Kolloquium Angewandte Mathematik Prof. Thomas Apel (BAU1) Prof. Matthias Gerdts (LRT1) Prof. Markus Klein (LRT1)



## Vortragsankündigung

Am Montag, den 4.11.2024, hält um 17:00 Uhr

Prof. Dr. Thomas Richter (Otto-von-Guericke Universität Magdeburg)

einen Vortrag über das Thema

## Modeling and numerical analysis of sea ice

Der Vortrag findet im Raum 3401 in Gebäude 33 statt.

## Vortragszusammenfassung

Sea ice is one of the important components in global circulation models used for weather forecasting and especially for climate prediction. Sea ice is modeled as a 2D layer between the atmosphere and the ocean. While sea ice covers only the polar regions of the Earth, the sea ice component usually takes on the role of a coupler between the ocean and the atmosphere and is responsible for all energy transfer between these two phases.

We focus on the dynamics of sea ice and provide an introduction to modeling it as a 2D fluid. Different rheologies are considered. The most established are approximations to a viscous plastic model, but recently different material types, e.g. brittle rheologies, are also considered.

Finally, we describe the special requirements in terms of numerical discretization and implementation of such a sea ice model, which should fit well into the general framework of global climate models.

## Alle Interessierten sind dazu herzlich eingeladen.