

CERME 11: Thematic Working Group 01 **Argumentation and Proof**

Leader: Gabriel J. Stylianides (United Kingdom), gabriel.stylianides@education.ox.ac.uk

Co-leaders: Orly Buchbinder (United States), Andreas Moutsios-Rentzos (Greece), Jenny Cramer (Germany)

Scope and focus of the Thematic Working Group

The increased role and importance assigned to argumentation and proof in the last decades has 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, anthropological, and sociological viewpoints. Thematic Working Group 1 aims to offer participants this richness of perspectives, providing opportunities for fruitful discussions that may stimulate comparison or integration of perspectives, and 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 on argumentation and proof and its 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, conjecture, reasoning, argumentation and proof, and their relationships in mathematics and in mathematics education.
- The role of logic and language in teaching, learning, and analysing of the proving process.
- The design and analysis of instructional materials or interventions that foster argumentation and proof across the curriculum, 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, and disciplinary.
- Cognitive/Affective, concerning processes involved in the production of conjectures, and the interpretation/evaluation/construction of arguments and proofs.
- Social-cultural aspects for students' construction of arguments and proofs.
- Educational, focused on both student engagement and intervention design.
- Curricular, based on analysis of the place of argumentation and proof in curricular resources.

Papers and poster proposals should use the CERME template, and conform to the guidelines at the [guidelines website](#). CERME 11 uses a [submission website](#). 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

- **15th July 2018:** Early bird submission (please refer to the [early bird website](#))
- **15th September 2018:** Initial submission by authors in the submission system.
- **3rd November 2018:** Initial decisions on papers and posters sent.
- **24th November 2018:** The authors submit a revised version if needed.
- **5th December 2018:** Final decisions sent.
- **12th December 2018:** Final version uploaded.
- **13th January 2019:** Papers available on CERME 11 website.