

WHAT MATHEMATICS EDUCATION WILL PREPARE STUDENTS FOR THE SOCIETY OF THE FUTURE?

Koeno Gravemeijer (co-chair)

Eindhoven University of Technology, Eindhoven, the Netherlands

Fou-Lai Lin (co-chair)

National Taiwan Normal University & Shi-Da Institute for Mathematics Education, Tapei,
Taiwan

Cyril Julie

University of the Western Cape, Bellville, Republic of South Africa

Minoru Ohtani

Kanazawa University & Kanazawa University Senior High School, Kanazawa, Japan

Michelle Stephan

University of North Carolina at Charlotte, Charlotte, USA

Short description of the Discussion Group: aims and underlying ideas

In this Discussion Group we want to gather congress participants interested in exchanging and discussing potential answers to the question, “What are the implications of the computerization and globalization of our society for mathematics education?” The role of mathematics in our society is growing, but more importantly, mathematics is increasingly done by machines. This will have an impact on both future job requirements and on the mathematics one will need to understand their world. So the question arises, “How can mathematics education prepare students for being able to participate in the digital society?” Key Questions are:

- *Which of the 21st century skills can, and should, be fostered in mathematics education? And, how could this be done?*
- *What skills and insights are necessary for mathematical modeling in out-of-school reality? And, what are the implications for mathematics education?*
- *What mathematical topics will have to be designated as goals of mathematics education?*
- *How will a shift in goals from routine skills to understanding affect the learning trajectories and the overall structure of the curriculum? And, how can computer tools be used to help students reach those goals?*

Planned structure:

Pre-conference activities	Topic	Material / Working format
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	Background information	<p>A few short papers is available at http://cstem.uncc.edu/icmi2016stemtsg offering some background information.</p> <p>This website is also open for participants who want to post additional background papers.</p>
	Participant input	We encourage the potential participants to express what themes they deem important for future mathematics education at the aforementioned website

Tuesday, 16.30-18.00: Planned timeline	Topic	Working format
16:30 – 16:55	Welcome, introduction & preliminary round: Clarifying the goal of the DG	brief introduction followed by a plenary discussion
16:55 – 17:30	The future society an the role of mathematics in it	brief introduction followed by a plenary discussion
17:30 – 18:00	Inventory of goals and topics	working in groups

Friday, 16.30-18.00: Planned timeline	Topic	Working format
16:30 – 17:00	Further elaboration of goals and topics	presentation and discussion of results
17:00 – 17:40	Consequences for curricula & educational practices	plenary discussion
17:40 – 18:00	“What next?”, possible policy brief and options for publications	plenary discussion