CERME8: Working Group 5
Stochastic Thinking

Leaders

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Scope and Focus of WG5

Stochastic thinking refers to statistical and probabilistic thinking and the combination of both. Statistical thinking is a key skill for the citizen who needs to interpret information presented through the media or the workplace, to contribute to modern society and to interpret scholarly papers. An important challenge is to develop statistically literate citizens and meaningful use of statistical tools. An important step forwards would be to consider bridges between data analysis, probability and inference and it is in this common ground that we locate stochastic thinking. Recent developments in technology support (i) dynamic exploration of data and (ii) experimentation with probabilistic models as generators of data as well as in exploratory data analysis or informal statistical inference. However, professional development of teachers is crucial to keep up with such developments. WG 5 positions itself within research that is fundamentally important at a time when new developments provide new stimulus for growth in the body of research on stochastic thinking.

Presentations will be short, only to refresh participants' reading of the papers and to feed collaborative group work.

Call for papers and poster proposals

We will be particularly interested in theoretical, empirical or design-based research papers (10 pages maximum) and poster proposals (2 pages) that address one or more of the following themes (though any papers of relevance to the group focus will also be considered):

* The nature and development of stochastic thinking and its relationship to other types of mathematical thinking, including the interface between probabilistic and statistical thinking, such as in modelling, informal statistical inference or data exploration.

* The professional development of mathematics teachers to teach statistics: frameworks of teachers' knowledge (components and competences); evaluation of teachers' knowledge and ability to use computer tools, and their influence on students' or adults' statistical and probabilistic thinking.

* The role of computer-based tools on stochastic thinking.

* The elaboration of theoretical frameworks that may provide insightful models for interpreting evidence from research on stochastic thinking.

There are no restrictions to the area of education or learning: papers on vocational education and training or adult learning are as welcome as papers on primary, secondary or tertiary education.

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 Arthur Bakker at a.bakker4@uu.nl, AND at the same time to the conference secretariat at accerme8@metu.edu.tr. 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 people 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 to papers.