esu 10

20-24 july
2026
Aveiro, Portugal

European Summer University on History and Epistemology in Mathematics Education

University of Aveiro – Dep. de Matemática (Portugal)

Website: https://esu10.sciencesconf.org

Official email: dmat-esu10@ua.pt

SECOND ANNOUNCEMENT

A *Summer University* (SU) on the *History and Epistemology in Mathematics Education* began as an initiative of the French Mathematics Education community of the IREMs in the early 1980's. From those meetings emerged the organization of a SU on a European scale and became the *European Summer University* (ESU) *on the History and Epistemology in Mathematics Education*. The first ESU was organized in Montpellier (France), 1993. Since then, ESUs have been successfully organized in different places in Europe: Braga (Portugal), 1996; Louvain-la-Neuve and Leuven (Belgium), 1999; Uppsala (Sweden), 2004; Prague (Czech Republic), 2007; Vienna (Austria), 2010; Copenhagen (Denmark), 2014, Oslo (Norway), 2018, Salerno (Italy), 2022[1]. It has now been integrated into one of the main international activities of the HPM Group, which - from 2010 onwards - is organized every four years. Thus, every two years at least one major international meeting of the Group takes place; namely, ESU and the HPM Satellite Meeting of ICME.

1. Aim

The principal aims of the ESU are:

- 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 offer an opportunity for mathematics teachers, educators and researchers to share their historical knowledge, 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.

2. Rationale

ESU attempts to bring out the following aspects of mathematics:

- Mathematics is a human intellectual enterprise with a long history and a vivid present. Besides its "polished" products, those that can be communicated, criticized and incorporated into the body of mathematical knowledge, the process of "doing mathematics" is equally important, especially from a didactical point of view;

[1] A brief account of the history of ESU, is available at https://hpm.sites.uu.nl/wp-content/uploads/sites/905/2023/10/HPM2004-ProcedFINAL-corrected_compressed.pdf (p. xxix-xxxi).

- From this perspective, the meaning of mathematical knowledge is determined not only by the circumstances in which it becomes a deductively structured theory, but also by the procedures that led, or may lead to it and which are indispensable for its understanding.
- Therefore, learning mathematics should include the understanding of implicit motivations, sense-making actions and reflective processes aimed at the construction of meaning, while teaching mathematics should give the learners the opportunity to "do mathematics."
- As a consequence, perceiving mathematics both as logically structured collections of intellectual products and as processes of knowledge production, should form the core of the teaching of mathematics as well as the image of mathematics spread to the outside world.

Along these lines, emphasizing the integration of historical and epistemological issues in mathematics teaching and learning constitutes a natural way for exposing mathematics in the making. This, in turn may lead to a better understanding of specific parts of mathematics and a deeper awareness of what mathematics as a discipline is. This is important for mathematics education in that it can help students understand that mathematics:

- is the result of contributions from many different cultures;
- has been in constant dialogue with other scientific disciplines, philosophy, the arts and technology;
- has undergone changes over time according to shifting views of what it is and how it should be taught and learnt;
- has constituted a constant force for stimulating and supporting scientific, philosophical, technical, artistic, and social development.

In this way, learning mathematics and stimulating students' interest in it can be enhanced at all levels of education. Like other approaches, it maintains that mathematics is central to our modern society and a mathematically literate citizenry is essential to a country's vitality; but it also shows the crucial importance of historical and epistemological issues in mathematics. The harmony of mathematics with other intellectual and cultural pursuits, moreover, makes the subject interesting, meaningful, and worthwhile. In this wider context, history and epistemology of mathematics have an additional important role to play in providing a fuller education of the community: not being a natural science, but a formal science closer to logic – hence to philosophy – mathematics has a distinct ability to connect the humanities with the sciences. Societies, of course, value the sciences and want young people to be scientifically educated. A cultural approach to mathematics and science aims to show how these subjects are deeply connected to the humanities: integrating history and epistemology in mathematics education can make this connection visible to students. This is most important, especially today when there is much concern about the level of mathematics that students are learning and about their decreasing interest in mathematics, at a time when the need is rising for both technical skills and a broader education.

3. Focus and main themes of ESU-10

The ESU is more a collection of intensive courses than a conference for researchers. It is a place where teachers and researchers meet and work together. It is also a place where beginners, more experienced researchers and teachers present their teaching experience to the benefit of the participants and get a constructive feedback from them—and it refers to all levels of education, from primary school to tertiary education, including in-service teachers' training.

The programme and activities of ESU-10 are structured around the following *main themes*:

Theme 1: Integrating history and historical epistemology of mathematics in mathematics education.

Theme 2: Integration of the history of mathematics in classrooms (curricula, courses, textbooks, experiences, original historical sources and material of all kinds).

Theme 3: History of mathematics in (pre-service and in-service) teacher education.

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: Mathematics and cultures.

Theme 7: History of mathematics in Portuguese-speaking countries (Portugal, Brazil, Mozambique, Cape Verde, Angola, Sao Tome e Principe, Guinea-Bissau).

Emphasis is placed on empirical findings from actual classroom experiments and/or produced teaching & learning materials. Insightful theoretical ideas and/or historical analysis with visible didactical implications, however, are also welcome.

Plenaries:

Theme 1: *History of mathematics for the Million*

Snezana Lawrence, England

Theme 2: *The importance and challenge of incorporating original mathematical texts in the classroom*

Fàtima Romero-Valhonesta, Spain

Theme 3: *History of mathematics for future teachers, in a nutshell*

Alan Bernard, France

Theme 4: *The Local and Global History of Early Modern Mathematics: Material Culture as a Key*

Samuel Guessner, Portugal

Theme 5: *Mathematics Education in Secondary Schools for Boys in 19th-Century Poland: Schools with Polish, Prussian, Austrian, and Russian Curricula*

Karolina Karpińska, Poland

Theme 6: *Indian mathematics, a source for a globalized history of mathematics*

Jean Michel Delire, Belgium

Theme 7: *Mathematics in Early Modern Portugal: The challenge of the sea*

Henrique Leitão, Portugal

Special Lecture: *European Summer Universities (1993-2025): more than thirty years of sharing*

Évelyne Barbin, France

More information here: https://esu10.sciencesconf.org/data/pages/plenary.pdf

4. Activities during ESU-10

All activities should refer to the ESU-10 *main themes*. Its scientific program will be structured along these themes, consisting of a few *plenary lectures* & *panels*, as well as, parallel sessions of *oral presentations*, *short communications*/*posters*, for participants, who want to speak about their own experience, or research. A major part of the programme, however, consists of *workshops*.

- There will be at most one *plenary lecture* per theme, normally conceived as an introductory lecture for related workshops.
- In the *panels*, participants will work together, well in advance, so that, during the panel session, there is a real discussion among them and/or with the panel coordinator.
- *Workshops* consist in studying a specific subject and having a follow-up discussion. The workshop organizer prepares, presents and distributes the historical/epistemological or pedagogical/didactical material, which motivates and orients the exchange of ideas and the discussion among the participants. Participants read and work on the basis of this material (e.g. original historical texts, didactical material, students' worksheets etc). Workshops will be scheduled in parallel sessions and will vary in duration (1.5 hours for workshops based on didactical – pedagogical material; 2 hours for workshops based on historical and/or epistemological material).
- *Oral presentations* will be allocated a 30-minute time slot each (25 minutes for presentation and 5 minutes for discussion), scheduled in parallel sessions. It is an activity in the spirit of a conventional research conference.
- *Poster presentations* will be held in 10-minutes *short oral communications*.
- *Exhibitions* of books and other didactical material will also be possible.

5. Target population

Participants are expected to be mostly (elementary or secondary school) teachers who wish to gain new ideas on how they can integrate the history of mathematics into their teaching. However, there will be also university teachers and students, interested in the integration of the history and epistemology of mathematics into mathematics education, as well as, historians of mathematics, who may give a limited number of lectures and workshops to inform others about recent developments in their domain, and mathematicians with an interest in the relation between mathematics, its history and epistemology, and its role at present and in the past.

6. Time and place

The ESU-10 will take place from **Monday 20** to **Friday 24 July 2026** at the Departamento de Matemática da Universidade de Aveiro (https://www.ua.pt/pt/dmat/quem_somos).

7. Official Languages

The official languages of ESU-10 are English, Portuguese and French.

More specifically:

- All *plenary talks* and *panel discussions* will be in *English*.
- It is preferable to organize *Workshops* in English. Nevertheless, workshop organizers who intend to organize their workshop in another language are advised and encouraged to prepare copies in English of the material to be distributed to the participants (e.g. slides, worksheets etc). This will certainly increase participation, as well as, facilitate communication among participants.
- *Oral presentations* can be delivered in any of the official languages. However, for presentations not in English, presenters will be asked to use **two sets of slides**; one set in the language they are going to give their presentation, and **one set in English**.

8. Submission of proposals

07 January 2026: **second deadline** for submitting **Abstracts** of proposals for all types of activities.

15 March 2026: Notification of acceptance or not of the submitted proposals on this new deadline.

Important: Please, use the Activity Application Form of the website (https://esu10.sciencesconf.org/data/pages/250509_ESU10_ActivityApplicationForm.doc)

The members of the *International Scientific Program Committee* (ISPC) will review the submitted abstracts. At this stage, acceptance of a proposal means that the proposed activity will be included in the ESU-10 Scientific Programme. However, this does not imply that a full text based on this activity will automatically be included in the ESU-10 Proceedings, which are going to be published after ESU-10. Full texts will be further reviewed by members of the SPC at the usual international standards. For more details, see *Proceedings,* §10 below.

9. The web site

Making known ESU-10 worldwide, is a major task to be realized by the ISPC. To this end, a web site is operating at **https://esu10.sciencesconf.org**

This is going to be an efficient tool for providing updated information, allowing for online registration, submission of proposals and full texts, supporting the reviewing process, etc. Other important information will be also updated on the website like, for instance, the fees (https://esu10.sciencesconf.org/resource/page/id/4).

10. Proceedings

Publishing the Proceedings of the ESU is also a major task. In fact, Proceedings of the previous ESU have become standard references in this area (cf. reference in footnote 1).

The Proceedings will be published **after** ESU-10, so that authors are given the opportunity to enrich their text as a result of the feedback they will gain during ESU-10.

Each submitted full text for a workshop, or an oral presentation will be reviewed by at least one member of the ISPC at the usual international standards.

More details on the deadline for submitting full texts, their size, the format guidelines and the expected date by which the proceedings will be available and sent to all registered participants, will be announced in due course from the ESU-10 website

https://esu10.sciencesconf.org

The official email is dmat-esu10@ua.pt

11. The (international) *Scientific Program Committee* (ISPC)

Marc, Moyon, University of Limoges, France and University of Aveiro, Portugal (chair)
Hélder, Pinto, Piaget Institute & University of Aveiro, Portugal (chair)
Évelyne, Barbin, University of Nantes, France (co-chair)
Michael, N. Fried, Ben-Gurion University of the Negev, Israel (co-chair)
Snezana, Lawrence, Middlesex University, Great Britain (co-chair)

Abdellah El Idrissi (Morocco)
Abraham Arcavi (Israel)
Adriano Demattè (Italy)
Antonio M. Oller-Marcén (Spain)
Bjørn Smestad (Norway)
Constantinos Tzanakis (Greece)
David Guillemette (Canada)
David Pengelley (USA)
Ewa Lakoma (Poland)
Frédéric Métin (France)
Fulvia Furinghetti (Italy)
Gail FitzSimons (Australia)
Hans Niels Jahnke (Germany)
Helena Durnová (Czech Republic)
Iran Abreu Mendes (Brazil)
Janet Barnett (USA)
Jean-Michel Delire (Belgium)
Johanna Pejlare (Sweden)
Luis Puig (Spain)
Marta Menghini (Italy)
Mª Rosa Massa Esteve (Spain)
Po-Hung Liu (Taiwan)
Renaud Chorlay (France)
Teresa Costa Clain (Portugal)
Tinne Hoff Kjeldsen (Denmark)
Wann-Sheng Horng (Taiwan)
Yi-Wen Su (Taiwan)

12. The *Local Organizing Committee* (LOC)

Nuno Bastos (I. P. Viseu)
Cecília Costa (UTAD)
Luís Descalço (U. Aveiro)
Helmuth Malonek (U. Aveiro)
Ana Patrícia Martins (I. P. Viseu)
Paula Oliveira (U. Aveiro)
Sónia Pais (I. P. Leiria)
Helder Pinto (I. Piaget)
Joaquim Pinto (APM)
Dina Tavares (I. P. Leiria)

13. For further information, contact

Marc Moyon	University of Limoges/ University of Aveiro	France/ Portugal	marc.moyon@ua.pt
Helder Pinto	Piaget Institute	Portugal	helder.pinto@ipiaget.pt
Évelyne Barbin	University of Nantes	France	evelyne.barbin@wanadoo.fr
Michael N. Fried	Ben-Gurion University of the Negev	Israel	mfried4489@gmail.com
Snezana Lawrence	Middlesex University London	UK	snezana@mathsisgoodforyou.com

official email: dmat-esu10@ua.pt

This event is supported by

European Summer University on History and Epistemology in Mathematics Education

esu 10

20-24 july
2026
Aveiro, Portugal

Plenarists

Snezana Lawrence (England)
Fàtima Romero-Valhonesta (Spain)
Alain Bernard (France)
Samuel Gessner (Portugal)
Karolina Karpińska (Poland)
Jean Michel Delire (Belgium)
Henrique Leitão (Portugal)
Évelyne Barbin (France)

University of Aveiro
Campus Universitário de Santiago
3810-193 Aveiro, Portugal

dmat universidade de aveiro departamento de matemática

Este trabalho é financiado por fundos nacionais através da FCT – Fundação para a Ciência e a Tecnologia, I.P., no âmbito do projeto/apoio UID/04106.