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Fakultät für Mathematik

EINLADUNG

zum

HABILITATIONSVORTRAG

Dr. Alexander Bihlo
(Department of Mathematics and Statistics,
Memorial University of Newfoundland)

"Geometry-preserving modeling in geophysical fluid dynamics"

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Abstract:
Lie symmetries are among the many important geometric properties of the governing equations of geophysical fluid dynamics. Unfortunately, they are also among the first properties to be lost once these equations are discretized using conventional discretization techniques. In this talk I will discuss tailored numerical integrators for some of the important models of geophysical fluid dynamics that numerically preserve their symmetries. This entails the development of geometric numerical integrators for the resolved grid-scale dynamics as well as geometric parameterization schemes for unresolved subgrid-scale processes. Applications include the modeling of shallow waves, geostrophic turbulence and barotropic eddies in the ocean.

Montag, 11. Mai 2020
16:00 Uhr

Via Zoom
(für den Link bitte
michael.kunzinger@univie.ac.at kontaktieren)

Michael Kunzinger