CERME 14: Thematic Working Group 17

Theoretical perspectives and approaches

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Scope and focus of the Working Group

The question of how to work with theories has been central to the Thematic Working Group 17 (TWG 17). There is an urgent need not only to develop and use theories in mathematics education research, but also to make explicit our reasons and purposes for our research approaches. In past TWG 17s, the group has addressed ways to navigate a diversity of theories and has explored links between theoretical perspectives and methodological approaches. Necessarily, this work entails attention to ontological, epistemological, axiological, and ethical dimensions of the development and use of theories and methodologies. TWG 17 aims to offer a space to bring together participants working across a range of areas in mathematics education research, to discuss their theoretical and methodological working, to examine their assumptions and approaches, and to collaborate around issues of theory and methodology.

Call for papers and poster proposals

We invite submissions discussing theory and methodology across a range of disciplinary topics. We welcome submissions that address, but are not limited to, the following foci:

- **Approaches for navigating a diversity of theoretical perspectives to solve practical and/ or conceptual problems related to mathematics education.** For example, how have researchers networked, adapted, and/or imported theories to advance technology use, design tasks, support teacher professional development, or to examine teacher beliefs and identity?
- **The role of theory and methodology in disrupting the status quo in mathematics education.** For example, how do researchers interrogate consequences of their theoretical and methodological choices? How do researchers address ontological, epistemological, axiological and/or ethical dimensions of theorizing? How does the power and status of different theoretical traditions impact the scope of mathematics education research?
- **The teaching and learning of theories and methodologies used in mathematics education research.** For example, how are new researchers and/or teachers being trained in theories and methodologies? What are new researchers' experiences in learning to work with theories and methodologies? How do researchers decide on theories and methodologies to use?
- **The development and use of new theories and methodologies in mathematics education research.** For example, how do researchers navigate a tension between theory use and theory development in mathematics education research? How may new theories and/or methodologies emerge in response to contemporary situations (e.g., artificial intelligence)?

Papers and poster proposals *must use the CERME template*, and conform to the guidelines at https://www.cerme14.it/. CERME 14 uses an electronic submission system https://www.conftool.pro/cerme14/. 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 author papers to this TWG. *All co-authors* can be asked to review up to two papers. The group leaders will decide about the acceptance of posters.

Important dates

- **See https://www.cerme14.it/ for important dates**