

## **Bathymetry Reconstruction for the Shallow Water Equations**

Judith Angel, Technische Universität Hamburg

For the numerical simulation of tsunamis, a model of the bathymetry, the topography of the ocean bottom, is indispensable as it greatly impacts the behavior of the wave. It is possible to approximately reconstruct the bathymetry from measurements of the water height by solving an optimisation problem with the shallow water equations as constraints. Following the derivation of the required adjoint equation we will present suitable numerical methods and show computational results.