

## **CERME7: Working Group 5**

### **Stochastic thinking**

#### **Leaders**

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#### **Scope and Focus of WG 5**

WG 5 on Stochastic Thinking (previously WG 3) met for the first time in CERME 3. 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. At university level many students draw upon classical inferential statistics, for example hypothesis testing and confidence intervals, that are often not well understood and used mechanically. 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. For example, recent developments in technology support (i) experimentation with probabilistic models as generators of data as well as in exploratory data analysis and (ii) decision-making involving risk analysis. 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 knowledge that is research on stochastic thinking.

#### **Call for papers and poster proposals**

We will be particularly interested in theoretical, empirical or developmental papers 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 or data exploration.
- The relationship between stochastic thinking and external factors such as teaching methodologies, tools, tasks, setting, and the education of teachers
- The role of computer-based tools, including microworlds, on stochastic thinking.
- The elaboration of theoretical frameworks that may provide insightful models for interpreting evidence from research on stochastic thinking.

Papers and poster proposals should use the CERME7 WORD template, and conform to the guidelines at <http://www.cerme7.univ.rzeszow.pl/?id=cerme-guidelines-for-authors> To submit it, you must email your paper as a WORD document to Dave Pratt at [d.pratt@ioe.ac.uk](mailto:d.pratt@ioe.ac.uk) AND at the same time to the conference secretariat at [s.cerme7@univ.rzeszow.pl](mailto:s.cerme7@univ.rzeszow.pl) If possible please also send a pdf version *in addition* to the WORD document.

#### **Reviews and Decisions**

Each paper will be peer-reviewed from among those who submit papers to this Working Group. Please expect to be asked to review papers yourself between 15<sup>th</sup> September and 22<sup>nd</sup> October 2010. 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. Further development of the paper might be expected after the conference in order for the paper to be published in the proceedings. If there is sufficient quality or potential quality in the papers presented, we may seek a further outlet for the work, for example in the form of a special issue of a prestigious journal.

#### **Important dates**

15<sup>th</sup> September 2010: Deadline for submission of papers.  
1st October 2010: Deadline for submission of poster proposals  
22<sup>nd</sup> October 2010: Deadline for reviewers to submit their reviews.  
1st December 2010: Deadline for revisions to papers.