

MACAS-2017

Revised Conference Programme

June 26 - Monday

19:00 Claus Michelsen will be meeting all of you for an informal meeting and dinner at your own expense at

Toldboden

Nordre Toldbod

1259 Copenhagen K

Phone: +45 33930760

Email: havnespiseriet@toldboden.com

Web: www.toldboden.com

June 27 - Tuesday

D170 08:30 Registration of participants with coffee/tea and informal networking

D174 09:30 Official opening

10:00 **Keynote 1:** Paul Ernest: *Mathematics, beauty and art*

Chair: Claus Michelsen

C001 11:00 **Session 1:** *Mathematics, music and literature*

Chair: Hans Walser

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

- 12:30-13:25 Lunch
- C001 13:30 **Session 2: Mathematics, primary education and beliefs**
Chair: Jesper Bremholm
Maria Kirstine Østergaard: *Contributing to students' perception of the relevance and application of mathematics by focusing on students' mathematics-related beliefs*
Lena Lindenskov: *Seven keys to experiencing aesthetic aspects of mathematics – exemplified in a Danish early intervention programme for high and low performers*
Gao Shuzhu & Chen Weiwei: *From centroid to explain a question about the volume of cone.*
- C001 15:00 Refreshments: water, fruit
- C001 15:30 **Session 3: Mathematics, creativity and giftedness**
Chair: Hans Peter Nutzinger
Lisser Rye Ejersbo: *How is the Danish requirement that mathematics be a creative subject realised in practice?*
Peter Weng & Uffe Thomas Jankvist: *More gifted than gifted – Mathematical communication competency as an indicator for giftedness*
- C001 17:00 Departure for guided tour at Danish School of Education, AU, Campus Emdrup, by Nicolai Paulsen
- D170
- 18:00-20:00 Reception with winetasting and tapas

June 28 - Wednesday

- D174 09:30 **Keynote 2: Jens Højgaard Jensen: Mathematical modelling – Hiding or guiding?**
Chair: Uffe Thomas Jankvist
- D174 10:30 **Session 4: Mathematics, modelling and mathematization**
Chair: Mario Sánchez Aguilar
Martin Niss: *Addressing mathematization obstacles with unformalized problems in physics education*
- D174 11:00 Refreshments: coffee/tea

- D174 11:30 **Session 5: Mathematics, language and technology**
Chair: Helle Rørbech
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*
- 12:30-13:25 Lunch
- C001 13:30 **Session 6: Mathematics and interdisciplinary teaching**
Chair: Maria Kirstine Østergaard
Simon Zell: *Models for interdisciplinary teaching*
Claus Michelsen: *Secondary mathematics and biology in-service teachers engaging in interdisciplinary unit planning: Challenges, limitations and potentials*
- 14:30 Getting ready for the cruise boat
- 15:00 Departure with the bus in front of C001
The Viking Bus will drive us to Toldboden
- 15:30-17:30 Cruise boat for a two hours guided tour in the harbor of Copenhagen
- 17:30-19:00 Walk & talk with visit to Christianshavn & Christiania
- 19:00 Dinner at Spiseloppen at Christiania
Restaurant Spiseloppen
Bådsmadsstræde 43
DK-1407 København K
T: +45 32 57 95 58

June 29 - Thursday

- D174 10:00 **Keynote 3: Annie Savard: Making decisions in a complex world: Teaching how to navigate using mathematics**
Chair: Astrid Beckmann
- C001 11:00 Refreshments: coffee/tea

C001 11:30 **Session 7: Mathematics, literature and aesthetics**

Chair: Tomas Højgaard

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.*

Hans Walser: *Semi-regular figures: Between beauty and regularity.*

12:30 Lunch

C001 13:30 **Session 8: Mathematics, STEM, STEAM, competencies and interdisciplinarity**

Chair: Lena Lindenskov

Kirsten Spahn & Anette Nielsen: *Teaching in Science, Technology, Engineering and Mathematics. Case: 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*

C001 15:30 Closing reception