

CERME14: Thematic Working Group 18

Mathematics Teacher Education and Professional Development

Leader: Marita Eva Friesen, (Germany), friesen@ph-heidelberg.de

Co-leaders: Raffaele Casi (Italy), Andreas Ebbelind (Sweden), Janne Fauskanger (Norway), Tracy Helliwell (United Kingdom); Pere Ivars (Spain); Libuše Samková (Czech Republic); Fanni Biró (Hungary; Young Researcher)

Scope and focus of the Working Group

The study of mathematics teacher education and professional development has been a central focus of research within mathematics education for several decades. Within TWG18, our focus is on research into the preparation of pre-service mathematics teachers (across all phases) and the professional development of in-service mathematics teachers. Frameworks, models, and practices of teacher education and professional development programmes are central to our discussions, particularly the content, methods, activities, tools, and related impacts. The working group's main research interests include various aspects of teacher education and professional development such as professional knowledge, beliefs, reflection, and noticing related to different mathematical content areas, classroom practices, and aspects of instructional quality.

TWG18 offers a communicative, collegial, and critical forum for sharing and discussing diverse perspectives on teacher education and professional development, as well as various theoretical and innovative methodological approaches for investigating mathematics teachers' professional learning and change. We aim at contributing to the development of our knowledge and understanding as researchers and educators in the field.

Call for papers and poster proposals

In TWG18, we welcome theoretical, methodological, empirical, and developmental papers and poster proposals. We encourage contributions presenting young researchers' approaches and studies. We are particularly, though not exclusively, interested in papers addressing the following topics:

- The development of mathematics teachers' professional competences, knowledge, identities, attitudes, and beliefs.
- Models, frameworks (e.g., teacher noticing, lesson study, etc.) and methodologies for researching mathematics teacher learning and professional growth (narrative approaches, action research, use of cases and vignettes, etc.).
- Curriculum and programme design, innovation in mathematics teacher education and professional development (e.g., design and use of online formats, questions of adaptivity and scaling-up).
- Task design, development of resources and use of tools (e.g., physical, technological, conceptual) within mathematics teacher education and professional development.
- Evaluation, approaches to assessment and impact of mathematics teacher education courses and professional development programmes.
- Current challenges in mathematics teacher education and professional development (e.g., qualification of out-of-field teachers; teacher shortages; preparation of career changers for teaching).

Papers and poster proposals *must use the CERME template* and conform to the guidelines at <https://www.cerme14.it/>. CERME14 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 contribute 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