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

Nº 103 **March 2020**

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

Dear friends,
Welcome to almost-Spring and to Newsletter 103!

Since the last newsletter, many of us have been occupied with some task or another related to HPM 2020. In early November 2019, the proposal submission system closed, and we received approximately 160 proposals. We corresponded with authors before the end of December 2019, and we asked for revisions on many of the original proposals. Authors were requested to complete and submit revisions on or before 9 February 2020, but then, as you now know, we now have COVID-19 to deal with globally. For that reason, we - as organizers and potential participants alike - are in a sort of holding pattern. At the moment, all tasks related to both **ICME-14** (e.g., registration, uploading extended papers, etc.) and **HPM 2020** (registration payment system is not yet functional, etc.) have been suspended, while we await the next announcement from the ICMI and the ICME-14 IPC Chair.

I cannot provide any further, helpful information at this time (that is, at the time that NL 103 is published), other than these few points:

- After the announcement from the ICMI and ICME-14 is made on **15 March 2020**: If you planned to participate in either ICME-14, HPM 2020, or both, and feel that you cannot risk making plans to travel (not just to China, but anywhere!), *we completely understand.* However, if you had a paper accepted (or, one that is pending final acceptance for HPM 2020) for either TSG 27 or TSG 55

at ICME-14, or for HPM 2020, please contact the appropriate Chairs to let them know your intent to not participate.

- If the ICMI and ICME-14 leadership announce on **15 March 2020** that the ICME-14 meeting will take place as planned, then the HPM 2020 IPC will continue with the final preparations immediately after. That is, the registration payment system will be activated, an updated *Second Announcement* will be issued, etc. We ask for your patience at that time, as we will be working in smaller window of time to finalize organization of the conference. ***If the conference takes place as originally scheduled, and if you plan on attending, we will greatly appreciate your prompt registration payment as that will assist with smooth planning for the LOC.***

- **If ICME-14 will not take place as planned, then HPM 2020 will likely not take place as planned. *At this point in time, we do not have a contingency plan (e.g., potential for postponement).***

Despite these unusual (and at times, distressing) circumstances, I want to thank the **35 reviewers** who completed the 320 reviews needed for 160 HPM 2020 proposal submissions. Approximately half of the proposals were submitted in Chinese, so members of the LOC completed those reviews under the guidance of **Professor Xuhua Sun (Co-Chair, HPM 2020) at the University of Macau**. The remainder were reviewed by members of the HPM Advisory Board who participated in the review process. I am especially grateful to **Xuhua and Costas Tzanakis**, who not only completed far and above a reasonable quota of reviews in a short period of time, but who also dealt with numerous emails from me during the stressful and busy review period.

Please be sure to check the ICME-14 website on **15 March 2020**. And, soon after, we will post updated HPM 2020 information.

Be well; stay healthy!

Kathy
(kclark@fsu.edu)

PS: Our newest newsletter feature, "Practitioner's Corner", will return in NL 104. If you have an idea you would like to share, or if you would like to be a contributing author, please contact me at the email address given above.

HPM 2020

History and Pedagogy of Mathematics (HPM) 2020 – *Satellite Meeting of ICME-14*[1]

Second Announcement

21–25 July 2020
University of Macau

Website

The website is available at **https://www.um.edu.mo/fed/HPM2020/** You can use the website as an efficient tool to help promote the HPM 2020 Satellite Meeting to colleagues and friends around the world, for online registration, and to obtain information on accommodations, excursions, and the conference program (draft program anticipated in April 2020).

2019 Novel (New) Coronavirus (2019-nCoV* or *COVID-19)

HPM 2020 is planned to take place after the conclusion of ICME-14 (which will take place in Shanghai, China). The most recent announcement provided on the ICME-14 website by the ICMI and ICME-14 leadership states:

ICMI and ICME-14 are closely monitoring the development of events regarding the coronavirus pandemic in China, and we are holding many conversations regarding the most sensible ways to proceed, given the circumstances and the available information. For now, we decided to put a hold on paid registrations and to extend any relevant deadline (e.g. poster submissions). On March 15th, ICMI and ICME-14 will make a new announcement.

ICMI and ICME-14
February 20, 2020

Thus, we will be taking our guidance regarding travel to China for HPM 2020 in July 2020 from these organizational bodies. Therefore, the Co-Chairs and IPC of HPM 2020 will continue to monitor the situation and will take our lead from the organizers of ICME-14. For now, we will continue to plan HPM 2020 as if it will take place as scheduled, with participants' health safety being of utmost importance.

That said, due to the disruption caused by COVID-19, this *Second Announcement* is incomplete and should the conference take place as scheduled, we will update this document with completed information in as timely a manner as possible.

1. Aim and Focus

HPM 2020 is the tenth quadrennial meeting of the International Study Group on the Relations Between the History and Pedagogy of Mathematics—the HPM

[1] Please note that the 14th International Congress on Mathematical Education (ICME-14) will take place just before HPM 2020, from 12–19 July 2020 in Shanghai, China (see: icme14.org).

Group. The HPM Group is an affiliated study group of the International Commission on Mathematical Instruction (ICMI).[2] By combining the history of mathematics with the teaching and learning of mathematics, HPM connects the past and the future of mathematics. Therefore, the group aims to stress the conception of mathematics as a living science, a science with a long history, a vivid present, and an as yet unforeseen future.

These quadrennial meetings are a major activity of HPM to bring together individuals with a keen interest in the relationship between the history of mathematics and mathematics education. They include:

- Researchers in mathematics education who are interested in the history of mathematics and mathematical thinking;
- Mathematics teachers at all levels who are eager to gain insights into how the history of mathematics can be integrated into teaching and how they can help students to learn mathematics;
- Historians of mathematics who wish to talk about their research;
- Mathematicians who want to learn about new possibilities to teach their discipline; and
- All those with an interest in the history of mathematics and pedagogy.

[2] See https://www.mathunion.org/icmi/organization/affiliated-organizations

2. *Time and Place*

The 2020 HPM Conference will be held from **21 to 25 July 2020** at the **University of Macau** in SAR **Macao, China**. With a fascinating history of 400 years of cultural exchanges between the East and the West, Macao is unique in its cultures and society. It boasts many cultural treasures of all types, including picturesque dwellings in traditional styles, ancient temples built during the Ming and Qing dynasties, buildings with Southern European architectural features, baroque style churches and impressive contemporary structures. In July 2005, the historic district collectively known as the "Historic Centre of Macao" was inscribed on the UNESCO World Heritage List. Today, Macao is a Special Administrative Region (SAR) of the People's Republic of China, benefiting from the "one country, two systems" policy. Macao SAR is growing in the number and diversity of its attractions; the greatest of these continues to be Macao's unique society, with communities from the East and the West complementing each other. It offers a perfect environment for an international conference.

Please note that HPM 2020 takes place after the conclusion of ICME-14, which will be held from **12–19 July 2020** in **Shanghai, China.** Its scientific program includes oral presentations and activities on the history and pedagogy of mathematics (TSG 27) and on the history of mathematical teaching (TSG 55).

3. *HPM 2020 Topics*

The program and activities of HPM 2020 are structured around the following topics:

1. Theoretical and/or conceptual frameworks for integrating history in mathematics education.
2. History and epistemology in students' and teachers' mathematics education: Classroom experiments and teaching materials.
3. Original sources in the classroom and their educational effects.
4. Mathematics and its relation to science, technology, and the arts: Historical issues and interdisciplinary teaching and learning.
5. Cultures and mathematics fruitfully interwoven.
6. Topics in the history of mathematics education.
7. History of Mathematics in China and Eastern Asia.

4. *Activities During the 2020 HPM Conference*

The HPM Conference is a place where mathematicians, educators, historians, researchers, and students can make presentations and participate in discussions.

The program includes:

- plenary lectures;
- panels;
- workshops;
- parallel sessions where participants present research reports;
- poster exhibitions; and
- exhibitions of books and other didactical material.

Plenary sessions and the panel deal with the main topics of the conference. Plenary speakers and panelists are invited by the International Program Committee (IPC).

Social activities include a gala dinner and excursions.

5. *Plenary Lectures and Panel*

Plenary Lectures:

History of Mathematics as a Way of Relating to Mathematics of the Past: The Case of Edmond Halley and Apollonius

Michael N. Fried, Ben Gurion University of the Negev, Beer-Sheva, ISRAEL

"I would like to introduce history in my mathematics lessons but I do not know how to do it!"

Marc Moyon, University of Limoges, FRANCE

Using Original Sources in the Classroom to Enrich the Mathematical Learning Experience

Mary Flagg, University of St. Thomas, Houston, Texas, USA

Mathematical World (or Worlds?) in the Context of HPM

Man Keung Siu, The University of Hong Kong, Hong Kong SAR, CHINA

Algebra in Swedish Mathematics Textbooks During the Era of Great Power

Johanna Pejlare, Chalmers University of Technology and the University of Gothenburg, SWEDEN

Matteo Ricci and the Introduction of Euclid's Elements in China
Luis Saraiva, University of Lisbon, PORTUGAL

Plenary Panel:

History of Mathematics Education in China: Its Features, Influences, and Modern Values

Yiwen ZHU (Panel Coordinator), *Sun Yat-sen University*, The city of Guangzhou, Guangdong Province, CHINA
(With panel member Shuyuan PAN, CHINA; Shirong GUO, CHINA; and Alexei Volkov, TAIWAN, CHINA)

6. *Official Languages*
The official languages of the conference are English and Chinese.

Oral presentations will be given in either English or Chinese.

7. *Proceedings*
Full texts for inclusion to the HPM 2020 *Proceedings* will be submitted ***after*** HPM 2020 and will be further reviewed by members of the IPC by the usual international standards. In all other cases, abstracts that have been accepted and presented at the conference meeting in Macao will also be included in these *Proceedings*.

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 in the HPM 2020 website (https://www.um.edu.mo/fed/HPM2020) and the HPM website (http://www.clab.edc.uoc.gr/hpm).

8. Important Dates
Submission of abstracts: **10 November 2019**

Notification of acceptance (or not) of the submitted abstracts: **30 December 2019**

Notification of acceptance (or not) of the revised abstracts: **1 March 2020** ***** Slightly delayed. Notifications will be communicated on or before 16 March 2020. ****

Early registration: **5 February – 1 April 2020** ***** Registration period is currently postponed until further notice. ****

Regular registration: **2 April – 31 May 2020**

Conference Dates: 21 – 25 July 2020

9. *Registration Fees*

- *Early registration* **before 1 April 2020: 180 €** (students and K-12 teachers in mainland China, Taiwan, and Hong Kong: 90 €)
- *Regular registration* **between 2 April and 31 May 2020: 230 €** (students and K-12 teachers in mainland China, Taiwan, and Hong Kong: 130 €)
- *Late Registration* **from 1 June to 20 July 2020: 270 €** (students and K-12 teachers in mainland China, Taiwan, and Hong Kong: 160 €)

Please note: ***There will be no on site registration. Therefore, all persons who plan to participate in HPM 2020 must pay the registration fee on or before 20 July 2020.***

The conference fee includes: 5 lunches, 8 coffee breaks, as well as the gala dinner on the seaside and an excursion.

10. ***Accommodations***

Please see information provided on the HPM 2020 website: https://www.um.edu.mo/fed/HPM2020/acc.html

11. ***Visits and Excursions***

To appear in the updated Second Announcement.

12. ***The International Program Committee (IPC)***

The IPC includes the following groups:

HPM 2020 Chairs

Kathleen Clark, Florida State University (USA), Chair
Chuang Wang, University of Macau (Macao), Co-Chair
Xuhua Sun, University of Macau (Macao), Co-Chair

HPM Executive Committee

Évelyne Barbin, Université de Nantes (France)
Fulvia Furinghetti, Universita di Genova (Italy)
Uffe Thomas Jankvist, Aarhus University (Denmark)
Tinne Hoff Kjeldsen, University of Copenhagen (Denmark)
Constantinos Tzanakis, University of Crete (Greece)

Participating HPM Advisory Board Members

George Booker, Griffith University (Australia)
Renaud Chorlay, IREM, Université Paris 7 (France)
Ubiratan D'Ambrosio, Pontificia Universidade (Brazil)
Florence Fasanelli, American Association for the Advancement of Science (USA)
Gail FitzSimons, Warrandyte, Victoria (Australia)
Michael N. Fried, Ben-Gurion University of the Negev (Israel)
Wann-Sheng Horng, National Taiwan Normal University (Taiwan)
Victor Katz, University of the District of Columbia (USA)
Ewa Lakoma, University of Technology Warsaw (Poland)
Snezana Lawrence, Middlesex University (UK)
Maria Rosa Massa-Esteve, Universitat Politècnica de Catalunya (Spain)
David Pengelley, New Mexico State University (USA)
Hélder Pinto, University of Aveiro and Piaget Institute (Portugal)
Luis Puig, Universitat de València (Spain)
Leo Rogers, Independent Researcher (UK)
Man-Keung Siu, University of Hong Kong (Hong Kong SAR, China)
Bjørn Smestad, Oslo Metropolitan University (Norway)
Greisy Winicki-Landman, California State Polytechnic University (USA)

13. The Local Organizing Committee (LOC)

Co-Chairs: Chuang Wang, Pak Sang Lou

Co-Associate Chairs: Kong Chi Meng

UM Members: Kwok Cheung Cheung, Boby Ho-Hong Ching; Chunlian Jiang, Xiaoqing Jin

Macao School Members: Hong Yuan Hong, Ian Nam Wong, Tak Seng Lai, Sao Kei Si, Ka Lei Che

Mainland Committee:

Wang Xiaoqin (East China Normal University)

Ji Zhigang (School of History and Culture of science, Shanghai Jiao Tong University)

Xu Zelin (Donghua University)

Song Naiqing (Southwest University, China)

Zou Dahai (Chinese Academy of Sciences)

Zhang Hong (Sichuan Normal University)

Dai Qin (Inner Mongolia Normal University)

Cao Yiming (School of Mathematical Sciences, Beijing Normal University)

Pu Shuping (College of Elementary Education, Chongqing Normal University)

Taiwan Committee:

Liu Po-hung (National Chin-Yi University of Technology)

Jia-Ming Ying (National Taipei University of Education)

Tung-Shyan Chen (National Chin-Yi University of Technology)

Hong Kong Committee:

Chan Yip-Cheung (Chinese University of Hong Kong)

Wong Ka-Lok (University of Hong Kong)

Tang Mei-yue (formerly Hong Kong Education and Manpower Bureau)

14. Contact

For further information, please contact:

- Kathleen Clark (Chair), hpm2020conference@gmail.com
- Xuhua Sun (Co-Chair), hpm2020macao@gmail.com

CMI Awardees for 2019 and 2020 – Citations

The Felix Klein Medal, with which ICMI honors the most meritorious members of the mathematics education community, is given in 2019 to **Tommy Dreyfus**, Professor Emeritus at Tel Aviv University, Israel, in recognition of his life-time achievement. This distinction acknowledges Professor Dreyfus's contribution to research as well as his leading role in shaping and consolidating the research community and in fostering communication between researchers. For four decades, Tommy Dreyfus's research has been systematically deepening our understanding of mathematics learning. Trained as a mathematical physicist, Tommy has been drawing in this work on his deep understanding of mathematics and his first-hand familiarity with ways in which mathematical ideas come into being and evolve. Since the late 1970s and for the next two decades his research has been focusing on students' conceptualization of mathematical objects such as function, and on the role of intuition, visualization and aesthetics in mathematical thinking. With years, his interests have been gradually shifting from the individual student to learning-teaching processes of the classroom. In the last twenty years, his empirical and conceptual work has been devoted to the study of epistemic activities such as proving and abstracting. These efforts resulted in the theory known as AiC - Abstraction in Context, which he developed with Baruch Schwarz and Rina Hershkowitz. Conceived in the late 1990s, the AiC framework has become increasingly influential. Since its inception, it has generated much empirical research all over the world. The theory has been found to be useful also to teachers, whom it provides with tools for monitoring student learning. As impressive in its scope, breadth, depth and impact as Professor Dreyfus's research is, it constitutes only a part of the contribution for which he is honored today with this special distinction. Another outstanding part of his work is his ongoing project of shaping and consolidating the international community of research in mathematics education, a goal that he tries to attain in multiple ways. First and foremost, through his extensive editorial work he has been setting standards and giving directions for research in mathematics education. Particularly influential has been his 30-year long association with *Educational Studies in Mathematics*, which included his three-year long term as the editor-in-chief. Professor Dreyfus has also been serving in, and shaping, numerous professional organizations, with PME (the international group for the Psychology of Mathematics Education) and ERME (the European Society for Research in Mathematics Education) among them.

In addition, he played key roles in numerous professional committees in Israel, Europe and America. His influence on research and on policy directly affecting mathematics teaching is keenly felt over the world.

In all these activities, Professor Dreyfus has been consistently promoting cross-discursive dialogues. He has done this by organizing international meetings,

establishing trans-continental collaborative research projects, appearing world-wide as an invited speaker and by extensive mentoring in his own country and beyond. Probably the most important and innovative among Professor Dreyfus's consolidating activities have been his multifarious efforts to spur and improve communication among researchers working within differing theoretical frameworks. Being concerned about the fragmentation of the field of mathematics education, Professor Dreyfus has been looking for ways in which community members can engage in a productive dialogue across discursive boundaries. These attempts began with his own cross-theoretical research collaborations. It continued with his conceptual work on the possibility of "networking theories", the activity of employing multiple theories in the attempt to produce a synergetic, cumulative effect. Through these initiatives, Professor Dreyfus has contributed to changing the dominant narratives about theoretical diversity. With his help, the multiplicity of research discourses is now seen less as a problem to solve than as an opportunity to embrace.

Born in Switzerland and now living in Israel, Tommy is fluent in a number of languages, which makes him particularly well equipped for the project of consolidating the international community. After his 1975 doctorate in mathematical physics from the University of Geneva, endowed with several prestigious fellowships and awards, Tommy began visiting universities all over the world. Since then, he never stopped. In parallel to his work at the Weizmann Institute and at the Center for Technological Education in Holon, and later as a full professor of mathematics education at Tel Aviv University, Tommy served as a visiting professor in 14 universities over the world, including in Canada, Germany, Finland, Israel, New Zealand, Norway, Sweden, Switzerland, and the USA. On all these occasions, he spent much time teaching and working with both young and seasoned researchers. By all accounts, he left an indelible mark in all the places he visited.

This owes, among others, to his ability to communicate fluently and easily, to his sensitivity to other cultures and to his general sense of inclusiveness. His willingness to listen and to share his own insights and his devotion to a common effort of understanding and improving mathematics education have touched everyone with whom he has come into contact. Officially retired since 2015, he remains as active and engaged as ever.

To sum up, over the 40 years of his career, Professor Dreyfus has been contributing to our collective endeavor of promoting mathematics education in great many ways: as a researcher, as an editor, as an organizer and policy adviser, and as a teacher and mentor. So far, he has published more than 120 research papers and book chapters, 9 edited volumes, and diverse teaching materials. His writings continue to be read and cited widely, and research programs he initiated or helped establish continue to thrive and inform the field. Even now in his retirement, he continues to shape the field, to foster young researchers and to influence research and policy, both in his own country and abroad. For all this and his many other contributions to our community, Tommy Dreyfus is an

eminently worthy candidate for the Felix Klein Award.

The Hans Freudenthal Medal, with which ICMI honors innovative, consistent, highly influential and still on-going programs of research in mathematics education, is being awarded in 2019 to Professor **Gert Schubring**, a long-time member of the Institut für Didaktik der Mathematik at Bielefeld University, Germany, and an extended visiting professor at the Universidade Federal do Rio de Janeiro in Brazil. This award is being granted to Gert Schubring in recognition of his outstanding contribution to research on the history of mathematics education.

Gert's research of over four decades has opened new, important avenues of research into the phenomenon of mathematics education. Trained as a mathematician, Gert has been a member of the Institut für Didaktik der Mathematik since 1973, when this interdisciplinary research institute for mathematics education was founded. In his doctoral dissertation, defended in 1977, Gert wrote on the genetic principle in approaching historical research in mathematics. Afterwards, he extended his interests, producing wide-ranging writings on the history of mathematics education within and across countries, and publishing on the history of mathematics. One of Schubring's earliest publications came out of the symposium, "Comparative Study of the Development of Mathematical Education as a Professional Discipline in Different Countries", presented at the Fourth ICME conference in Berkeley in 1980. This set the stage for the mathematics education community's reflection on itself as a discipline, and how its own social context had framed its objects and methods of study. By inviting us to place ourselves in front of a mirror, Gert also sparked interest in the history of earliest efforts in mathematics education, including the work of Felix Klein, on which Gert has recently published the important book, *The Legacy of Felix Klein* (2019, Springer).

His seminal works have helped to realize the importance of considering the social context in the study of the history of mathematics education. If this field of research is now well acknowledged, it is in large part due to his theoretical and methodological contributions, as well as to his leadership in scientific communication. Another, related but separate, strand of Gert's pioneering work was the study of textbooks, which he began in his investigations on the evolution of mathematics teaching in Latin America. This is yet another area of research that he helped to recognize as worth attention. In 2017 he also chaired the International Program Committee for the Second International Conference on Mathematics Textbook Research and Development held in Rio de Janeiro, Brazil.

Schubring has also laid out the formal structures that helped in turning the study of the history of mathematics education into an academic field. He was the founding co-organiser of International Conference on the History of Mathematics Education (ICHME), a forum that since 2009 has already met six times. After leading the Study Group on the 'History of Teaching and Learning Mathematics' at

the 10th ICME conference in 2004, Gert became the founding editor of the *International Journal for the History of Mathematics Education*. Gert also co-edited the Handbook on the History of Mathematics Education published in 2014, in which he contributed to four of the handbook chapters. He is co-editor of the new book series *International Studies in the History of Mathematics and its Teaching*, which includes the 2019 volume he edited himself, titled *Interfaces Between Mathematical Practices and Mathematical Education*.

An important aspect of Gert Schubring's work was his straddling of the communities of the history of mathematics and of mathematics education. His own book in the former field, Generalization, Rigor and Intuition, published in 2005, is a major reference in the history of mathematics focused on 17th-19th-century mathematics. Additionally, several publications in mathematics education journals (such as For the Learning of Mathematics) introduced tools and concepts from the history of mathematics, such as methodologies for analyzing historical texts, that greatly enrich mathematics education research.

Similarly, Gert brought ideas in mathematics education, such as the notion of "mathematics for all" back into the fold of the history of mathematics, to examine what kind of knowledge mathematics has been taken to be in different cultures and historical periods.

For decades, Gert has been actively promoting the study of the history of the field of mathematics education, while simultaneously conducting significant historical studies of his own. No other researcher has had a greater impact on establishing the social history of mathematics education as a dynamic field of scholarly endeavor. His work has not only made us aware of the past of mathematics education but has also provided important insights into mathematics education as it stands today and sets directions for its future. It informs current teaching by showing ways in which historical mathematical texts can inspire pedagogy. It makes us aware of future possibilities and of the fact that they do not have to be merely determined by the past, but rather can be moulded by new understandings of past practices, values and ways of thinking. All these important contributions make Professor Gert Schubring an eminently deserving recipient of the Hans Freudenthal Medal for 2019.

ICMI is delighted to announce that the 2020 **Emma Castelnuovo Award for Outstanding Achievements in the Practice of Mathematics Education** goes to **NCTM – the National Council of Teachers of Mathematics (USA and Canada)** – in recognition of 100 years of development and implementation of exceptionally excellent and influential work in the practice of mathematics education.

Founded in 1920, NCTM is the world's largest mathematics education organization, with 40,000 members and more than 230 state, provincial, and local affiliate organizations and other affiliates whose scope covers the USA and Canada.
The Award Committee found evidence to fulfill all criteria related to the Emma Castelnuovo Award. In the following,

some exemplary activities of NCTM's past 30 years are highlighted. These activities fall into a wide range of domains—principles and standards as foundations for policy and practice, publications including research journals, professional development, legislative and policy leadership, and international collaboration.

In 1989, NCTM presented Curriculum and Evaluation Standards for School Mathematics, which turned out to be a highly influential document, not only in North America, but all over the world. This document was followed by a series of further book-length reports aimed at establishing a broad framework to guide reform in school mathematics, Professional Standards for Teaching Mathematics (1991), Assessment Standards for School Mathematics (1995), Principles and Standards for School Mathematics (2000), Curriculum Focal Points (2006), Principles to Actions: Ensuring Mathematical Success for All (2014) and Catalyzing Change in High School Mathematics: Initiating Critical Conversations (2018).

Since its inception in 1920, NCTM has published professional journals for teachers of mathematics. Starting with January 2020, a single journal Mathematics Teacher: Learning and Teaching PK-12, published 12 times a year, will replace what has been for the past 30 years three journals. In 1970, NCTM began publishing the Journal for Research in Mathematics Education, one of the world's first journals devoted to this subject. These periodic publications are supplemented by an extensive publication catalogue for teachers at all levels. Some NCTM publications have been translated into other languages, including Arabic, Chinese, German, Korean, Portuguese, Spanish and Swedish.

For the professional development of teachers, principals, and other stakeholders important for mathematics teaching, NCTM holds an annual meeting and exposition along with three regional meetings each year, with a combined attendance of about 25,000. In addition, NCTM offers multiple professional development activities, professional services, and resources via its webpage. NCTM's Mathematics Education Trust (MET), established in 1976, provides funds directly to classroom teachers, affiliates, and institutions to enhance mathematics education. MET offers 30 grants annually, totaling USD 125,000. In addition, it offers scholarships, award programs, and—usually two—annual lifetime achievement awards.

NCTM is influentially engaged in constructive policy discussions among all stakeholders (in particular in the USA), focusing on improving mathematics teaching for all students. This process is supported by the NCTM Advocacy Toolkit, a collection of materials which provides NCTM members with tools and the guidance they need to advocate for mathematics and education. For spreading NCTM ideas internationally and for establishing contacts and collaboration worldwide, NCTM founded the International Corresponding Societies, currently with 19 organizations in all continents, and has supported several initiatives with educators in Latin, Central, and South America.

NCTM's work has influenced the efforts by teachers, researchers, administrators, and other stakeholders to foster excellence in the practice of mathematics education. Here are some selected quotations from letters supporting NCTM's nomination for the Emma Castelnuovo Award. An internationally well-known mathematics educator stresses: "I have never lived or worked in the United States, and yet, as a teacher and as an academic, I was aware of the work of the NCTM. I drew on their resources and publications knowing that I could access a wealth of high quality materials developed by expert practitioners in the field. (T)he NCTM Principles and Standards and the Curriculum Focal Points are curricular documents that I return to frequently when looking at putting together mathematics teacher education courses for pre- and in-service teachers in ways that ensure breadth and depth, with inclusion of the big ideas in mathematics. I have often passed these documents on to students from many parts of the world to use to think about the relative emphases and absences in their own national and regional curricula. Later, as an academic, I made widespread use of articles published across the raft of NCTM journals. The NCTM has worked tirelessly to advocate for high quality mathematical access for all children. ... The NCTM is an organization that has succeeded in doing this kind of work at a scale that is bigger than any other organization that I can think of."

An internationally well-known mathematics educator from the USA emphasizes, among other considerations, the important role NCTM plays in supporting ICMI activities, for example by providing grants to NCTM members for attending ICME conferences, and by supporting the writing and distribution of documents about mathematics education in the USA since ICME-9 in 2000.

Finally, here is the voice of a former mathematics teacher in the USA: "NCTM has been an integral part of every stage of my nearly 50-year career in mathematics education, from classroom teacher, to school and district supervisor, to state mathematics director, to my varied leadership efforts that continue at the state, local, national, and international levels. It is clear that the National Council of Teachers of Mathematics has been the voice of mathematics education for at least these past five decades of my personal involvement. More than that, there is no doubt in my mind that the Council has also served as the leader within our profession—articulating a shared vision of professional mathematics educators, supporting and disseminating research behind that vision, and providing resources for the classroom and the board room to make that vision a reality. NCTM is absolutely indispensable to anyone who cares about or works in any area related to mathematics teaching and learning."

There are many more such quotations that could have been included. It is fully evident that NCTM is an outstanding organization that well deserves the recognition of the Emma Castelnuovo Award for excellence in the practice of mathematics education.

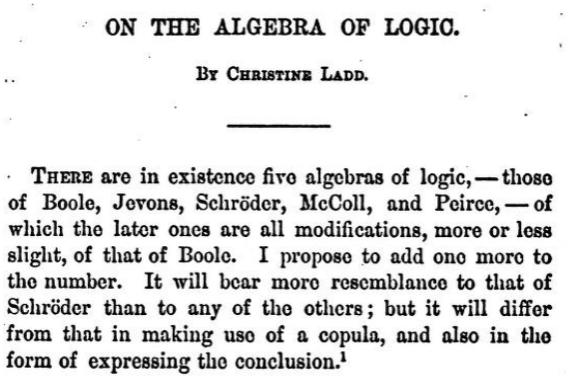
MAA Convergence Provides Classroom Activities

Since 2004, *MAA Convergence* has been 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. We highlight here some of our newest articles and other resources for use in your classroom.

In "A Mathematical History Tour: Reflections on a Study Abroad Program," Abe Edwards and his co-author, Marie Savoie, share details of their journey through Florence, Paris and London as part of a unique study-abroad program in the history of mathematics, offering suggestions on planning your own trip with students as well as how to recreate some of the magic that occurred along the way at home.

Above: Edwards and his students surround the monument to Fibonacci in Pisa.

Julia M. Parker applied Richard Delaware's technique of explication to a portion of the famous Johns Hopkins dissertation by Christine Ladd in "An Explication of the Antilogism in Christine Ladd-Franklin's 'Algebra of Logic'." To review the research and writing tips Delaware wrote early last year, visit "More than just a Grade: The HOM-SIGMAA Student Contest Fosters Writing Excellence at UMKC."



ON THE ALGEBRA OF LOGIC.

By Christine Ladd.

There are in existence five algebras of logic, — those of Boole, Jevons, Schröder, McColl, and Peirce, — of which the later ones are all modifications, more or less slight, of that of Boole. I propose to add one more to the number. It will bear more resemblance to that of Schröder than to any of the others; but it will differ from that in making use of a copula, and also in the form of expressing the conclusion.[1]

Above: Opening paragraph of Ladd's 1883 dissertation, "On the Algebra of Logic."

Additionally, *Convergence* gladly collaborates with other journals to bring readers joint publications. NCTM's *Mathematics Teacher* graciously shared "Bringing Historical Methods for Astronomical Measurements into the Classroom" by Seán P. Madden, Jocelyne M. Comstock, and James P. Downing, and "Correspondence from Mathematicians" by Jennifer Horn, Amy Zamierowski, and Rita Barger. These articles describe activities, suitable for use in a variety of classroom settings, which respectively expose students to astronomical measurement methods attributed to Eratosthenes, Ptolemy, and Galileo, and to the origins of familiar mathematical concepts.

We also simultaneously published the latest work by crossword puzzlers Sid

Kolpas and Stu Ockman, "Here's Looking at Euclid," with MAA's undergraduate magazine *Math Horizons*. Most recently, the British Columbia Association of Mathematics Teachers' *Vector* provided Glen Van Brummelen's "Why History of Mathematics?" which outlines justifications for studying and teaching history of mathematics that were originally prepared to help secondary teachers in British Columbia understand how to approach a new course on the topic that has been added to the province's Grade 11 curriculum.

Convergence continues to feature several ongoing series and collections, including:

- "A Series of Mini-projects from TRansforming Instruction in Undergraduate Mathematics via Primary Historical Sources" which currently offers ten mini-Primary Source Projects (PSPs) from the TRIUMPHS team for use in a variety of courses. The most recent PSPs to join the series are:
  - "Completing the Square: From the Roots of Algebra, A Mini-Primary Source Project for Students of Algebra and Their Teachers" (by Daniel E. Otero)
  - "Regression to the Mean: A Mini-Primary Source Project for Statistics Students" (by Dominic Klyve)
- "Math Origins," in which author Erik Tou traces the historical development of concepts seen in today's undergraduate curriculum. The most recent articles in the series examine attempts made in the 17th and 18th centuries to systematically organize the theory of logic and the multitude of notational systems proposed for logic in the 19th and 20th centuries.
- Our ever-growing "Index to Mathematical Treasures," which includes hundreds of images for use in your classroom from dozens of libraries and archives. Our chief "treasure hunter" is *Convergence* founding editor Frank Swetz. Cynthia Huffman also contributed ten new treasures from the collections of the Linda Hall Library in 2019.

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

Interested in contributing? We'd love to hear from you! Please contact us at convergence@maa.org. *Convergence* publishes expository articles on the history of topics in the grades 8–16 mathematics curriculum; translations of primary sources; classroom activities, projects, or modules for using history to teach mathematics; and classroom testimonials after applications of such activities, projects, or modules. For more details, see our Guidelines for Authors at https://www.maa.org/press/periodicals/convergence/guidelines-for-convergence-authors.

Amy Ackerberg-Hastings,
Independent Scholar (USA)
and
Janet Barnett,
Colorado State University-Pueblo (USA)
Editors, *MAA Convergence*

Have you read these?

Beeley, P. (2020). 'There are great alterations in the geometry of late'. The rise of Isaac Newton's early Scottish circle. *British Journal for the History of Mathematics, 35*(1), 3–24.

Bruneau, O. (2020). Colin Maclaurin (1698–1746): a Newtonian between theory and practice. *British Journal for the History of Mathematics, 35*(1), 52–62.

Craik, A. (2020). George Sinclair's neglected Treatises: some influences and reactions. *British Journal for the History of Mathematics, 35*(1), 43–51.

Crippa, D. (2020). Beating untrodden paths: James Gregory and his Italian readers. *British Journal for the History of Mathematics, 35*(1), 25–42.

Darrigol, O. (2020). Deducing Newton's second law from relativity principles: A forgotten history. *Archive for History of Exact Sciences, 74*(1), 1–43.

Ferraro, G. (2020). Euler and the structure of mathematics. *Historia Mathematica, 50*, 2–24.

Guillén, E., & Adame, C. (2020). The notion of variable quantities ω in Bolzano's early works. *Historia Mathematica, 50*, 25–49.

Jaëck, F. (2020). What were the genuine Banach spaces in 1922? Reflection on axiomatisation and progression of the mathematical thought. *Archive for History of Exact Sciences, 74*(2), 109–129.

Martins, A. P. (2020). An overview on the history of actuarial calculus in Portugal until the late 19th century. *Historia Mathematica,* (*In press, corrected proof*, available online 27 January 2020).

Netuka, I. (2020). Lebesgue's criticism of Carl Neumann's method in potential theory. *Archive for History of Exact Sciences, 74*(1), 77–108.

Nikolantonakis, K., Anastasiadis, M., Tsiapou, V., Popotis, A., & Deligiannidis, Tr. (2020). Integrating the history of mathematics into elementary mathematics education: Theory and applied examples. In E. Byker & A. Horton (Eds.), Elementary education: Global perspectives, challenges and issues of the 21st century (pp. 191–244). New York, NY: Nova Science Publishers.

Suárez, C. (2020). The law of refraction and Kepler's heuristics. *Archive for History of Exact Sciences, 74*(1), 45–75.

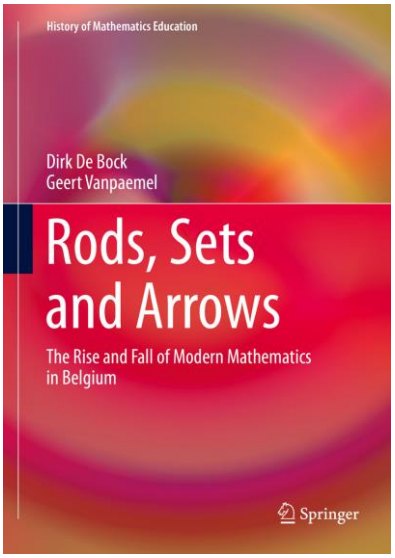
Turner, L. (2020). Cultivating a research imperative: Mentoring mathematics at Stockholms Högskola, 1882–1887. *Historia Mathematica, 50*, 50–83.

Vergnerie, C. (2020). Une controverse entre Émile Picard et Leopold Kronecker. *Archive for History of Exact Sciences, 74*(2), 131–164.

Wess, J. (2020). Colin Maclaurin (1698–1746) and his contemporaries on wind and water: the local and the universal. *British Journal for the History of Mathematics*, *35*(1), 52–62.

Yazdi, H.-R. (2020). The Jalālī Calendar: the enigma of its radix date. *Archive for History of Exact Sciences*, *74*(2), 131–164.

History of Mathematics Education in Belgium



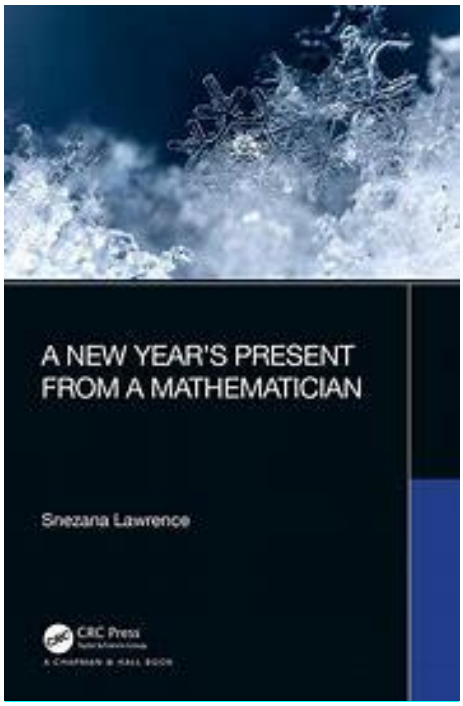
De Bock, D., & Vanpaemel, G. 2019. *Rods, sets and arrows. The rise and fall of modern mathematics in Belgium* (Monograph, book series: History of Mathematics Education). Cham, Switzerland: Springer.

As the title indicates, the book focuses on the central role played by modern mathematics in the Belgian (and European) reform of school mathematics in the decades after World War II. Given its international scope, we think that the book could be of interest to the members of the HPM community.

More information about this book is available on the Springer website (https://www.springer.com/gp/book/9783030205980).

Geert Vanpaemel
Dirk De Bock

A New Year's Present from a Mathematician



Lawrence, Snezana. 2019. *A New Year's Present from a Mathematician*. Chapman & Hall.

A New Year's Present from a Mathematician is an exciting book dedicated to two questions: What is it that mathematicians do? And who gets to be called a 'mathematician' and why?

This book seeks to answer these questions through a series of stories ranging from the beginning of modern mathematics through to the 20th century, but not in a usual, chronological manner. The author weaves her story around major questions concerning nature of mathematics, and links mathematicians by the substance of their ideas and the historical and personal context in which they were developed.

Ideal as a gift for anyone with an interest in mathematics, this book gives a powerful insight into mathematical concepts in an easy-to-read-and-digest manner, without trivializing their nature. The attention given to engaging examples, framed within a poetic narrative structure, means that this book can be enjoyed by almost anyone, regardless of their level of mathematical education.

https://www.routledge.com/A-New-Years-Present-from-a-Mathematician-1st-Edition/Lawrence/p/book/978036721937

Snezana Lawrence

Announcements of Events

14TH INTERNATIONAL CONGRESS ON MATHEMATICAL EDUCATION (ICME-14)

July 12–19, 2020
Shanghai, China

https://www.icme14.org

Note: An important announcement regarding ICME-14 will be made by the ICMI/ICME-14 leadership on 15 March 2020.

For details on the complete scientific programme of ICME-14 and its structure and time-schedule, as well as on practical details, the registration process, the venue and social events, visit the official ICME-14 website https://www.icme14.org.

A major part of the scientific program of the ICMEs consists of Topic Study Groups (TSG). These are mini conferences designed to gather a group of the Congress participants who are interested in a particular area of Mathematics Education. During ICME-14, there will be 62 TSGs in total.

TSG 27: The role of the history of mathematics in mathematics education

Chair: K. M. Clark (USA), kclark@fsu.edu
Co-Chair: C. Tzanakis (Greece), tzanakis@edc.uoc.gr

TSG 27 aims to provide a forum for participants to share their research interests and results, as well as their teaching ideas and classroom experience in connection with the integration of the history of mathematics in mathematics education. Special care is taken to present and promote ideas and research results of an as broad as possible international interest, while still focusing due attention to the national aspects of research and teaching experience in this area. Every effort will be made to allow researchers to present their work, get fruitful feedback from the discussion, and stimulate the interest of newcomers by giving them the opportunity to get a broad overview on the state-of-the-art in this area.
This TSG refers to all levels of education – from primary school to tertiary education, including in-service teachers' training – preferably on work and conclusions based on actual classroom experiments and/or produced teaching and learning materials.

The program of TSG 27 will be structured around the following main themes:
1. Theoretical and/or conceptual frameworks – in particular from general mathematics education research – for integrating history in mathematics education;
2. History and epistemology implemented in mathematics education: Classroom experiments and teaching materials, considered from various perspectives; e.g., cognitive, didactical, pedagogical, affective, etc.;
3. Surveys on the history of mathematics as it appears in curriculum and/or textbooks;

4. Original sources in the classroom, and their educational effects;
5. The role of history of mathematics in relation to the use of digital technologies in the teaching and learning of mathematics;
6. History and epistemology as a tool for an interdisciplinary approach in the teaching and learning of mathematics and the sciences by unfolding their productive interrelations; and
7. Cultures and mathematics fruitfully interwoven.

(The following are in (approximately) alphabetical order by surname of presenting author.)

Papers for Oral Presentation: Author(s), *Title*
• J. Estacio Menezes; R. A. F. da Silva Braz: *Inserting history in the practice of mathematics teachers from an international event* (short presentation)
• P. Kotarinou; P. Florou; Ch. Stathopoulou: *Content and language integrated learning (CLIL) and history of mathematics in teaching upper secondary school geometry* (short presentation)
• P. D. Gil; M. E. Martinho: *Argumentation and connections with history of mathematics: an experience in classroom environment* (short presentation)
• D. Guillemette: *Towards qualitative and participative research on history of mathematics in mathematics education: some arguments and possible paths* (long presentation)
• J. Han: *The application of HPM micro-video in the teaching of binomial theorem* (short presentation)
• Y. Hong: *A study on history of mathematics & professional development for middle school mathematics teachers from the perspective of MKT* (short presentation)
• U. T. Jankvist; E. Geraniou: *Whiteboxing the content of a historical source through the use of digital technology* (long presentation)
• H. Jiang: *Enhancing mathematics teaching self-efficacy in pre-service teachers: effects of an HPM learning community in Shanghai* (short presentation)
• H. Koirala; M. Davis; X. Liu; S. Koirala: *Using the history of mathematics to develop children's multiplication concepts and procedural fluency* (short presentation)
• P. Lei: *A comparative study of the history of mathematics in high school mathematics textbooks in mainland China and Taiwan China* (short presentation)
• X. Li: *A survey on mathematics teachers' attitude and belief towards using history of mathematics in mathematics education* (short presentation)
• Z. Li; J. Han: *The design and cases of primary school HPM micro-video* (short presentation)
• Z. Shen; S. Liu: *An empirical study on*

the impact of students' cognition through the concept of function teaching from the perspective of HPM in senior high school (short presentation)
• X. Mingchu; H. Zhengxian; Z. Yiyun: *Significance of the history of mathematics to mathematics education: From the perspective of philosophy* (short presentation)
• E. Pandit: *Pre-service teachers' self-efficacy belief: The use of history of mathematics in mathematics teaching* (long presentation)
• S. Schoeneburg-Lehnert; T. Krohn: *Organum Mathematicum – A mathematical shrine as source for modern math education* (long presentation)
• S. Schorcht: *Historical snippets from a different point of view – Teachers' interpretation of tasks around the edges* (long presentation)
• Z. Shen; J. Zou: *The development of teachers' MKT: A case study of HPM learning community* (long presentation)
• M. K. Siu: *Forty-five years of HPM activities: A semi-personal reflection on what I saw, what I heard and what I learnt* (long presentation)
• J. Soto-Andrade; D. Sun; D. Diaz-Rojas; A. Yáñez-Aburto: *History of mathematics in the classroom: algorithm of the addition and subtraction* (long presentation)
• C. Tzanakis: *Mathematics, history & education: Harmony in diversity* (long presentation)

• D. van den Bogaart-Agterberg: *Combining cognitive demand with history of mathematics in mathematics (teacher) education* (long presentation)
• Y. Weiss; R. Kaenders: *The gradual linearization of German geometry teaching* (long presentation)
• Q-ch. Yu: *An empirical research on the intension of mathematical culture based on the history of mathematics* (short presentation)
• Z. Yue: *The influence of HPM lesson study on a primary mathematics teacher's teaching design competency* (short presentation)
• E. Zubillaga Guerrero; F. M. Rodríguez Vásquez; M. T. González Astudillo: *Methodological proposal for the analysis of historical sources of mathematics* (long presentation)

Papers for Poster Presentation (as of 31 December 2019): Author(s), *Title*
• D. Basyal: *Three books of mathematical poetry*
• Qi chunyan: *Research on the development of knowledge in the core literacy of high school mathematics teachers based on history of mathematics*
• M. Davis; H. Koirala; X. Liu; S. Koirala: *Enhancing children's computational fluency through finger and line multiplication*

Summary of TSG 27 Submissions and Decisions

There were **33 papers** submitted for consideration for the TSG 27 program at ICME-14 during the first submission period. (Note: There is a second poster submission period open, but that has been suspended due to COVID-19 disruptions.) Of these, **4 papers** were rejected or redirected to another TSG. Thus, **29** proposals were accepted: **26** for either a 10-min or 15-min oral presentation and **3** for posters.

The geographic distribution of the currently accepted papers and posters includes papers from **15 countries**: **14** from Asia (13 from China); **8** from Europe; **5** from America; **1** from Africa; **2** as intercontinental collaborations.

TSG 55: The history of the teaching and learning of Mathematics

Chair: W. Rodrigues Valente (Brazil), wagner.valente@unifesp.br
Co-Chair: A. Karp (USA), apk16@columbia.edu

TSG 55 is designed to bring together scholars interested in research on the history of mathematics education. The aim of the TSG is to provide a forum for the discussion of findings and unsolved problems in the history of mathematics education as well as of issues in methodology of research in this field. During the last years research in the history of mathematics education has been actively developed – important books and articles, specialized conferences, specialized journals, and special issues of some major serials have been devoted to the relevant topics. Still, it is very clear that many themes are not explored sufficiently and sometimes almost nothing is known about some periods and regions. Additionally, the history of mathematics education is often explored from a local (or national) point of view only. Often connections with similar processes happening elsewhere need to be revealed and understood. This TSG is supposed to help researchers in identifying new topics and new techniques for studies and in establishing fruitful collaboration in their work.

Meetings of the TSG will offer presentations on a variety of topics including the following (but not limited to them):

- History of reforms in mathematics education
- History of teaching different mathematical subjects (Algebra, Geometry, Calculus, Probability, etc.)
- History of tools in mathematics education (including textbooks, manipulatives, calculators, etc.)
- Mathematics teachers: history of professionalization
- Local, national, and international dimensions in the history of mathematics education
- History of mathematics education journals and conferences
- Heroes and actors in mathematics education: lives and contributions
- Research methodology in the history of mathematics education.

TSG 55 at ICME-14 Update

The Topic Study Group on the history of teaching and learning mathematics was

first formed at the ICME-10 in Copenhagen. We plan to open this year's meeting by congratulating Gert Schubring, who was one of the originators of the group's activity and its chairman in 2004, and who has been named recipient of the Hans Freudenthal Medal for 2019.

The meeting in Shanghai may be considered an anniversary, being the group's fifth meeting. Similar to the last Congress, this year we are planning to have three kinds of presentations: so-called (quite loosely) long presentations, short presentations, and poster presentations. As in previous sessions of ICME, the topics will be varied. In terms of geography, we will address, of course, the history of China, but also the history of Belgium and Brazil, Poland and Portugal, Japan and Spain, Russia and USA, and other countries. In terms of objects of research, attention will be devoted to the methodology of the field, various reforms in teaching, the history of mathematics education for women, the history of textbooks and exams, the history of remarkable figures in mathematics education and mathematical periodicals, as well as many other problems.

We are planning to prepare a collection of papers, which will include the best among the presentations in a developed and expanded form.

Wagner Rodrigues Valente (Brazil),
Chair, TSG 55
Alexander Karp (USA)
Co-Chair, TSG 55

Forthcoming BSHM Meeting

The British Society for the
History of Mathematics
http://www.bshm.ac.uk/events

1. History of Decision Mathematics

16 May 2020
London, UK

2. People, Places, Practices: Joint BSHM-CSHPM/SCHPM conference

6–8 July 2020
University of St Andrews, UK

http://www.mcs.st-andrews.ac.uk/bshm-cshpm/index.shtml

People, Places, Practices, is the 5-yearly joint conference of the British Society for the History of Mathematics and Canadian Society for History and Philosophy of Mathematics/La Société Canadienne d'Histoire et de Philosophie des Mathématiques, in collaboration with HOM-SIGMAA, the History of Mathematics Special Interest Group of the MAA.

The conference is hosted by the School of Mathematics and Statistics, St Andrews University, the home of the MacTutor History of Mathematics Archive.

Registration is open. Early Bird rates available until 31 March.

Confirmed invited speakers include Karen Parshall, Colm Mulcahy, Évelyne Barbin, Edmund Robertson, Valeria Giardino, Brendan Larvor, Robin Wilson, Serafina Cuomo.

An Education Strand will run on 6–7 July. This will provide practical talks and workshops for those teaching the 15+ age group.

The meeting will be co-located with the Eleventh Conference on Mathematical Cultures and Practices (MC&P-XI, 8–10 July 2020). The two events will overlap on the afternoon of 8 July.

The organising committee are: Maria Zack (CSHPM), Dirk Schlimm (CSHPM), Amy Shell-Gellasch (HOMsigmaa), Mark McCartney (BSHM), Isobel Falconer (BSHM)

The education subcommittee are: Chris Pritchard (BSHM & Scottish Mathematical Council), Amy Shell-Gellasch (HOMsigmaa), Danny Otero (HOMsigmaa), Snezana Lawrence (BSHM), Isobel Falconer (BSHM).

For further details of the conference and venue, see
http://www.mcs.st-andrews.ac.uk/bshm-cshpm/index.shtml

3. History of Mathematics and Flight

12 September 2020
Manchester Airport, UK

History of Mathematics & Teaching of Mathematics

May 20–24, 2020
Miskolc, Hungary

https://www.uni-miskolc.hu/hmtm/

Mathematics – a common language for Europe for a thousand years.

The aim of the conference is to present aspects of the History of Mathematics, including its impact on the Teaching of Mathematics, to provide a forum to meet each other, and to give an opportunity for young researchers to present their results on the history of mathematics. We invite our colleagues, students, graduate students and other researchers to take part in the meeting.

The meeting will be hosted by the University of Miskolc, its campus next to Miskolc-Tapolca, famous spa for its thermal cave-bath.

The scientific programme of the conference will be scheduled on 21st, 22nd and 23rd May 2020.

Cooperating partners

- School of Mathematics of the University of St Andrews,
- University of Miskolc,
- Mathematics Education Centre of the Eötvös University Budapest,
- Institute of Mathematics, and Institute of Informatics of the University of Debrecen,
- János Bolyai Mathematical Society, Hungary,
- Junior Mathematical Society Miskolc.

Organizing and Scientific Committee

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- Dénes Nagy, International Symmetry Society (Melbourne and Budapest) (snagydenes(at)gmail.com)

Special event

The organizers are glad to announce that the Hungarian TEMPUS Public Foundation has decided to support a CEEPUS Summer School **Central European Contributions to the Teaching of Mathematics and History**

of Mathematics organized around the conference, and has awarded a number of 10 student and 4 teacher CEEPUS grants see details at: http://mat76.mat.uni-miskolc.hu/ceepus/news

Contributions

The programme of the conference is planned to include invited lectures, talks, and posters.

Each participant will be given the possibility of presenting his/her contribution as a short (15–20 minutes) talk or a poster. Refereed papers will be published in the conference volume.

Call for papers

- Authors are invited to submit an abstract to the Organisers via the Easy chair system.
- The **abstract** must be written in English.

Deadline for submission extended to: **15 March 2020**.

Notification of acceptance: 31 March 2020, or within 20 days for early registrations.

Upon the acceptance of the abstract (s) the authors are invited to submit/upload their full paper as well via the same way, the Easy chair system. You can change and replace several times your paper, the last version should be uploaded by 30 April 2020, closing data for the conference volume. Papers uploaded after this deadline will be published in the on-line version of the conference volume, to be available of the website of the conference.

Registration: 2 steps

1. Please use our on-line registration form available on the conference web page, where you can fill in the date of your arrival and departure, your option for requesting support for booking the accommodation. This registration will help the organizers to assist You arriving safely to the conference, organizing your stay here, and to offer the best conditions for your participation.

2. Abstracts and full papers are expected to be submitted via the local Easy Chair Conference System page at the event HMTM-2020, this will help us the to make up the conference program, the booklet of abstracts and the conference volume, planned to be ready for the conference.

Conference materials

- Program booklet
- Abstracts
- Booklet with the invited lectures/and or the conference volume

Conference volume

The refereed contributed papers will be published in a conference volume. The authors of accepted contributions are requested to send in 2 copies (an editable Word or .tex version, and a pdf format version) before the end of April 2020. The conference CD is planned to be ready for the meeting.

More information: Péter Körtesi
matkp(at)uni-miskolc.hu,
pkortesi(at)gmail.com

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

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104	**12 June 2020**	**July 2020**
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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.