias (UFMS)
- João Frederico Meyer (UNICAMP)
- Cydara Ripoll (UFRGS)
- Walcy Santos (UFRJ)
- Fábio Simas (UNIRIO)
- Ralph Teixeira (UFF)

Plenary speakers

- ✓ Kay O'Halloran (Curtin University, Bentley, Australia)
- ✓ João Bosco Pitombeira (Universidade Federal de Mato Grosso do Sul, Campo Grande, Brazil)
- ✓ Ken Saito (Department of Human Sciences, School of Humanities and Social Sciences, Osaka Prefecture University, Osaka, Japan)
- ✓ Zalman Usiskin (University of Chicago, Chicago, USA)
- ✓ Jianpan Wang (Jianpan Wang, East China Normal University, Shanghai, China)

Conference themes

- ✓ Textbook research (concepts, issues, methods, directions, etc.)
- ✓ Textbook analysis (characteristics, treatment of contents and/or pedagogy, etc.)
- ✓ Analysis of historical textbooks
- ✓ Textbook use (by teachers, by students, and/or by other parties)
- ✓ Textbooks and student achievement
- ✓ Textbook development (domain/competence analyses, teaching trajectories, task design, format of presenting the “content” to the student, format of presenting the “content” to the teacher (teacher guides))
- ✓ Textbook policies (governmental educational policy about textbooks, distribution, market strategies)
- ✓ Evolution of textbooks in the light of new digital technologies (including integration of ICT tools and innovation, e-textbook)
- ✓ Other disciplines in mathematics textbooks & mathematics in textbooks of other disciplines
- ✓ Other major relevant issues about mathematics textbooks

Venue

Rio de Janeiro, also known as Cidade Maravilhosa (Wonderful City), was recently named a World Heritage Site by UNESCO. Despite the city is among the largest urban areas on the planet, it is well known worldwide for its landscapes of exceptional scenic beauty. Its unique geographical location gathers tropical beaches, dramatic mountain ranges, luxuriant rain forest, rivers and waterfalls – all within the urban area.

For further information, visit:
<http://www.rio.rj.gov.br/web/riotur/>.

Visa Information

Citizens from most of Latin American and European countries do not need to apply to visas to short-term visits to Brazil. Visas are required for US citizens, as well as citizens from some African and Asian countries.

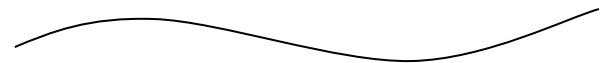
Vaccinations may also be required.

For further information, please consult Brazilian consulates in your country of origin, and see:

<http://www.portalconsular.mre.gov.br/>.

Further Information

www.im.ufrj.br/icmt2
icmt2@im.ufrj.br



***The Fourth International
Conference on History and
Pedagogy of Modern
Mathematics***

20-26 August 2017
Chengdu, China

The Second Circular (December 2016)

Organized by

School of Mathematics, Sichuan Normal
University, Chengdu

In Association with

School of Mathematics, Northwest
University, Xi'an
Dept of Mathematics, Simon Fraser
University
Chinese Society for the History of
Mathematics

Supported by

National Science Foundation of China

I. Organization

1. Scientific Committee

Co-Chair

Tom Archibald, Simon Fraser University,
Vancouver
Anjing Qu, Northwest University, Xian

2. Organizing Committee

Co-Chair

Du Wei, Sichuan Normal University,
Chengdu
JI Zhigang, Shanghai Jiaotong University,
Shanghai

Member

Chen Chuanzhong, Hainan Normal
University, Haikou
Cao Guangfu, Guangzhou University,
Guangzhou
Chen Kesheng, Anhui Normal University,
Wuhu
Deng Mingli, Hebei Normal University,
Shijiazhuang
Guo Shirong, Inner Mongolia Normal
University, Huhehaote
Huang Qinan, Shaanxi Normal University,
Xi'an
Li Xiaoqi, Northeastern University at
Qinhuangdao, Qinhuangdao
Qiao Lei, Sichuan Normal University,
Chengdu
Ren Xinxi, Shanxi Normal University,
Linfen
Song Naiqing, Southwest University,
Chongqing
Tang Quan, Xianyang Normal University,
Xianyang
Wang Chang, Northwest University, Xi'an
Wang Guangming, Tianjin Normal
University, Tianjin
Wang Qingjian, Liaoning Normal
University, Dalian
Wang Xiaoqin, East China Normal
University, Shanghai
Xu Chuansheng, Linyi University, Linyi
Xue Youcai, Zhejiang University of
Science and Technology, Hangzhou
Xu Zelin, Donghua University, Shanghai
Yuan Min, Northwest University, Xi'an
Zhou Ji, Sichuan Normal University,
Chengdu
Zhang Hong, Sichuan Normal University,
Chengdu

Secretary
Zhang Hong (Chair), Qiao Lei, Wang
Chang

II. Program

Five days of scientific sessions are planned.

1. Invited Lecturers

- Tom ARCHIBALD, Simon Fraser University, Vancouver
- Umberto BOTTAZZINI, University of Milan, Milan
- Jiang-Ping Jeff CHEN, St. Cloud State University, St. Cloud
- Leo CORRY, Tel Aviv University, Tel Aviv
- Catherine GOLDSTEIN, CNRS, Paris
- Christopher David HOLLINGS, University of Oxford, Oxford
- Sung Sa HONG, Sogang University, Seoul
- Lizhen JI, University of Michigan, Ann Arbor
- Zhigang JI, Shanghai Jiaotong University, Shanghai.
- Fumiharu KATO, Tokyo Institute of Technology, Tokyo
- Deborah KENT, Drake University, Des Moines
- Young Wook KIM, Korea University, Seoul
- Tinne Hoff KJELDSEN, Roskilde University, Copenhagen
- Ko Wei LIH, Academia Sinica, Taipei
- Jesper LÜTZEN, University of Copenhagen, Copenhagen
- Jeanne PEIFFER, CNRS, Paris
- Anjing QU, Northwest University, Xian
- Sangwook REE, The University of Suwon, HwaSeongSi
- Tilman SAUER, Johannes Gutenberg University Mainz, Mainz

- Norbert SCHAPPACHER, Université de Strasbourg, Strasbourg
- Man Keung SIU, University of Hong Kong, Hong Kong
- Ivahn SMAJDA, Université Paris Diderot, Paris
- Kenji UENO, Yokkaichi University, Yokkaichi
- Hong ZHANG, Sichuan Normal University, Chengdu

2. Scientific Sessions for Contributed Papers

Plenary lecture and Panel session will be organized on specific topics.

3. Language: English, Chinese

4. Tentative Schedule

	Language	8:00 – 12:00	14:00 – 18:00
21	English	Plenary lecture	Plenary lecture
22		Plenary lecture	Plenary lecture
23		Plenary lecture	Plenary lecture
24		Special session for young scholars	Sightseeing
25	Chinese	Culture and local history of mathematics	History and pedagogy of college mathematics

5. Topic

Contemporary Research in the History of Modern Mathematics and Applications to Pedagogy

Research in both the history of mathematics and the applications of history of mathematics to pedagogy have been enriched by new directions in recent

years. The results have included new emphases in both disciplines, with diverse and far-reaching consequences. On the side of history, we see a renewed interest in the philosophical issues of various kinds, on the transmission of mathematical knowledge from local settings to global norms, on networks of scholars and networks of texts, on the nature and importance of application in mathematics, and on a reassessment of the importance of computation in all its forms. On the side of education, we see an expansion of the strategic use of history as a tool, going beyond cross-cultural comparison to being an ingredient in various theoretical approaches.

The purpose of the meeting proposed is to assemble senior scholars active in these fields, junior scholars whose work promises to be transformative, and scholars who are ambitious to acquire new approaches while presenting contributed papers on work of their own for comment by their peers.

With a broadly inclusive scope we hope to build on the positive experiences of earlier meeting to continue to build a Chinese and international research community and to build links for the future.

We are deeply convinced that the better understanding of modern mathematical activity that such an approach can yield will be helpful for mathematics education at all levels, and that the presence of researchers with education as a primary focus will enhance this aim.

III. Practicalities

1. Registration

Registration Fees (Registration covers the book of abstracts, all the conference sessions, including the banquet and all meals. It does not cover accommodation)

Participators	Students	Accompanying
USD\$200	USD\$100	USD\$150

Registration fee is paid upon arrival. We normally expect that participants will arrive on August 20 and depart on 26.

2. Accommodation

During the conference all participants stay in **Chengdu Wangjiang hotel**.
<http://www.wangjianghotel.com/en/index.html>

3. Deadline of Registration form, Title and Abstract

Please send back your registration form before 1 May 2017.

Please send title of your talk before 1 June 2017.

We expect that you send the abstract of your paper before 1 July 2017.

All emails should be sent to Dr. Qiao Lei: qiaolei5@yeah.net.

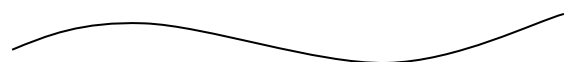
We accept *.doc and *.txt files.

4. Webpage and Contact persons

Official webpage will be announced.

Dr. Qiao Lei, Sichuan Normal University, qiaolei5@yeah.net

Dr. Wang Chang, Northwest University, heart_cw@126.com



ICHME-5

Fifth International Conference on the History of Mathematics Education

19-22 September 2017
Utrecht, the Netherlands

ICHME-5 Announcement

We are calling for papers for this fifth conference, as a continuation of the successful work of the first four conferences, in Iceland (2009), Portugal (2011), Sweden (2013) and Italy (2015). [Abstracts of proposed contributions must be submitted before April 1, 2017.](#) The decision about acceptance of proposals will be communicated by May 15, 2017.

Submission of abstracts, and later of papers, is only possible via the conference website: www.ichme-5.nl. Abstracts should be in English and about one page (500 words). References must be included. Please briefly describe (one or two sentences) why your proposed presentation is a relevant addition to the body of knowledge of the History of Mathematics Education. Once submitted, there will be no possibility for a revision of abstracts.

The conference
First becoming visible internationally at ICME 10 in 2004 (in Copenhagen) as Topic Study Group 29, the history of mathematics education has since become a well-established area of research. It has been a subject of interest in various

international meetings, e.g., ICME, HPM, CERME and ESU conferences.

The first specialized research conference, entitled “Ongoing Research in the History of Mathematics Education,” held in Garðabær near Reykjavík (Iceland) in 2009, led to a series of such specialized conferences. This will be the fifth international conference, this time held in Utrecht, the Netherlands.

During previous conferences themes discussed included:

- The Development of Mathematics Education in Specific Countries;
- Practices of Teaching, Mathematics Textbooks, Teacher Education, Transmission and Reception of Ideas;
- Geometry Teaching;
- Algebra Teaching;
- Teaching of Calculus;
- Interdisciplinarity and Contexts;
- The Modern Mathematics Movements; and
- History of Curricula.

Those proposing abstracts will have wide freedom of choice, but in order to stimulate research in areas that are less explored, new topics such as teacher journals and mathematics education prior to 1800 are suggested. A publication of the proceedings is planned. Papers will be peer-reviewed.

The conference is organized by the Dutch Association of Mathematics Teachers, in cooperation with the Freudenthal Institute and the Descartes Centre of the University of Utrecht.

International program committee:

- Kristín Bjarnadóttir (Iceland)
- Jan Hogendijk (the Netherlands)
- Jenneke Krüger (the Netherlands)
- Johan Prytz (Sweden)
- Gert Schubring (Brazil/Germany)
- Bert Theunissen (the Netherlands)

Advisor: Fulvia Furinghetti (Italy)

Further information about the conference and practical information is available on the conference website: www.ichme-5.nl.

Registration and conference fee: until 15 June 2017, the fee is € 195; thereafter the fee will be € 230. Last day of registration and payment is 31 August 2017. Registration will take place via the conference website.

References

Schubring, G. (Ed.) (2006). Special issue: History of teaching and learning mathematics. *Paedagogica Historica*, 42(5-6). [Proceedings of TSG 29 at ICME 10] <http://www.tandfonline.com/loi/cpdh20>

Bjarnadóttir, K., Furinghetti, F., & Schubring, G. (Eds.) (2009). "Dig where you stand." Proceedings of the conference on on-going research in the history of mathematics education. Reykjavik, Iceland: University of Iceland – School of Education.

Bjarnadóttir, K., Furinghetti, F., Matos, J., & Schubring, G. (Eds.) (2012). "Dig where you stand" 2. Proceedings of the second conference on the history of mathematics education. Lisbon, Portugal: Universidade Nova.

Bjarnadóttir, K., Furinghetti, F., Prytz, J., & Schubring, G. (Eds.) (2015). "Dig where you stand" 3. Proceedings of the

third conference on the history of mathematics education. Uppsala, Sweden: Department of Education, Uppsala University. <https://uu.diva-portal.org/smash/get/diva2:794222/FULLTEXT03.pdf>

Karp, A., & Furinghetti, F. (2016). History of mathematics teaching and learning: Achievements, problems, prospects (ICME-13 Topical Surveys, G. Kaiser (Ed.)). Switzerland: Springer Open.

Karp, A., & Schubring, G. (Eds.) (2014). Handbook on the history of mathematics education. (2014). New York, NY: Springer.

Jenneke Krüger

Freudenthal Institute
University of Utrecht
The Netherlands





The Fourth International Meeting of the Association for the Philosophy of Mathematical Practice

23-27 October 2017

Salvador da Bahia, Brazil

<http://www.philmathpractice.org>

The Fourth International Meeting of the Association for the Philosophy of Mathematical Practice will be held on October 23-27, 2017, in Salvador da Bahia, Brazil.

Registration: All contributing speakers and discussants are requested to confirm their participation before May 30th by sending an e-mail containing name and affiliation and paying a conference fee of US\$ 100, which will include congress material, coffee breaks and the conference dinner meal. Participants without a permanent position are entitled to a discount, paying a fee of US\$ 50; similarly for those who may attend the conference without presenting a communication. This should be settled in advance via transfer (more details to be defined).

Keynote speakers

Luiz Carlos Pereira – Brazil

Jemma Lorenat – USA

Valeria Giardino – France

José Ferreirós – Spain

Erich Reck – USA

Round Tables

Platonism in Mathematical Practice

Elaine Landry (USA)

Oswaldo Chateaubriand (Brazil)

Marco Panza (France)

Formal and informal proofs

Jessica Carter (Denmark)

Paolo Mancosu (USA)

Max Dickmann (France)

Workshops

On the relationship between geometry and arithmetic: the theories of proportion from Euclid to Hilbert

Organizer: Davide Crippa (Czech Republic)

Speakers: Vincenzo De Risi (Germany)

Davide Crippa (Czech Republic)

Eduardo Giovannini (Argentina)

Varieties of visualization in mathematics

Organizer: Silvia De Toffoli (USA)

Speakers: Silvia De Toffoli (USA)

Javier Legris (Argentina)

Danielle Macbeth (USA)

Education and mathematical practice

Organizer: Gert Schubring (Brazil)

Speakers: Gert Schubring (Brazil)

Tinne Hoff Kjeldsen (Denmark)

Nicola Oswald (Germany)

Contradictory objects in mathematical practice

Organizer: Walter Carnielli (Brazil)

Speakers: Walter Carnielli (Brazil)

Giorgio Venturi (Brazil)

Abilio Rodriguez (Brazil)

HPM Administrative Structure

Chair:

Clark, Kathy	Florida State University, Tallahassee, Florida, USA
---------------------	---

Former Chair (2012-2016):

Radford, Luis	École des sciences de l'éducation, Université Laurentienne, Sudbury, Ontario, Canada
----------------------	--

Executive Committee:

Barbin, Evelyne	Universite de Nantes, IREM-Centre Francois Viète, France
Furinghetti, Fulvia	Dipartimento di Matematica dell'Università di Genova, Genova, Italy
Jankvist, Uffe Thomas	Aarhus University, Department of Education, Denmark
Kjeldsen, Tinne Hoff	Department of Mathematical Sciences, University of Copenhagen, Denmark
Tzanakis, Constantinos	Department of Education, University of Crete, Rethymnon 74100, Greece

Advisory Board:

Bjarnadóttir, Kristín	University of Iceland, School of Education, Reykjavík, Iceland
Booker, George	Griffith University, Brisbane, Australia
Chorlay, Renaud	IREM, Université Paris 7, Paris, France
D'Ambrosio, Ubiratan	Pontificia Universidade, Católica de Sao Paulo, Brazil
Fasanelli, Florence	American Association for the Advancement of Science, Washington, DC, USA
FitzSimons, Gail	Warrandyte, Victoria, Australia
Fried, Michael N.	Program for Science and Technology Education, Ben-Gurion University of the Negev, Israel
Hong, Wann-Sheng	Department of Mathematics, National Taiwan Normal University, Taiwan
Hwang, Sunwook	Department of Mathematics, Soongsil University, Seoul, Korea
Isoda, Masami	Graduate School of Comprehensive Human Science, University of Tsukuba, Japan
Katz, Victor	University of the District of Columbia, Washington, DC, USA
Lakoma, Ewa	Institute of Mathematics Military University of Technology Warsaw, Poland
Lawrence, Snezana	Anglia Ruskin University, Cambridge, England, UK
Massa-Esteve, Maria Rosa	Centre de Recerca per a la Història de la Tècnica, Matemàtica Aplicada I, ETSEIB, Universitat Politècnica de Catalunya, Barcelona, Spain
Pengelley, David	Department of Mathematical Sciences, New Mexico State University, Las Cruces, USA
Pinto, Hélder	CIDMA, University of Aveiro, Aveiro, Portugal
Puig, Luis	Departamento de Didáctica de las Matemáticas, Universitat de València Estudi General, Spain
Rogers, Leo	Independent Researcher, Oxford, UK
Qu, Anjing	Department of Mathematics at Northwest University, Xian, China
Schubring, Gert	IDM, Universitat Bielefeld, Bielefeld, Germany
Siu, Man-Keung	Department of Mathematics, University of Hong Kong, Hong Kong SAR, China
Smestad, Bjørn	Faculty of Education, Oslo University College, Norway
Stein, Robert	California State University, San Bernardino, USA
Winicki-Landman, Greisy	Department of Mathematics and Statistics, California State Polytechnic University, USA

Newsletter Editors:

Clark, Kathy	Florida State University, Tallahassee, Florida, USA
Lawrence, Snezana	Anglia Ruskin University, Cambridge, England, UK
Pinto, Helder	CIDMA – University of Aveiro, Aveiro, Portugal
Puig, Luis	Departamento de Didáctica de las Matemáticas, Universitat de València Estudi General, Spain

Newsletter Distributors:

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

Area	Name and address	Email address
Argentina	Juan E. Nápoles Valdés, Lamadrid 549, (3400) Corrientes, ARGENTINA	napoles4369@gmail.com
Australia	Gail FitzSimons, 68 Bradleys Lane, Warrandyte, Victoria 3113, AUSTRALIA	gfi@unimelb.edu.au
Austria	Manfred Kronfellner, Institute of Discrete Mathematics and Geometry, Vienna University of Technology, Wiedner Haupstr. 8-10, A-1040 Wien, AUSTRIA	m.kronfellner@tuwien.ac.at
Belgium and The Netherlands	Steven Wepster, Mathematical Institute, Utrecht University, Budapestlaan 6, P.O. Box 80010, 3508 TA Utrecht, NL	S.A.Wepster@uu.nl
Canada	Thomas Archibald, Mathematics Department, Acadia University, Wolfville, NS B0P1X0, CANADA	Tom.Archibald@acadiu.ca
China	Ma Li, Linköping University, ITN, SE - 601 74 Norrköping, SWEDEN	ma_li@mac.com
Colombia	Edgar Alberto Guacaneme, Facultad de ciencia y tecnología, Universidad Pedagógica Nacional – Bogotá, COLOMBIA	guacaneme@pedagogica.edu.co
Denmark	Tinne Hoff Kjeldsen, Department of Mathematical Sciences, University of Copenhagen. Universitetsparken 5, 2100 Copenhagen Ø, DENMARK	thk@math.ku.dk
France	Evelyne Barbin, Centre François Viète, Faculté des sciences et des techniques, 2 Chemin de la Houssinière, BP 92208, 44322 Nantes cedex, FRANCE	evelyne.barbin@wanadoo.fr
Germany	Gert Schubring, Inst. f. Didaktik der Math., Universitaet Bielefeld, Postfach 100 131, D-33501, Bielefeld, GERMANY	gert.schubring@uni-bielefeld.de
Iceland	Kristín Bjarnadóttir, University of Iceland, School of Education, v. Stakkahlid 105 Reykjavík, Iceland	krisbj@hi.is
Iran	Mohammad Bagheri, P.O.Box 13145-1785, Tehran, IRAN	sut5@sina.sharif.edu
Israel	Ted Eisenberg, Mathematics Department, Ben Gurion University of the Negev, Beer-Sheva 84105, ISRAEL	eisen@math.bgu.ac.il eisenbt@barak-online.net
Italy	Marta Menghini, Dipartimento di Matematica (Universita` La Sapienza), Piazzale A. Moro 5, 00185 Roma ITALY	marta.menghini@uniroma1.it
Japan	Osamu Kota, 3-8-3 Kajiwara, Kamakura Kanagawa-ken, 247-0063 JAPAN	kota@asa.email.ne.jp
Malaysia	Mohamed Mohini, Department of Science and Mathematical Education, Universiti Teknologi Malaysia, 81310 Johor, MALAYSIA	mohini@fp.utm.my
Mexico	Alejandro R. Garciadiego, Caravaggio 24, Col. Nonoalco Mixcoac Del. Benito Juárez 03700 México, D. F. México	gardan@servidor.unam.mx
Morocco	Abdellah El Idrissi, E.N.S. B.P: 2400 Marrakech, 40 000, MOROCCO	a_elidrissi@hotmail.com
New Zealand	Brenda Bicknell, Faculty of Education, University of Waikato, Private Bag 3105, Hamilton 3240, NEW ZEALAND	bicknell@waikato.ac.nz
Other East Asia	Gloria Benigno, Department of Education, Culture and Sports, Region X, Division of Misamis Occidental, Oroquieta City, PHILLIPINES	glorya4444@yahoo.com

Area	Name and address	Email address
<i>Peru</i>	María del Carmen Bonilla, Calle Reni 272, San Borja, Lima 41. Lima, PERU.	mc_bonilla@hotmail.com
<i>Poland</i>	Ewa Lakoma, Institute of Mathematics Military University of Technology Warsaw, POLAND	ewa.lakoma@wat.edu.pl
<i>Russia</i>	Vasilii Mikhailovich Busev	vbusev@yandex.ru
<i>Scandinavia</i>	Sten Kaijser, Department of Mathematics, P.O. Box 480, SE- 751 06 Uppsala, SWEDEN	sten@math.uu.se
<i>South America</i>	Marcos Vieira Teixeira, Departamento de Matemática, IGCE – UNESP, Postal 178, 13 500 - 230 Rio Claro, SP BRAZIL	marti@rc.unesp.br
<i>South Asia</i>	Prof. R. C. Gupta, Ganita Bharati Academy, R-20, Ras Bahar Colony, Jhansi-284003, U.P. INDIA	
<i>South East Europe</i>	Nikos Kastanis, Department of Mathematics, Aristotle University of Thessaloniki, Thessaloniki 54006, GREECE	nioka@auth.gr
<i>Southern Africa</i>	Marcos Cherinda, Universidade Pedagógica, Campus de Lhangue, Faculdade de Ciências Naturais e Matemática, CP 4040, Maputo, MOZAMBIQUE	mCherinda@up.ac.mz
<i>Spain and Portugal</i>	Carlos Correia de Sá, Dep. Matemática Pura; Faculdade de Ciências da U. do Porto; Rua do Campo Alegre, 687 P - 4169 - 007 Porto, PORTUGAL	csa@fc.up.pt
<i>Taiwan</i>	Wann-sheng Horng, Math Dept NTNU, 88 Sec.4, Tingchou Rd., Taipei, TAIWAN	horng@math.ntnu.edu.tw
<i>Turkey</i>	- currently vacant -	
<i>United Kingdom</i>	Snezana Lawrence, Anglia Ruskin University, Cambridge, England, UK	snezana@mathsisgoodforyou.com
<i>United States of America</i>	David L. Roberts, Prince George's Community College, Largo, Maryland, USA	robertsdl@aol.com

Table of contents

Message from HPM Chair	1
Practitioner's Corner	3
MAA Convergence	8
ESU 8	10
Have you read these?	13
Announcements of events	15
HPM Administrative Structure	26

The views expressed in this Newsletter may not necessarily be those of the HPM Advisory Board. Please pass on news of the existence of this newsletter to any interested parties. This and previous newsletters can be downloaded from our website:

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

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

<http://grouphpm.wordpress.com/>

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

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

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

No.	Deadline for material	Sent to distributors
95	12 June 2017	July 2017
96	12 October 2017	November 2017
97	12 February 2018	March 2018

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

The Newsletter is free of charge, available upon request from the distributor for your area, and may be reproduced with acknowledgement.

Editors:

Snezana Lawrence, snezana@mathsisgoodforyou.com

Helder Pinto, hbmpinto1981@gmail.com

Kathy Clark, kclark@fsu.edu

Luis Puig, luis.puig@uv.es

A note from the Editors

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