CERME 12: 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 at CERME adopt a broad view of technology resources in mathematics education to include tangible devices (hardware) and the associated applications (software) within the context of learning and teaching. The groups also embrace the traditional tools and resources such as manipulatives and textbooks. TWG 15 addresses the issues related to resources and technology that mostly concern teachers and teacher education, TWG 16 focuses more on these issues from students' perspectives. Previous discourse at ERME conferences embraced a wide variety of research topics, theoretical and methodological approaches. Most recently, this has focused on: teachers' uses of students' (digital) productions; sorting and organising digital content such as: simulations, applets and Open Educational Resources (OERs); the teaching of coding, and through, mathematics; teachers' choices and beliefs concerning technology use; and the ever-challenging process to develop useful theories and new pedagogies. The group is keen to learn more about actual uses of technology in classrooms (and beyond) to understand both the prevailing classroom practices and the implications of this on policy, practice and theory. The Covid-19 pandemic offers a such a context.

Call for papers and poster proposals

For CERME12, we particularly welcomes theoretical, methodological, empirical or developmental papers and poster proposals on the following themes:
- The knowledge and skills required for effective mathematics teaching with technologies and resources and the design/evaluation of teacher education programmes (including MOOCs).
- Theoretical and methodological approaches to describe the identification/evolution of teachers' practices in the design and use of technologies.
- Teachers' decision-making for the selection and use of digital tools for teaching and learning mathematics and associated quality criteria.
- Theorising the role of teacher collaboration with communities within and beyond institutional settings to support the implementation/use of technologies in teaching mathematics
- Teachers' appropriations of emerging technologies, for example: virtual/augmented reality; artificially intelligent digital tools; and the use of 'big data' for assessing mathematical outcomes.
- However, 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 www.cerme12.it CERME 12 uses an electronic submission system www.conftool.pro/cerme12 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. The group leaders will decide about the acceptance of posters.

Important dates
- **15th July 2021:** Deadline for Early Bird Procedure
- **15th September 2021:** Deadline for submission of papers and posters.
- **4th November 2021:** Preliminary decisions on papers.
- **12h November 2021:** Preliminary decisions on posters.
- **2nd - 6th February 2022:** CERME 12 takes place.
- **See www.cerme12.it/deadlines/ for other important dates**