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CERME 13: Thematic Working Group 01
Argumentation and Proof

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Leader: Andreas Moutsios-Rentzos (Greece), moutsiosrent@primedu.uoa.gr

Co-leaders: Orly Buchbinder (USA), Jenny Christine Cramer (Germany), Viviane Durand-Guerrier (France), David Alexander Reid (Norway), Yang Mei (UK)

Scope and focus of the Working Group

The increased role and importance of argumentation and proof in mathematics education 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, methodological, or philosophical issues pertaining to argumentation and proof and their teaching and learning. We welcome papers that address, but are not limited to, the following foci:

- 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, philosophical and methodological 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, embodied, multimodal, social, and cultural.
- Technological, including computer science and artificial intelligence.
- 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 https://cerme13.renyi.hu/. CERME 13 uses an electronic submission system https://www.conftool.pro/cerme13/. 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 yourself. The group leaders will decide about the acceptance of posters.

Important dates
- **15 February 2023:** Deadline for submission of papers and posters.
- **5 April 2023:** Preliminary decisions on papers and posters.
- **10-14 July 2023:** CERME 13 takes place.
- **See** https://cerme13.renyi.hu/deadlines **for other important dates**