



21 - 22 September 2021
Online Meeting of ICTMA Community



21 September 202111.00 am – 3.00 pm, **UTC**

- **Mathematical Modelling Competencies** presentations from special issue of Educational Studies in Mathematics
- Announcement of the **venue for ICTMA 21 in 2023** and short presentation
- **Henry-Pollak-Award:** Announcement of the decision

22 September 202111.00 am – 3.00 pm, **UTC****Early Career Researcher Activities**

- Theme: Writing and Publishing Academically on Mathematical Modelling Education
- Four parallel **workshops** with the chance to attend two



21 September 2021 11.00 am – 3.00 pm, UTC

Mathematical Modelling Competencies

11.00 – 11.15 am

Welcome and Introduction into the theme: Gabriele Kaiser, Stanislaw Schukajlow

11.15 am -2.30 pm

Short presentations on the **eleven** papers from the special issue of *Educational Studies in Mathematics* on **Innovations in measuring and fostering modelling competencies** by their authors (details next slide)

2.30 – 2.45 pm

Announcement of the venue for ICTMA 21 in 2023 and short presentation

2.45 – 3.00 pm

Announcement of the decision on the Henry-Pollak-Award

No registration necessary, free attendance under this link:

<https://uni-wuerzburg.zoom.us/j/99467990960?pwd=Y0tudWpPWFVjbzRtV3REcjFxM3Bidz09>

Meeting-ID: 994 6799 0960

Passwort: 419279



11.00-11.15 Introduction by Gabriele Kaiser and Stanislaw Schukajlow

11.15 am – 1.00 pm

Short **presentations** on the **papers** in this order (subject to change):

- **Mustafa Cevikbas, Gabriele Kaiser & Stanislaw Schukajlow.** *A systematic literature review of the current discussion on mathematical modelling competencies: State-of-the-art developments in conceptualizing, measuring, and fostering*
- **Vince Geiger, Peter Galbraith, Mogens Niss & Catherine Delzoppo** (Australia/Denmark). *Developing a task design and implementation framework for fostering mathematical modelling competencies*
- **Xiaoli Lu & Gabriele Kaiser** (China/ Germany). *Creativity in students' modelling competencies: conceptualisation and measurement*
- **Corey Brady & Hyunyi Jung** (USA). *Modeling presentations: toward an assessment of emerging classroom cultures of modeling*
- **Xinrong Yang, Björn Schwarz & Issic Leung** (China/Germany/Hong Kong). *Pre-service mathematics teachers' professional modelling competencies: A comparative study between Germany, Mainland China and Hong Kong*
- **Alina Alwast & Katrin Vorhölter** (Germany). *Measuring pre-service teachers' noticing competencies within a mathematical modelling context - an analysis of an instrument*

About 1.00 pm – 2.30

- **Rina Durandt, Werner Blum & Alfred Lindl** (South Africa/Germany). *Fostering mathematical modelling competency of South African engineering students: which influence does the teaching design have?*
- **Gilbert Greefrath, Stefan Siller, Heiner Klock & Raphael Wess** (Germany). *Pre-service secondary teachers' pedagogical content knowledge for the teaching of mathematical modelling*
- **Janina Krawitz, Yu-Ping Chang, Kai-Lin Yang & Stanislaw Schukajlow** (Germany/Taiwan). *The role of reading comprehension in mathematical modelling: improving the construction of a real-world model and interest in Germany and Taiwan*
- **Jinfa Cai, Raymond LaRochelle, Stephen Hwang & Gabriele Kaiser** (USA/Germany). *Expert and preservice secondary teachers' competencies for noticing student thinking about modelling*
- **Peter Frejd & Pauline Vos** (Sweden/Norway). *A commentary to the Special Issue "Innovations in measuring and fostering mathematical modelling competencies"*



22 September 2021 11.00 am – 3.00 pm, UTC
**Early Career Researcher Activities: Writing and Publishing
Academically on Mathematical Modelling Education**

11.00 am – 11.30 am

Gabriele Kaiser: Introduction into the theme - Scientific standards in academic publishing

11.30 am - 1.00 pm

Parallel workshops with guest editors from special issues on mathematical modelling education:

- Stanislaw Schukajlow (ESM)
- Gloria Stillman (MTL)
- Werner Blum & Susana Carreira (Quadrante)
- Marcelo Borba & Gabriele Kaiser (ZDM – Mathematics Education)

1.10 pm -2.40 pm

Same parallel workshops and change of workshop

- Stanislaw Schukajlow (ESM)
- Gloria Stillman (MTL)
- Werner Blum & Susana Carreira (Quadrante)
- Marcelo Borba & Gabriele Kaiser (ZDM – Mathematics Education)

2.40 pm – 3.00 pm

Summary and feedback

Registration and selection of preferred workshops under this link until 20th September 2021

https://docs.google.com/forms/d/e/1FAIpQLScvSwnZXqH6J_RbxBxSnQ848f99kWrpVXqQ6FoRognMR4a4WA/viewform



Final remarks

The activities are open for everybody and not restricted to ICTMA members, all mathematics educators interested in mathematical modelling education are welcome. Early Career Researcher activities are interpreted broadly, more mature researchers are welcome.

For questions please write to us.

**We look forward meeting you online at 21 and 22
September 2021.**

Gabriele Kaiser (ICTMA president)

Hans-Stefan Siller (chair of ICTMA20)

