

CERME 9: Thematic Working Group 7

Mathematical Potential, Creativity and Talent

Leaders

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Scope and focus of the Thematic Working Group

The goal of the WG is to promote research and practice in the field of mathematical ability, creativity, mathematical potential and giftedness. The WG is aimed to encourage communication between researchers in the fields of mathematics education and research mathematicians, and to contribute to the development of our understanding of the nature and nurture of mathematical creativity in all students and high mathematical ability in particular individuals. Following the debate at WG7 at CERME-7 and CERME-8, we will continue international exchange of ideas related to the research on identification of mathematical talent, didactics of teaching highly able students as well as the promotion of creativity in all students.

Discussion will focus on research aimed at better understanding (a) of the differences in the educational approaches that result in different levels of mathematics performances in individual students or in groups of students; (b) of the nature of mathematical tasks and activities that are challenging, fundamentally free of routine, inquiry-based, and rich in authentic mathematical problem solving; (c) tools that are useful for identifying mathematically gifted and creative students; (d) the relationship between exceptional mathematical abilities, motivation and mathematical creativity; (e) teacher education aimed at mathematics teaching that encourages creativity and promotes mathematical talents.

Call for papers and poster proposals

The group invites research papers (10 pages maximum) and poster proposals (2 pages) related to the abovementioned perspectives (prepared according to CERME9 template).

The contributions may vary in the research paradigms, basic theories, and research methodologies. Contributors may present research findings on the variety of issues in the field of on mathematical potential, creativity and talent, among which may be the following themes:

- Theoretical investigation of the concepts of mathematical talent and creativity: their definitions and origins; relationship between mathematical creativity, giftedness, motivation and effort;
- Empirical research on the issues underlined above;
- In-depth studies on creative processes in mathematics;
- Exploration of pedagogy and teacher proficiency associated with (a) teaching highly able students and realization of students' high mathematical potential, (b) promoting mathematical creativity in all students;
- Featuring of mathematically challenging tasks;
- Historical and sociological analysis of the relevant issues on mathematical creativity and giftedness.

The focus of the research may vary from individual students and classrooms, teachers and teacher education as well as on the experiences of research mathematicians.

Papers and poster proposals should use the CERME word template, and conform to the guidelines at <http://www.cerme9.org/guidelines/guidelines-for-authors/>. To submit it, you need to email your paper as a WORD document to **Roza Leikin**, AND at the same time to the conference secretariat at **submission@cerme9.org**. If possible please also send a pdf version in addition to the WORD document.

Reviews and decisions

Each paper will be peer-reviewed by two persons from among those who submit papers to this Working Group. Please expect to be asked to review up to three papers yourself. It may be necessary for you to revise your paper before final acceptance. The group leaders will decide about the acceptance of posters.

Important dates

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| September 15, 2014: | Deadline for submission of papers |
| October 1, 2014: | Deadline for submission of poster proposals |
| November 25, 2014: | Deadline for reviewers to submit their reviews |
| December 5, 2014: | Decisions about paper or poster acceptance |
| December 20, 2014: | Reduced fee registration deadline |
| January 10, 2015: | Deadline for revisions of papers |
| January 20, 2015: | Papers for presentation at the congress available on the CERME website |