

CERME8: Working Group 4 Geometrical thinking

Leaders

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Scope and Focus of WG4

The Group is concerned with research and development in geometrical thinking from pre-school up to University teaching and learning, including any type of geometry. To motivate a better insight of the work of the group, prospective participants are invited to consider contributions to the previous Conferences and, particularly, the syntheses made at CERME 3, 5, 6 and 7. Some elements, such as the teacher, student and milieu interactions, were considered and discussed within a theoretical background centred on Geometry with regard to epistemology, didactics and semiotics.

Call for papers and poster proposals

The organisers of Group 4 invite colleagues to submit research-based papers on any subject relative to geometrical thinking through educational levels.

Though any papers of relevance to the general focus of the WG 4 will be considered, we will be particularly interested in theoretical, as well as empirical or developmental papers and posters proposals on the following issues:

- Historical perspectives and curriculum studies;
- Geometry education and the «real world»: geometrization, modelling and applications, fundamental approaches of discovery and validation;
- Teaching and learning tools and technologies: materials, artefacts such as computers, and the way they are used and their effects on the development of the geometrical thinking;
- Explanation, argumentation and proof in geometry education;
- Geometric paradigms, registers of representation and geometrical work space;
- Spatial and figural abilities, as geometric reasoning about two-dimensional and three-dimensional shapes;
- Teacher training and didactic aspects of geometry education.

The focus on the topics will be centred on the following aspects:

- Epistemological, sociological and psychological;
- Cognitive, semiotic and instrumental;
- Educational related to the development of the geometrical competences of the students, the difficulties of learning and the design of curricula and their implementation.

Papers and poster proposals should use the CERME8 WORD template, and conform to the guidelines at <http://www.cerme8.metu.edu.tr/>. To submit it, you must email your paper as a WORD document to Philippe R. Richard at philippe.r.richard@umontreal.ca AND at the same time to the conference secretariat at accerme8@metu.edu.tr. Please indicate «WG4-CERME8 proposal» in the e-mail subject.

If possible, please also send a PDF version *in addition* to the WORD document.

Reviews and Decisions

Each paper will be peer-reviewed by three persons from among those who submit papers to this Working Group. Please expect to be asked to review up to three papers yourself between 15th September and 22nd October 2012. It may be necessary for you to revise your paper before final acceptance. Please reserve some time to do this in the second half of November. The group leaders will decide about the acceptance of posters.

Important dates

- 15th September 2012: Deadline for submission of papers.
1st October 2012: Deadline for submission of poster proposals
22nd October 2012: Deadline for reviewers to submit their reviews.
1st December 2012: Deadline for revisions of papers.