

Mathematical Modelling Education and Its Relation to Interdisciplinary Education

Date: 14 May 2024 (Tue)

Time: 18:30-21:00

Venue: Lecute Hall, Escola Secundária Luso-Chinesa de Luís Gonzaga Gomes
(高美士中葡中學禮堂)

Language: English

Registration: Online Registration (<https://go.um.edu.mo/i29ji3gn> or )

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Speaker:

Prof. Gabriele KAISER is a Senior Professor in mathematics education at the Faculty of Education of the University of Hamburg, Germany. She is the Editor-in-chief of ZDM – Mathematics Education. She was the former president of International Community of Teachers of Mathematical Modelling and Applications and the Convenor of the ICME-13. Her research areas include: teacher education, teaching and learning of modelling, international comparative studies, gender and cultural aspects in mathematics education.

Abstract:

The talk will start with a description of the state of the art in learning and teaching mathematical modelling at different educational levels, with a special focus on modelling competences. It will then describe modelling activities that are appropriate to promote modelling education, in particular experiences with complex and more authentic examples, such as the speed of a tsunami wave. Finally, the relationship between mathematical modelling education and interdisciplinary education will be described, as working with modelling examples requires interdisciplinary work involving different school subjects. The cooperation between interdisciplinary work and mathematical modelling has a very long tradition; however, despite the high potential of this cooperation, many difficulties remain unresolved. The potential can be seen, among other things, in convincing students of the relevance of mathematics education. Difficulties may include mutual understanding due to different languages used and differences in the knowledge base of interdisciplinary work and mathematical modelling are discussed.