

Lothar Collatz Seminar Summer Semester 2020

June 24 · 4:15 pm · online

Dr. Nicole Beisiegel (University College Dublin)

An Adaptive DG Model for Extreme Waves

Abstract:

In this seminar we will talk about the numerical study of atmospherically induced, potentially dangerous, and extreme waves in various wave frequency bands. We will consider an adaptive discontinuous Galerkin (DG) model that solves the 2D non-linear shallow water equations.

Furthermore, we will have a closer look at several forcing mechanisms that play a role in wave formation and amplification and discuss underlying physical mechanisms. Using the aforementioned model, we will study idealised hurricane storm surge and coastal inundation and use adaptive mesh refinement capabilities to significantly reduce computing time while leading to high order accuracy.

For further information please contact

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www.c3s.uni-hamburg.de/news-events/seminar-c3s.html