

## CERME 14: Thematic Working Group 04

### Geometry Teaching and Learning

**Leader:** Alik Palatnik, (Israel), [alok.palatnik@mail.huji.ac.il](mailto:alok.palatnik@mail.huji.ac.il)

**Co-leaders:** Lina Brunheira (Portugal), Taro Fujita (UK/Japan), Chrysi Papadaki (Greece/Germany), Petra Surynková (Czech Republic).

#### Scope and focus of the Working Group

The TWG04 focuses on studies related to geometry instruction, ranging from early childhood education to higher education, including the professional development of teachers. Our TWG encourages a plurality of theoretical and methodological approaches. The TWG focuses on themes raised in previous ERME conferences including but not limited to:

- The specific aspects of geometry instruction (interrelation between visual-spatial and formal aspects of geometry, interrelation between traditional and novel tools and technological environments for geometry, problem-solving and proving, the role of diagrams and models);
- Geometry curriculum in different countries (textbooks, tasks, activities, didactic situations, competencies, methodologies, tools, and more);
- Teacher education in geometry (contexts, practices, challenges, and perspectives)

#### Call for papers and poster proposals

TWG04 invites colleagues to submit research-based papers on any subject related to geometry learning and teaching in primary, secondary, and tertiary education. We will be particularly interested in empirical as well as theoretically oriented papers and posters proposals on the following issues:

- Combination of geometric knowledge, visualization, and spatial skills in students' geometric reasoning about two-dimensional and three-dimensional shapes;
- Affective and social aspects of geometry instruction
- Tools and technologies (novel and traditional, material and virtual) for geometry learning and teaching, the way they are used, the interplay between different tools, and their effectiveness.
- Geometry education in teacher training and professional development
- Task design for geometry teaching and learning
- Argumentative aspects of geometry education (including teaching and learning of proofs)
- Comparative international studies on geometry curriculum and competencies (including PISA)
- Dynamic geometry environments (with emphasis on geometric component)
- Teaching and learning of non-Euclidian geometry topics

We encourage the submission of quality papers crossing the boundaries between traditional topics, emerging questions and stimulating discussions on the nature of geometry teaching and learning.

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.