



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



HPM 2020

First Announcement

History and Pedagogy of Mathematics (HPM) 2020 Satellite¹ Meeting of ICME 14²

July 21 to 25, 2020
University of Macau

<https://www.um.edu.mo/fed/HPM2020>

1. The HPM Group: Introduction, 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 Group. The HPM Group is an affiliated study group of the International Commission on Mathematical Instruction (ICMI).³ 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.

¹ Meetings of the affiliated international study groups of the International Commission on Mathematical Instruction (ICMI) typically take place just before or after the quadrennial International Congress on Mathematical Education (ICME).

² 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).

³ See <https://www.mathunion.org/icmi/organization/affiliated-organizations>

2. Main theme and topics

The program and activities 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.

3. 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 panels deal with the main topics of the conference. Plenary speakers and panelists are invited by the International Program Committee.

We encourage participants to make submissions for the following activities: workshops, research reports, poster exhibitions, and exhibitions of books and other didactical material.

Research reports are intended to communicate new research results. They take place in parallel sessions of 25-minute oral presentations followed by 5-minute discussions.

Workshops focus on the exchange of ideas and discussion among the participants around some historical or didactical material prepared beforehand by the workshop organizer. The material usually includes original historical texts, didactical material, students' worksheets, etc. Workshops can be one hour or two hours in duration.

Posters present summaries of ongoing or completed research, new ideas, etc.

4. 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.

5. Official languages

The official languages of the conference are English and Chinese.

6. Submission of proposals

To submit a proposal for a research report, workshop, and/or poster, the following procedure must be followed:

- (a) Register for an account and submit proposals via **Microsoft CMT** (<https://cmt3.research.microsoft.com/User/Login>).
- (b) Submit an **abstract** of no more than 500 words (one A4 page) for each proposed activity, no later than **31 October 2019**.

Please note: An abstract in English *or* Chinese is required; however, you may also submit a proposal in English ***and*** Chinese. This has the advantage of enhancing the visibility of your proposal by making it accessible to all participants.

The members of the *International Program Committee* (IPC) will review the submitted abstracts. In case of acceptance, the abstract will appear in the *Conference Program*, and its author (or authors) will present the activity described in the abstract during the conference. However, this does not automatically imply that a full text based on this activity will be included in the HPM 2020 Proceedings, which will be published after the meeting, so that authors are given the opportunity to enrich their text as a result of the feedback they will gain during the meeting.

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>).

Summary of deadlines:

Submission of abstracts: **31 October 2019**

Notification of acceptance or not of the submitted abstracts (for presentation only):

30 December 2019

The members of the 2020 HPM International Program Committee (IPC) will coordinate the peer-review process.

7. Registration fee

- **Early registration before 1 April 2020: 180 €** (students and K-12 teachers in mainland China, Taiwan, and Hong Kong: 90 €)
- **Regular registration before 1 June 2020: 230 €** (students and K-12 teachers in mainland China, Taiwan, and Hong Kong: 130 €)
- **Late Registration from 1 June 2020, or at the conference: 270 €** (students and K-12 teachers in mainland China, Taiwan, and Hong Kong: 160 €)

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

8. 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, Università di Genova (Italy)
Uffe Thomas Jankvist, Aarhus University (Denmark)
Tinne Hoff Kjeldsen, University of Copenhagen (Denmark)
Constantinos Tzanakis, University of Crete (Greece)

HPM Advisory Board

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George Booker, Griffith University (Australia)
Renaud Chorlay, IREM, Université Paris 7 (France)
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Florence Fasanelli, American Association for the Advancement of Science (USA)
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Wann-Sheng Horng, National Taiwan Normal University (Taiwan)
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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 (Portugal)
Luis Puig, Universitat de València (Spain)
Luis Radford, Université Laurentienne (Canada)
Leo Rogers, Independent Researcher (UK)
Anjing Qu, Northwest University (China)
Gert Schubring, Universität Bielefeld (Germany)
Man-Keung Siu, University of Hong Kong (Hong Kong SAR, China)
Bjørn Smestad, Oslo Metropolitan University (Norway)
Robert Stein, California State University, San Bernardino (USA)

Greisy Winicki-Landman, California State Polytechnic University (USA)

9. The Local Organizing Committee (LOC)

Co-Chairs: Chuang Wang, Pak Sang Lou

Co-Associate Chairs: Kong Chi Meng

UM Members: Kwok Cheung Cheung, Bobby 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)

10. Website

Follow us at: <https://www.um.edu.mo/fed/HPM2020>

11. Contact

For further information, please contact:

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