

CERME 11: Thematic Working Group 03

Algebraic Thinking

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Scope and focus of the Thematic Working Group

Algebraic Thinking is a well-established working Group at CERME. TWG3 provides a forum for international discussion on issues relating to algebraic thinking, teaching and learning. We welcome papers from a variety of different theoretical approaches and methodological frameworks, and expect papers will address issues at all levels from early algebra through to university algebra.

Call for papers and poster proposals

Thematic Working Group 3 welcomes theoretical, methodological, philosophical, empirical or developmental papers and poster proposals on issues related to algebraic thinking. The scope of the working group is broad and any paper/poster of relevance to the overall focus of the group will be welcomed, although we particularly welcome papers that:

- Review the literature to examine how theories interrelate or influence what can be understood.
- Extend existing research on the nature of algebraic thinking (e.g., how students perceive and use algebraic concepts, such as the equals sign, variables, equations, expressions)
- Report large scale/longitudinal studies or replicate and extend existing research to new contexts and settings
- Consider mathematical tasks used as instruments to teach and learn algebraic thinking
- Offer fresh insights on established research topics, such as fundamental algebraic objects and processes (e.g., symbolization, generalization, proofs and justification)
- Develop new approaches for learning and teaching algebra
- Consider the role of technology or other teaching materials
- Provide insight into how students progress from arithmetical to algebraic thinking
- Consider the nature and influence of classroom culture that supports algebraic thinking and discuss professional development programs that support teachers' development

The focus of any empirical or developmental research may vary from micro-level studies of individual students and classrooms, teachers, to macro-level studies of educational systems. We particularly welcome papers that extend topics of previous TWG3 contributions.

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.