

The Fifth ERME Topic Conference (ETC 5) on Mathematics Education in the Digital Age (MEDA), 5-7 September 2018, Copenhagen, Denmark

Information about themes and publications

The initial call for contributions to the MEDA conference 2018 involved three themes:

- Mathematics teacher education and professional development in the digital age
- Mathematics curriculum development and task design in the digital age
- Theoretical perspectives and methodologies/ approaches for researching mathematics education in the digital age

Received contributions on these themes have undergone a peer-review process and accepted contributions are published in the conference proceedings.

Citation: Clark-Wilson, A., Donevska-Todorova, A., Faggiano, E., Grønbæk, N., Trgalova, J. & Weigand, H.-G. (Eds.). Proceedings of The Fifth ERME Topic Conference (ETC 5) on Mathematics Education in the Digital Age (MEDA), 5-7 September 2018, Copenhagen, Denmark.

The Proceedings are online available here:

https://www.math.ku.dk/english/research/conferences/2018/meda/proceedings/MEDA_2018_Proceedings.pdf

Individual contributions are online available here:

<https://www.math.ku.dk/english/research/conferences/2018/meda/proceedings/>

Intensive pre-conference activities have led to formulating new working themes that would be discussed during the MEDA 2018 conference. Those are:

1. Networking theories in mathematics education and technology- what are the challenges and why it so difficult to do this?
2. Curriculum and Task design - big and small scale
3. Task and curriculum implementations - what happens in real classrooms?
4. Implications for teacher development - (pre- and in-service)

Thoughtful discussions during all Sessions of MEDA2018 aim to lead to proposals for chapters of the book *Mathematics Education in the Digital Age: Learning, Practice and Theory*. Further information about the book is to be found in the [Call for Chapters](#).

Overview of sessions

General

Each session commences in the grand lecture hall with an opening of the session theme. After this participants resume in their respective break-out rooms for further theme presentations and discussions. Break-out rooms are color coded on the badges. The first color concerns Session1 & 2, the second color concerns Sessions 3 & 5.

Session 1: Theories and networking theories

Group/ Room	Authors	Title
Grand Lecture Hall Chair: Eleonora Faggiano	Susanne Prediger	Video input
	Mirko Maracci	Key paper presentation on Theories and networking theories
	Albano, Faggiano and Rossi	Key paper presentation 'lightning talk' A didactical tetrahedron supporting co-disciplinary design, development and analysis of mathematical e-learning situations

Group	Room	Authors	Title
Blue	Grand lecture hall Chair: Maracci	Uffe Thomas Jankvist, Eirini Gereniou and Morten Misfeldt	The KOM framework's aids and tools competency in relation to digital technologies - a networking of theories perspective
Red	A1-01.02 Chair: Gueudet	Michal Tabach and Jana Trgalova	ICT standards for teachers: Toward a frame defining mathematics teachers' digital knowledge
Green	A1-01.16 Chair: Weigand	Florian Schacht	An inferentialist perspective on the understanding of students' uses of digital textbooks in mathematics
Yellow	SCI-FS-B17-123-1_sal Clark-Wilson	Prateek Shah, Harshit Agrawal and Sanjay Chandrasekharan	Implications of Digital Media and New Cognitive Theories for Research and Practice in the Mathematics Classroom

Session 2: Task and Curriculum design – big and small

Group/ Room	Authors	Title
Grand Lecture Hall Chair: Ana Donevska-Todorova	Allen Leung	Video input
	Donevska-Todorova & Weigand	Key paper presentation 'lightning talk' Design Principles for Resources and Tasks for Technology-Enhanced Teaching and Learning Mathematics
	Ladel, Kortenkamp, Larkin & Etzold	Key paper presentation 'lightning talk' Evaluation of Apps using the ACAT Framework
	Edson, Phillips & Bieda	Key paper presentation 'lightning talk' Transitioning a Problem-Based Curriculum from Print to Digital: New Considerations for Task Design

Group	Room	Authors	Title
Blue	Kons. Mødesal Chair: Faggiano	Albano, Dello Iacono, Fiorentino & Polo	Designing mathematics learning activities in e-environments
Red	A1-01.02 Chair: Donevska-Todorova	Essonnier & Trgalova Jablonski, Ludwig & Zender	Design principles supported by the collaborative design of mathematical digital resources within a CoI Task quality vs. task quantity. A dialog-based review system to ensure a certain quality of tasks the MathCityMap web community
Green	A1-01.16 Chair: Rezat	Andrà, Brunetto & Repposi	Designing Mathematical Tasks to Promote Students' Online Interaction
Yellow	Grand Lecture Hall Chair: Turgut	Koch, Suurtamm, Lazarus & Masterson	Making Connections: Launching a Co-created Digital Mathematics Curriculum Network

Session 3: Task and curriculum implementation – what happens in real classrooms

Group/ Room	Authors	Title
Grand Lecture Hall Chair: Jana Trgalová	Janine Remillard	Key talk: Examining elementary teachers' use of digital instructional resources: A cross-cultural study
	Jana Trgalová	Input for working groups

Group	Room	Authors	Sub-theme
Yellow	Grand Lecture Hall Chair: Faggiano	Amanda Thomas, Alden Edson Lewis Hosie, Lynae Warren, Ann Edwards Sebastian Rezat, Uta Häsel-Weide Teresa Rojano	From existing to digital tasks, resources or curricula
Blue	Kons. Mødesal Chair: Weigand	Uffe Jankvist, Morten Misfeldt, Steffen Iversen Maria Fahlgren, Mats Brunström Georgios Kafetzopoulos, Giorgios Psycharis Margo Kondratieva	Students perspective
Grey	SCI-FS-B17-123-1_sal Chair: Donevska-Todorova	Tamsin Meaney, Ruzica Pajic Krista Francis, Brent Davis Bea Kristinsdóttir, Freyja Hreinsdóttir, Zsolt Lavicza Franziska Peters	Specific tasks or resources
Red	A1-01.02 Chair: Clark-Wilson	Charlotte Scott, Giorgos Psycharis Gulay Bozkurt, Candaş Uygan, Melih Turgut Rachel Hess Green, Shai Olsher	Teachers' use of digital resources
Green	A1-01.16 Chair: Tragalova	Nimer Baya'a, Wajeeh Daher, Otman Jaber, Ahlam Anabousy Robert Weinhandl, Zsolt Lavicza Galit Nagari-Hadiff, Michal Yerushalmy	Training specific teachers' abilities

Session 4: Thinking, working and writing

Participants gather in in collaboration teams in one of the rooms

Grand Lecture Hall
Kons. Mødesal
A1-01.02
A1-01.16
SCI-FS-B17-A01-Frokoststuen
SCI-FS-B17-123-1_sal

Session 5: Implications for teacher development

Group/ Room	Authors	Title
Grand Lecture Hall Chair: Alison Clark-Wilson	Alison Clark-Wilson	Key talk: Implications for teacher development

Group	Room	Presenter	Title
Yellow	Grand Lecture Hall Chair: Rezat	Osama Swidan, Hanan Abu-Abdoon	Educating teachers to use e-textbooks as a means to prompt argumentation and creative reasoning
Blue	Kons. Mødesal Chair: Weigand	Avital Elbaum-Cohen, Michal Tabach	Reflection as a mechanism to explain changes in teachers' identity: The case of Yosef
Grey	SCI-FS-B17-123-1_sal Chair: Kortenkamp	Ali Simsek, Alison Clark-Wilson	Teacher Knowledge for Teaching Geometric Similarity with Technology: A Review of Literature
Red	A1-01.02 Chair: Clark-Wilson	Helena Rocha, Floriano Viseu	Teachers' perspectives on the use of technology to teach Functions at lower and upper secondary
Green	A1-01.16 Chair: Trgalova	Ahlam Anabousy, Michal Tabach	Processes that a Community of Inquiry Undergo towards Developing Mathematics Lessons with Technology

Session 6: Developing book chapter proposals

Participants gather in in collaboration teams in one of the rooms

Grand Lecture hall
Kons. Mødesal
A1-01.02
A1-01.16
SCI-FS-B17-A01-Frokoststue- stuen
SCI-FS-B17-123-1_sal

Session 7: Conference summary

The conference outcome is summarized by keynote speaker, Dame Professor Celia Hoyles and Chair of the International Program Committee, Professor Hans-Georg Weigand. This takes place in the Grand Lecture Hall.