

CERME 12: Thematic Working Group 1 Argumentation and Proof

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Scope and focus of the Working Group

The increased role and importance assigned to argumentation and proof in the last decades have led to a variety of approaches to research in this area. The papers presented at past ERME Conferences illustrate this diversity by intertwining educational issues with mathematical, logical, historical, philosophical, epistemological, psychological, curricular, interdisciplinary, anthropological, and sociological viewpoints. Thematic Working Group 1 aims to offer participants this richness of perspectives, to provide opportunities for discussions that may stimulate comparison or integration of perspectives, and to create venues for collaborations on issues of argumentation and proof.

Call for papers and poster proposals

We invite research-based papers that discuss empirical, theoretical, or philosophical issues pertaining to argumentation and proof and their teaching and learning. All papers relevant to the overall focus of the group will be considered, including (but not limited to) papers that address the following:

- Explanation, justification, conjecturing, reasoning, argumentation and proof, and their relationships in mathematics and in mathematics education.
- The role and interplay of language and logic in teaching, learning, and analysis of argumentation and proving processes.
- The design and analysis of instructional materials or interventions that foster argumentation and proof across curricula, from kindergarten to university, including teacher training.
- Theoretical or philosophical perspectives on educational research on argumentation and proof, as well as analytic tools and methods of inquiry.

The above examples, as well as other issues, will be considered from a range of viewpoints:

- Historical, philosophical, epistemological, disciplinary and interdisciplinary.
- Cognitive, affective, social and cultural; concerning the processes involved in the production of conjectures, and the interpretation, evaluation and construction of arguments and proofs.
- Educational, focused on student engagement, intervention design, teacher preparation specific to proof, and enactment of argumentation and proving in classrooms.
- Curricular, considering the role of argumentation and proof in curricular and policy resources.

Papers and poster proposals should use the CERME template, and conform to the guidelines at www.cerme12.it CERME 12 uses an electronic submission system www.conftool.pro/cerme12 The authors submit the initial version of their paper on the website (uploading it both as a .doc and a .pdf file, and providing the required information, in particular the TWG number).

Reviews and decisions

Each paper will be peer-reviewed by two persons from among those who submit papers to this TWG. Please expect to be asked to review up to two papers. The group leaders will decide about the acceptance of posters.

Important dates

- **15th July 2021:** Deadline for [Early Bird Procedure](#)
- **15th September 2021:** Deadline for submission of papers and posters.
- **4th November 2021:** Preliminary decisions on papers.
- **12th November 2021:** Preliminary decisions on posters.
- **2nd - 6th February 2022:** CERME 12 takes place.
- See www.cerme12.it/deadlines/ for other important dates