

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

No. 96

#### November 2017

This and earlier issues of the Newsletter can be downloaded from our website <a href="http://www.clab.edc.uoc.gr/hpm/">http://www.clab.edc.uoc.gr/hpm/</a>

These and other news of the HPM group are also available on the website <a href="http://grouphpm.wordpress.com/">http://grouphpm.wordpress.com/</a>

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

## A MESSAGE FROM THE CHAIR OF HPM

Welcome to Newsletter 96!

Dear friends,

Happy November!

I've decided to use my "Welcome" message in Newsletter 96 as a way to revisit one of the discussion group sessions from HPM 2016 (Montpellier, France). In Discussion Group 2, Sebastian Schorcht (Germany) and I facilitated a discussion of the topic, "History of Mathematics in Teacher Education." During the group exchange we discussed several topics, including ways in which we might be able to build a community of interested teachers, scholars, and researchers to address responses to and develop work based upon the work from four prompts that guided a similar discussion at HPM 2012:

**Prompt 1:** Identify one or two beneficial aspect(s) of a "History of Mathematics" course (from either the perspective of having taken or taught such a course before).

**Prompt 2:** Identify one or two obstacles that may arise in implementing a "History of Mathematics" course. Describe ways in which the obstacles can be addressed.

**Prompt 3:** Describe the benefits to teacher candidates (teacher students) that requiring a "History of Mathematics" course may provide (again, based on actual experience or what you believe).

**Prompt 4:** With regard to the potential content and pedagogy of such a course, what are examples of tasks that should be required?

The discussion group in Montpellier was engaging (at least from my perspective!), but I would like to generate further discussion based on what began there. To begin that continued work I invite you to

visit the link below and to contribute your thoughts and experiences via a brief survey. I will leave the survey open for a few weeks, and I will compile the results to inform the next step. When we proposed the Discussion Group for Montpellier 2016, we stated that we wanted to:

focus on sharing and discussing specific tasks or activities, which may serve as examples for contexts that do not currently possess a strong history of mathematics dimension within mathematics teacher education programs, or which may provide new examples for those who do. A key product of the DG is to produce a document that contains a description of examples, notation of potential uses, and contact information for persons who either devised or implemented the sample task or activity. (Clark & Schorcht, 2016, emphasis added)

It's important to me to continue to build and connect a broader community of persons engaged in thinking deeply about the ways in which history of mathematics informs the education of future and current mathematics of teachers. I believe the reach of this Newsletter will enable us to compile examples from around the world, and moving forward, we can provide a space to share resources and to propose additional collaboration, including those with other researchers outside the HPM, which will continue to open the door for new ideas and new areas in which we can contribute.

Please share your examples and experiences on the short survey here: <a href="https://fsu.qualtrics.com/jfe/form/SV\_25">https://fsu.qualtrics.com/jfe/form/SV\_25</a>
<a href="https://fsu.qualtrics.com/jfe/form/SV\_25">KWFeGg5Rxjd5j</a>

And, if you have any questions, please don't hesitate to contact me!

If you have not already done so, I hope that you will consider submitting a proposal for ESU-8 (the proposal deadline has been extended to **15 November 2017!**). And, I would like to extend my gratitude to the International Scientific Program Committee and the work that they have completed thus far in preparation for the event in Oslo in July 2018. *Thank you*, Evelyne, Uffe, Tinne, Bjørn, and Costas, for all of your hard work!

Finally, I wish you a productive close to 2017 and a lovely start to 2018!

*Kathy* (kclark@fsu.edu)

#### Reference:

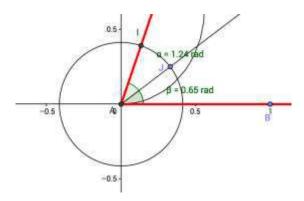
Clark, K., & Schorcht, S. (2016). History of mathematics in teachers' education: Motivation for and of Discussion Group 2. In L. Radford, F. Furinghetti, & T. Hausberger (Eds.), Proceedings of the 2016 ICME Satellite Meeting of the International Study Group on the Relations Between the History and Pedagogy of Mathematics (HPM 2016, 18-22 July 2016) (pp. 203-204). Montpellier, France: IREM de Montpellier.

# MAA Convergence: Mathematics History for Your Classroom

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 Victor Katz and Frank Swetz and published by the Mathematical Association of America, Convergence brings you a variety of interesting articles and teaching tools.

We highlight here some of our newest articles and resources for use in your high school or college classroom.

"Trisecting an Angle Using Mechanical Means" is one of our many articles with interactive features. You and your students can use author Keith Dreiling's interactive applets to trisect angles using the methods of Hippias, Archimedes, and Nicomedes.



Above: Spiral of Archimedes for trisecting angles

In "The Mathematics of Levi ben Gershon in the Classroom," author Shai Simonson shares his translations of work by Levi (1288-1344) on the value of pi, calculating square roots, and a selection of word problems. Learn how you and your students can compute your personal estimates of pi!

In "Impacts of a Unique Course on the History of Mathematics in the Islamic World," author Nuh Aydin shares his motivation for developing such a course, its structure and content, its community service component, and its impacts on students, community members, and his own scholarship.



Above: From the title page of a 1648 manuscript of John Speidell's 1648 Spherical Trigonometry. See more in MAA Convergence's "Mathematical Treasures," where this image appears courtesy of the University of Pennsylvania Libraries.

We continue our series of mini-Primary Source Projects (mini-PSPs) from the **TR**ansforming Instruction in Undergraduate Mathematics via Primary Historical Sources (TRIUMPHS) team with two new projects:

- "Why be so Critical? Nineteenth Century Mathematics and the Origins of Analysis," by Janet Barnett, in which introductory analysis students read criticisms by Bolzano, Cauchy, Dedekind, and Abel that helped motivate the development of formal proof via precise inequalities in analysis.
- "Connecting Connectedness," by Nicholas Scoville, in which introductory topology students see how mathematical ideas and definitions evolve over time by reading contributions to the concept and definition of connectedness from Cantor, Jordan, Schoenflies, and Lennes.

"The Totient Function" is the first article in a new series titled "Math Origins," in which Euler Archive Director Erik Tou answers the question, "How were concepts, definitions, tools, and theorems familiar to today's students of mathematics developed over time?" In this first installment, Tou explains how the totient function, also known as the Euler phi-function, was shaped by Euler, Gauss, and Sylvester.

bi	e usual abbreviation oposed symbols;—	ns, and M	r. Dodgson's
	Sine of 0	sin 0	no
	Cosine of #	con 0	00
	Tangent of $\theta$	tan 0	750
	Cotangent of 0	cut 0	¥0
	Secant of 0	and 0	00
	Cosecant of 0	cosec 0	X10
	Versed sine of 0	vers 0	20K Ø

Above: Proposal of Charles Dodgson (Lewis Carroll) for symbols for trigonometric functions (1861). From MAA Convergence's "Mathematical Treasures"

Our "Index to Mathematical Treasures" includes hundreds of images for use in your classroom from dozens of libraries and sources.

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, California USA

## 8<sup>th</sup> EUROPEAN SUMMER UNIVERSITY ON HISTORY AND EPISTEMOLOGY IN MATHEMATICS EDUCATION

20-24 July 2018 Oslo, Norway

## **ESU - 8**

Oslo & Akershus University College of Applied Sciences

https://esu8.edc.uoc.gr

#### **ANNOUNCEMENT**



#### Aim

The ESU mainly aims

- to provide a forum for presenting research in mathematics education and innovative teaching methods based on a historical, epistemological and cultural approach to mathematics and their teaching, with emphasis on actual implementation;
- to give the opportunity to mathematics teachers, educators and researchers to share their teaching ideas and

classroom experience related to this perspective;

in this way, to motivate further collaboration along these lines, among members of the mathematics education community in Europe and beyond.

The programme and activities of ESU-8 are structured around the following

#### **Main themes:**

Theme 1: Theoretical and/or conceptual frameworks for integrating history and epistemology of mathematics in mathematics education;

Theme 2: History and epistemology in students and teachers mathematics education: Curricula, courses, textbooks, and didactical material of all kinds - their design, implementation and evaluation;

Theme 3: Original historical sources in teaching and learning of and about mathematics;

Theme 4: Mathematics and its relation to science, technology, and the arts: Historical issues and socio-cultural aspects in relation to interdisciplinary teaching and learning;

Theme 5: Topics in the history of mathematics education;

Theme 6: History of mathematics in the Nordic countries.

More detailed information: In the regularly updated ESU-8 website <a href="http://esu8.edc.uoc.gr">http://esu8.edc.uoc.gr</a>. See also the *First Announcement* at <a href="https://esu8.edc.uoc.gr/1st-announcement/">https://esu8.edc.uoc.gr/1st-announcement/</a> & the *HPM Newsletter* issues <a href="No 94">No 94</a> & <a href="No 94">No 95</a>

#### **Important dates:**

 New deadline for abstract submission of proposals for all types of activities: 15 November 2017 (original 31/10/17)

- *Authors' notification*: 15 December 2017
- Second Announcement: By early December 2017
- Deadline for early registration: 31 January 2018

**Submission procedure**: Submission of proposals and full texts for the proceedings, the reviewing process, and authors' notification is being realized online via <a href="https://esu8.edc.uoc.gr/submission">https://esu8.edc.uoc.gr/submission</a> where more detailed information on the reviewing procedure and the evaluation criteria can be found.

**Proceedings**: They will be published in **digital** form **after** ESU-8, so that the authors are given the opportunity to enrich their text as a result of the feedback they will gain during ESU-8.

#### **Registration and Conference fees:**

Registration is being done online via <a href="https://esu8.edc.uoc.gr/registration/">https://esu8.edc.uoc.gr/registration/</a>

*Early registration* (before January 31, 2018): 2100 NOK (1600 NOK for students and school teachers)

*Late registration* (before 31 May 2018): 2600 NOK (2100 NOK for students and school teachers)

(Current equivalence of Norwegian Krone (NOK):  $1NOK \approx 0.106 \in 0.127$  US\$)

#### **Plenary Lectures**

Theme 1: Hans Niels Jahnke (Germany), Hermeneutics, and the Question of "How is Science Possible?"

Theme 2: Ingo Witzke (Germany), Epistemological beliefs about mathematics

- Challenges and chances for mathematical learning: Back to the future.

Theme 3: Frédéric Métin (France), Implementing history in the math class, from kindergarten to teacher training: words and artifacts

Theme 4: Snezana Lawrence (UK), The art and architecture of mathematics education – a study in metaphors

Theme 5: Marta Menghini (Italy), The fusion of plane and solid geometry in the teaching of geometry: textbooks, aims, discussions

Theme 6: Andreas Christiansen (Norway), The first Norwegian textbooks in mathematics — A story of independence and controversy

#### **Plenary Panel Discussion:**

Theme 2: Caterina Vicentini (Italy) coordinator, panelists still to be decided: History, Epistemology and Teaching Mathematics: A challenging partnership?

**Second Announcement**: It will be launched in early December 2017 at the latest. It will include all essential information on the registration fees, the ESU-8 overall time schedule, the publication of its proceedings, the registration procedure, accommodation, the social program and other practical issues.

#### For further information, contact

Constantinos Tzanakis, Dept. of Education, Univ. of Crete, 74100 Rethymnon, Greece, <a href="mailto:esu8.tzanakis@edc.uoc.gr">esu8.tzanakis@edc.uoc.gr</a> (chair)

Bjørn Smestad, Dep. of Primary and Secondary Teacher Education, Oslo & Akershus Univ. College of Applied Sciences, Oslo, Norway, <a href="mailto:esu8.smestad@edc.uoc.gr">esu8.smestad@edc.uoc.gr</a> (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, Dept. of Education, Aarhus University, Campus Emdrup. Tuborgvej 164, DK-2400 Copenhagen NV, utj@dpu.dk (co-chair)

*Tinne Hoff Kjeldsen*, Dept. of Mathematical Sciences, University of Copenhagen, Universitetsparken 5, DK-2100 Copenhagen Ø, thk@math.ku.dk (cochair)



## Have you read these?

Barany, M., Paumier, A.-S., & Lützen, J. (2017). From Nancy to Copenhagen to the World: The internationalization of Laurent Schwartz and his theory of distributions. *Historia Mathematica*, 44(4), 367-394.

Cerroni, C. (2017). From the theory of "congeneric surd equations" to "Segre's bicomplex numbers". *Historia Mathematica*, 44(3), 232-251.

Davis, A. (2017). Mathematical women - creating historical resources. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(3), 254-256.

Dewar, J. (2017). Women and mathematics: a course and a scholarly investigation. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(3), 246-253.

Fraser, C. (2017). Awarding of the May Prizes for 2017. *Historia Mathematica*, 44(4), 315-317.

Hollings, C. (2017). 'Nobody could possibly misunderstand what a group is': a study in early twentieth-century group axiomatics. *Archive for History of Exact Sciences*, 71(5), 409-481.

Hollings, C., Martin, U., & Rice, A. (2017). The early mathematical education of Ada Lovelace. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(3), 221-234.

Hollings, C., Martin, U., & Rice, A. (2017). The Lovelace – De Morgan mathematical correspondence: A critical re-appraisal. *Historia Mathematica*, *44*(3), 202-231.

Kaufholz-Soldat, E. (2017). '[...] the first handsome mathematical lady I've ever seen!' On the role of beauty in portrayals of Sofia Kovalevskaya. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(3), 198-213.

Mansfield, D., & Wildberger, N. (2017). Plimpton 322 is Babylonian exact sexagesimal trigonometry. *Historia Mathematica*, 44(4), 395-419.

Oswald, N. (2017). An unpublished paper 'Über einige durch unendliche Reihen definirte Functionen eines complexen Argumentes' by Adolf Hurwitz. *Historia Mathematica*, 44(3), 252-279.

Padua, S. (2017). Picturing Lovelace, Babbage, and the Analytical Engine: a cartoonist in mathematical biography. BSHM Bulletin: Journal of the British Society for the History of Mathematics, 32(3), 214-220.

Rodríguez, L. (2017). Frigyes Riesz between the two World Wars. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, *32*(3), 235-245.

Rosso, R. (2017). Eugenio Beltrami's courses on the analytic and mechanical theory of heat, II. Mechanical theory of heat. *Historia Mathematica*, *44*(4), 320-341.

Royle, T. (2017). The impact of the women of the Technical Section of the Admiralty Air Department on the structural integrity of aircraft during World War One. *Historia Mathematica*, 44(4), 342-366.

Skiena, S., & Ward, C. (2017). Who's bigger? Where computer scientists really rank. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(3), 257-264.

Sørensen, H. K. (2017). Studying appropriations of past lives: using metabiographical approaches in the history of mathematics. *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 32(3), 186-197.

Sørensen, H. K. (2017). Montucla Prize 2017. *Historia Mathematica*, 44(4), 318-319.



#### **Announcements of Events**



## Forthcoming BSHM Meeting

(The British Society for the History of Mathematics)

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

## 1. From Games to Game Theory

9 December 2017 Birmingham and Midlands Institute

#### Christmas Meeting

The day will trace concepts of chance from the fifteenth century to their formulation into a sophisticated, important and evolving theory in the twenty first. Speakers are: David Singmaster, Fenny Smith, Tony Mann, Norman Biggs, Herve Moulin and Bernhard Stengel.

Draft Programme:

10.30: Philip Beeley 'Introduction'

10.35: David Singmaster 'The Unexpected Utility of Recreational Mathematics'

11.35: Fenny Smith 'Early Concepts of Probability as Illustrated in Late 15th C works on Commercial Arithmetic'

12.15: Norman Biggs 'Game, Set and Match'

2.00: Members' papers (if received)

2.40: Herve Moulin 'The subplot of Cooperative Game Theory'

3.40: Tony Mann 'The Prisoner's Dilemma: from Paradox to Powerful Tool'

4.20: Bernhard von Stengel 'Game Theory in the Last Half Century'

## 2. Research in Progress

17 February 2018 Oxford

The BSHM's annual meeting for research students in the History of Mathematics, which concludes with a lecture by a senior academic.

This year's senior speaker will be Catherine Goldstein (Institut de mathématiques de Jussieu-Paris Rive gauche), who will speak on the subject "Chessboards and numbers: the case of Henri Delannoy."

Confirmed student speakers include Brigitte Stenhouse (The Open University), Troy Astarte (Newcastle), Kevin Tracey (Swansea/Science Museum), Kevin Baker (Oxford), and Hans Gaebler (Oxford).

## 3. History of Cryptography and Codes

19 May 2018 London

A one-day conference on mathematics and its history at Birkbeck (University of London) organized by the British Society for the History of Mathematics (BSHM), and supported by the Department of Economics, Mathematics and Statistics at Birkbeck.

This event will be on the history of cryptography and codes.

## The 13<sup>th</sup> Maghrebian Colloquium on the History of Arabic Mathematics

30 March – 1 April 2018 Tunis, Tunisia

#### Second announcement

The 13<sup>th</sup> Colloquium on the History of Arabic Mathematics (COMHISMA 13) shall take place on Friday 30<sup>th</sup> March, Saturday 31<sup>st</sup> March and April 1<sup>st</sup>, 2018 in Tunis City (CIFFIP - Lac II).

#### Themes of the Colloquium:

A. Theoretical mathematics, Astronomy, Applied mathematics, Recreational mathematics in Arabic and Islamic traditions.

B. History of teaching Arabic mathematics and its circulation.

C. Mathematics and Society.

<u>Languages of the meeting</u>: Abstracts, papers and communications can be presented in the Arabic, English, or French languages.

#### **Important deadlines**

- Deadline for abstract submission 15 September 2017 (Editors' Note: Deadline has passed.)
- Deadline for acceptation of papers

#### **15 November 2017**

- Deadline for receiving full text of communication
- 15 February 2018
- Deadline for registration
   15 January 2018

#### **Registration Fees**

Professor: 120 DT (± 50 Euros) Student: 50 DT (± 25 Euros)

#### **Accommodations**

All activities planned for COMHISMA 13 will be held at CIFFIP – Lac II.

Participants can use some lodging facilities on the premises or they can also lodge at one of the Hotels in the center of Tunis.

Accommodation fees at the CIFFIP: 180 DT (± 75 Euros) for three days.

For center city hotels, 73 DT to 200 DT for each night, with breakfast.

- Arrival of the participants
- 29 March 2018, after noon.
- Departure of the participants
- 01 April 2018, after noon.

#### Cultural activities and tourist tour

No work is planned for Saturday after noon, on 31 March 2018. We shall offer several activities from which participants may choose.

The International scientific committee of COMHISMA 13 is chaired by Professor Ahmed Djebbar.

#### **Institutional Partners**

- Centre International de Formation des Formateurs et de l'Innovation Pédagogique (CIFFIP)
- Institut Supérieur de l'Education et de la Formation Continue (ISEFC)
- Laboratoire du Monde Arabo-Islamique Médiéval (LMAIM)

#### **Organizing Associations**

- Association des Femmes Tunisiennes Mathématiciennes

- Association Tunisienne des Sciences Mathématiques
- Association Tunisienne de Didactique des Mathématiques
- The Mediterranean Institute for the Mathematical Sciences (MIMS-Tunisia).
- Société Mathématique de Tunisie

#### **Local Organizing Committee**

Honorary Chairman: Béchir Kachoukh Members:

- Mahdi Abdeljaouad Faouzi Chaabane - Marouane Ben Miled - Hmida Hedfi
- Taoufik Charrada et Salma Elaoud (ATSM)
- Mounir Dhieb et Rahim Kouki (ATDM)
- Makkia Dammak (AFTM)
- Salwa Aouadi (MIMS)
- Nedra Belhaj Rhouma (SMT)

Contact: mahdi.abdeljaouad@gmail.com

## **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
ILLIAN OI W	13415	Beole des selences de l'eddediton, em versite Eddrentienne, badear y, entario, canada

#### **Executive Committee:**

Barbin, Evelyne	Universite de Nantes, IREM-Centre Francois Viete, France
Furinghetti, Fulvia	Dipartimento di Matematica dell'Universita 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	r, 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, Catolica 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, Isra		
Horng, 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	ictor 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,		
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	<b>Email address</b>
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@acadiau.ca
China	Ma Li, Linkoping University, ITN, SE - 601 74 Norrkoping, 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
Hungary	Kati Munkácsy, Eötvös Loránd University, Centre of Mathematics Education, Budapest, street Pázmány 1/c, HUNGARY	katalin.munkacsy@gmail.com
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
<u>Morocco</u>	Abdellah El Idrissi, E.N.S. B.P: 2400 Marrakech, 40 000, MOROCCO	<u>a_elidrissi@hotmail.com</u>
New Zealand	Brenda Bicknell, Faculty of Education, University of Waikato, Private Bag 3105, Hamilton 3240, NEW ZEALAND	bicknell@waikato.ac.nz

Area	Name and address	Email address
Other East Asia	Gloria Benigno, Department of Education, Culture and Sports, Region X, Division of Misamis Occidental, Oroquieta City, PHILLIPINES	glorya4444@yahoo.com
Peru	María del Carmen Bonilla, Calle Reni 272, San Borja, Lima 41. Lima, PERU. mc bonilla@hotmail.com	
Poland	Ewa Lakoma, Institute of Mathematics Military University of Technology Warsaw, POLAND	ewa.lakoma@wat.edu.pl
Russia	Vasilii Mikhailovich Busev	vbusev@yandex.ru
Scandinavia	Sten Kaijser, Department of Mathematics, P.O. Box 480, SE- 751 06 Uppsala, SWEDEN	sten@math.uu.se
South America	Marcos Vieira Teixeira, Departamento de Matemática, IGCE – UNESP, Postal 178, 13 500 - 230 Rio Claro, SP BRAZIL	marti@rc.unesp.br
South Asia	Prof. R. C. Gupta, Ganita Bharati Academy, R-20, Ras Bahar Colony, Jhansi-284003, U.P. INDIA	
South East Europe	Nikos Kastanis, Department of Mathematics, Aristotle University of Thessaloniki, Thessaloniki 54006, GREECE	nioka@auth.gr
Southern Africa	Marcos Cherinda, Universidade Pedagogica, Campus de Lhanguene, Faculdade de Ciencias Naturais e Matemática, CP 4040, Maputo, MOZAMBIQUE	mCherinda@up.ac.mz
Spain and Portugal	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
Taiwan	Wann-sheng Horng, Math Dept NTNU, 88 Sec.4, Tingchou Rd., Taipei, TAIWAN	horng@math.ntnu.edu.tw
Turkey	- currently vacant -	
United Kingdom	Snezana Lawrence, Anglia Ruskin University, Cambridge, England, UK	snezana@mathsisgoodforyou. com
United States of America	David L. Roberts, Prince George's Community College, Largo, Maryland, USA	robertsdl@aol.com

#### **Table of contents**

Message from HPM Chair	1
MAA Convergence	
ESU 8	5
Have you read these?	7
Announcements of Events	9
HPM Administrative Structure	12

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:

<a href="http://www.clab.edc.uoc.gr/hpm/">http://www.clab.edc.uoc.gr/hpm/</a>These and other news of the HPM group are also available on the website

<u>http://grouphpm.wordpress.com</u>
(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
97	<b>12 February 2018</b>	March 2018
98	12 June 2018	July 2018
99	12 October 2018	November 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, <a href="mailto:snezana@mathsisgoodforyou.com">snezana@mathsisgoodforyou.com</a>

Helder Pinto, hbmpinto1981@gmail.com

Kathy Clark, <a href="mailto:kclark@fsu.edu">kclark@fsu.edu</a> Luis Puig, <a href="mailto:luis.puig@uv.es">luis.puig@uv.es</a>

#### 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.