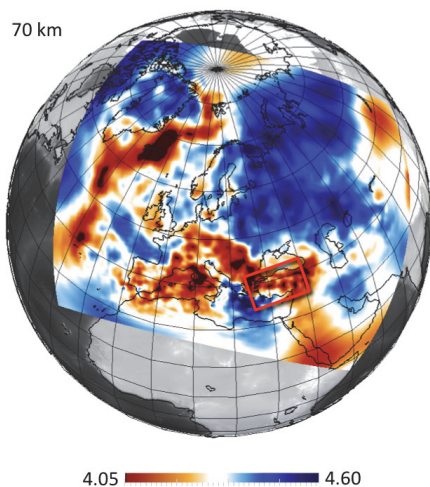


# Geowissenschaftliches Kolloquium

## Waveform tomography, Anwendung auf Europa mit tektonischen Interpretationen

Donnerstag, 30. Januar 2014 - 16.15 Uhr

**Andreas Fichtner**  
(Swiss Federal Institute of Technology in Zurich (ETHZ))



We develop a Full Waveform Inversion method that assimilates local and teleseismic data into one consistent model, using numerical wave propagation and adjoint techniques. Our method jointly resolves crustal and mantle structure; shedding light onto the interaction of deep-Earth dynamics and near-surface processes. Applied to Europe and Western Asia, our multiscale Full Waveform Inversion reveals, among other features, the deep structure of the North Anatolian Fault Zone and the role of the Iceland-Jan Mayen plume system on North Atlantic geodynamics.

**Prof. Dr. Andreas Fichtner** obtained his PhD from LMU Munich in 2010. Following a postdoctoral fellowship at Utrecht University, he joined the faculty at ETH Zurich in 2013. His work is focused on the development of seismic tomography techniques, using high-performance computing to simulate seismic wave propagation through complex 3D Earth models. He applies his methods on all scales in order to provide improved images of our dynamic planet.



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