

Title of panel: **Computational Technology: Historical and philosophical approaches to technics and technology in mathematics and mathematics education**

The panelist will relate to the following questions:

- How, and to what extent, the use of computer technology in mathematical activities changes mathematical work processes, what mathematics is and how it is understood and learned?
 - Is the use of computer technology in mathematics and mathematics education best viewed as in continuity with or as a break away from the use of non-computer technology?
 - How different theories describes doing and learning mathematics with computer technology?
- Special attention will be given to areas where the different theories calls for different empirical research questions and recommendations for educational practice.

The panelists are:

Mario Sánchez Aguilar

mosanchez@ipn.mx

Associate professor of mathematics education research at the National Polytechnic Institute of Mexico. His research interests include the use of the Internet and other technological tools for the teaching and learning of mathematics, and in the development of mathematics teachers. He is also interested in the use of historical sources in the classroom.

Mikkel Willum Johansen

mwj@ind.ku.dk

Assistant professor in the philosophy of the mathematical sciences at the Department of Science Education, University of Copenhagen. His main research interests is in mathematical cognition. His approach is inspired both by the theory of distributed cognition and by cognitive semantics. As part of his work, Mikkel has discussed how and to what extend the development of mathematics has been influenced by the introduction of different cognitive tools.

Mirko Maracci

mirko.maracci@unipv.it

Assistant Professor in Mathematics Education at the Department of Mathematics of the University of Pavia, Italy. His research interests concern mainly the use of technology for mathematics teaching and learning and the integration of technology in school practice, and the issue of the theoretical diversity in mathematics education research. His studies in the field of technology are rooted in a Vygotskyan approach, they combine a semiotic and an educational perspective and elaborate on the notion of mediation considering the crucial role of human mediation.

Morten Misfeldt

misfeldt@learning.aau.dk

Associate professor and research manager of the research lab for ICT and design for learning, Aalborg University in Copenhagen. His research interests includes technology enhanced learning, university mathematics education, the use of ict in primary level mathematics education, the influence of ict on mathematics curriculum and mathematical practices in various areas of society.

Per Jönsson

per.jonsson@mah.se

Works in mathematics with a special interest in numerical analysis and the use of computers for mathematical research, furthermore Per has been involved in a number of educationally framed projects.