

CERME 13: Thematic Working Group 15

Teaching Mathematics with Technology and Other Resources

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Scope and focus of the Working Group

The two technology groups TWG15 and TWG16 at CERME adopt a broad view of technology in mathematics education as a discipline, or in STEAM: the first group focusing on teaching and the second on learning. The groups embrace both innovative and traditional tools and resources, such as simulations, applets, coding, manipulatives or textbooks. Previous discourse at ERME conferences embraced a wide variety of research topics, theories and methodologies including qualitative, quantitative and mixed methods. Most recently, TWG15 has focused on teachers' uses of students' (digital) productions, sorting and organising digital content and teachers' choices, beliefs and self-efficacy concerning technology use and professional development to include new pedagogies. The group is keen to learn more about actual uses of technology in relation to the different roles of teachers in their profession: a) teaching in classrooms, to understand both the prevailing classroom practices, theoretical considerations and pedagogical implications; b) learning how to teach, with the support of educators, researchers, and/or colleagues; c) working on resources in collaboration with colleagues in institutional or informal settings; and the implications of these roles on policy, practice and theory.

Call for papers and poster proposals

TWG15 particularly welcomes theoretical, methodological, empirical, developmental or replication studies reported in papers (8 pages) or posters (2 pages) that address the following themes: (1) The specific knowledge and skills required for effective mathematics teaching with technology and the design of teacher education programmes whose curriculum considers the use of technology; (2) Theoretical and methodological approaches regarding teachers' practices when teaching with technology and their justifications for these practices; (3) Teachers' decision-making for the selection and use of technology for teaching and learning mathematics and associated quality criteria; (3) Theorising the role of teacher collaboration with colleagues within and beyond institutional settings to support the implementation/use of technology in teaching mathematics; (4) Analysing teachers' work in communities with researchers, educators, facilitators or colleagues, in relation to curricular innovation of mathematics teaching with technology; (5) Teachers' appropriations of emerging technologies (e.g., virtual/augmented reality; artificial intelligence; big data, learning analytics) and quality criteria. Any paper/poster of relevance to the overall focus of the group will be considered.

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