

MACAS-2017

Conference Programme

June 26

19:00 Informal meeting and dinner at your own expense (location will be announced later)

June 27

08:30 Registration of participants with coffee/tea and informal networking

10:00 Official opening

10:30 **Keynote 1:**

- Paul Ernest: *Mathematics, beauty and art*

11:30 **Session 1: Mathematics, music and literature**

- Hans Peter Nutzinger: *The beauty of patterns – The hidden mathematics of music*
- Uffe Thomas Jankvist, Helle Rørbech & Jesper Bremholm: *Revisiting Hardy's "Apology" – An interdisciplinary rendezvous between mathematics, literature and literacy*
- Lina Medina Ibarra, Avenilde Romo-Vázquez & Mario Sánchez Aguilar: *Relating mathematics and literature as a teaching strategy at the high school level*

13:00 Lunch

14:00 **Session 2: Mathematics, literature and aesthetics**

- I.V. Golovacheva, A.F. Stroev, M.Ye. Zhuravlev & P.V. de Mauny: *An invitation to mathematical modelling of artistic space in literary criticism: Masochism reconsidered*
- Susanne Spies: *Aesthetic experience within mathematics – The beauty of proofs and theorems in light of critical arguments in Kantian aesthetics*
- Hans Walser: *Semi-regular figures: Between beauty and regularity*

15:30 Refreshments: coffee/tea

16:00 **Session 3: Mathematics, creativity and giftedness**

- Lissér Rye Ejersbo: *How is the Danish demand that mathematics be a creative subject handled in practice?*

- Peter Weng & Uffe Thomas Jankvist: *More gifted than gifted – Mathematical communication competency as an indicator for giftedness*
- Elena Klimova: *What do card tricks, the terracotta army and a beam balance have in common?*

17:30 Reception with wine and tapas

June 28

09:00 **Keynote 2:**

- Jens Højgaard Jensen: *Mathematical modelling – Hiding or guiding?*

10:00 **Session 4: Mathematics, modelling and mathematization**

- Martin Niss: *Addressing mathematization obstacles with unformalized problems in physics education*

11:00 Refreshments: coffee/tea

11:30 **Session 5: Mathematics and interdisciplinary teaching**

- Simon Zell: *Models for interdisciplinary teaching*
- Claus Michelsen: *Secondary mathematics and biology in-service teachers engaging in interdisciplinary unit planning: Challenges, limitations and potentials*

12:30 Lunch

13:30 **Session 6: Mathematics, language and technology**

- Caitlin Furlong: *Technology-based games in mathematics and their impact on student motivation*
- Daria Yeryomka: *The mathematical and physical principles of modern art expertise technology*
- Nicole Lirette-Pitre, Nicole Ferguson & Marianne Cormier: *Language strategies within the Learning Cycle: Impacts on science interest, cognitive growth and reading comprehension*

15:00 Busses leave for excursion and conference dinner (separate programme will follow).

June 29

10:00 **Keynote 3:**

- Annie Savard: *Making decisions in a complex world: Teaching how to navigate using mathematics*

- 11:00 Refreshments: coffee/tea
- 11:30 **Session 7: Mathematics, primary education and beliefs**
- Maria Kirstine Østergaard: *Contributing to students' perception of the relevance and application of mathematics by focusing on students' mathematics-related beliefs*
 - Lena Lindenskov: *Early intervention in mathematics for low performers and high performers in grade 2*
 - Gao Shuzhu & Chen Weiwei: *From centroid to explain a question about the volume of cone*
- 13:00 Lunch
- 14:00 **Session 8: Mathematics, STEM, STEAM, competencies and interdisciplinarity**
- Kirsten Spahn & Anette Nielsen: *Transportation of malaria medicine through environments with different temperatures*
 - Viktor Freiman, Manon LeBlanc & Caitlin Furlong: *STEAMing soft skills in makerspaces: What are the mathematical connections?*
 - Tomas Højgaard & Jan Sølberg: *Competencies, curricula and interdisciplinarity: An analysis of a curriculum development process in mathematics and science education*
- 15:30 Closing reception: Wine and snacks