



# Einladung

zu dem am Donnerstag, dem 09. November 2023, ab 14 Uhr  
im Kurt-Alder-Hörsaal  
Chemische Institute, Greinstraße 6

stattfindenden öffentlichen

## wissenschaftlichen Vortrag zur Habilitation

Institut für Geophysik und Meteorologie

(Fach: Geophysik)

von

## Dr. Alexander Grayver

über das Thema

### How much ice is there?

The ice mass of the Antarctic and Greenland ice sheets has been decreasing over the past few decades. Since continental ice sheets hold the largest reserves of fresh water, their melting is a major factor contributing to the global sea level. But how do we obtain a systematic view of the largest continental glaciers? Can we accurately map the ice thickness, subglacial topography, and monitor ice motion? In the last few decades, the ice sheet models and knowledge about subglacial topography have yielded major improvements over previous generation of models. This revolution in our observational capabilities was enabled through continuous satellite-, airborne and ground-based geophysical observations. It is further supported by development of data modelling techniques that rely on fundamental laws of physics rather than heuristic relations. In this talk, I will review most detailed observations and models of the ice sheet thickness and topography of the subglacial rocks. We will travel through newly unveiled deep glacial troughs, subglacial mountainous ridges and lakes, and discuss some of the key data and methods that enabled these discoveries.

G. Bareth  
Dekan