

CERME8: Working Group 14 University Mathematics Education

Leader

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Scope and Focus of WG14

Research on university level mathematics education is a relatively young field, which embraces an increasingly wider range of *theoretical approaches* (e.g. didactical, cognitive/developmental, socio-cultural, anthropological and discursive) and *methods/methodologies* (e.g. quantitative, qualitative and narrative). Variation also characterises research in this area with regard to at least two further issues: the *role of the participants*, students and university teachers, in the research – from ‘just’ subjects of the research to fully-fledged co-researchers – and the *degree of intervention* involved in the research – from external, non-interventionist research, to developmental/action research in which researchers identify problems and devise, implement and evaluate reforms of practice. We welcome contributions from across the above spectrum of, as well as other, developments that aim for deeper understanding of issues regarding the teaching and learning of mathematics at university and post-secondary level.

Call for papers and poster proposals

In Working Group 14 we welcome research-based papers (10 pages maximum) and poster proposals (2 pages) in the following areas, though any paper/poster of relevance to the overall focus of the group will also be considered. We particularly welcome papers that report studies of:

- Mathematical reasoning and proof in university mathematics
- Challenges for teaching mathematics at university level (including the perspectives of university teachers)
- The role of ICT tools (e.g. CAS) in the teaching and learning of university mathematics
- Transition issues “at the entrance” to university studies of mathematics, or beyond
- Novel approaches to teaching Calculus and Linear Algebra
- The teaching and learning of advanced university mathematics topics (beyond Calculus and Linear Algebra)
- Challenges of teaching mathematics to students in non-mathematics degrees
- Assessing the learning and teaching of mathematics at university level
- Theoretical approaches to the study of teaching and learning mathematics at university

Particularly with regard to the last of the above these could include a focus on specific approaches and on contrasting or combining approaches. For example, alongside ‘classical’ cognitive approaches to studies of advanced mathematical thinking, several CERME7 WG14 contributions employed the Anthropological Theory of Didactics or discursive approaches to the study of mathematics teaching and learning at university level. This diversity is much appreciated and welcome.

We welcome “practitioners” of mathematics teaching at university level and newcomers to the field, while we expect the papers to report systematic studies of the teaching and learning of mathematics at university and post-secondary level and to refer to relevant literature in the field.

Papers and poster proposals should use the CERME8 template, and conform to the guidelines at http://www.cerme8.metu.edu.tr/author_guidelines.html. To submit your paper or poster, you must email it as a WORD document to Elena Nardi at e.nardi@uea.ac.uk AND to the conference secretariat at accerme8@metu.edu.tr by 15th September 2012. Please send a PDF version *in addition* to the WORD document.

Reviews and Decisions

Each paper will be peer-reviewed by three colleagues from among those who submit papers to WG14. Please expect to be asked to review up to three papers yourself between 15th September and 22nd October 2012. It is likely that some revisions will be necessary on 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

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| 15 September | Deadline for submission of papers. |
| 1 October | Deadline for submission of poster proposals |
| 22 October | Deadline for reviewers to submit their reviews. |
| 15 November | Decisions about paper or poster acceptance |
| 1 December | Deadline for revisions to papers. |
| 1 December | Reduced fee registration deadline |
| 15 December | Papers for presentation at the congress available on the congress website |
| 6 -10 February | Conference |