



Andreas Fichtner

SWITZERLAND

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PERSONAL DATA

Name: Andreas Fichtner
Date of birth: June 7, 1979
Place of birth: Rochlitz, Germany
Nationality: German

EDUCATION & POSITIONS:

since 2013: Assistant professor, Swiss Federal Institute of Technology (ETH), Zurich
2009-2012: Postdoctoral researcher, Utrecht University, Utrecht, The Netherlands
2005-2009: PhD student, Ludwig Maximilian University, Munich, Germany
2003-2005: MSc student, Ludwig Maximilian University, Munich, Germany
2002-2003: Visiting Fulbright student, University of Washington, Seattle, USA
1999-2002: BSc student, University of Mining and Technology, Freiberg, Germany

RESEARCH INTERESTS:

My research combines seismology, high-performance computing, applied mathematics, and various geological sciences, to reveal the details of the Earth's internal structure. With my research I contribute to fundamental science, as well as to the solution of problems with socio-economic relevance, including the understanding of earthquake rupture processes, the impact of mantle convection on long-term surface deformation and the formation of natural resources. The key elements of my research are:

- Improve seismic tomography through methodological developments and by harnessing HPC capabilities.
- Develop a global Comprehensive Seismic Earth Model (CSEM) that consistently combines massive data sets on all scales.
- As part of the CSEM project, develop 3D density tomography, and a full-waveform variant of ambient noise tomography.
- Employ high-resolution tomographic models to study earthquake rupture processes, and improve tsunami warnings.
- Use seismic interferometry to study the excitation of ambient noise on Earth.
- Interact with colleagues from other fields (e.g. tectonics, geochemistry) in the interpretation of tomographic Earth models.

AWARDS & DISTINCTIONS:

2015: Early Career Scientist Award by the International Union of Geodesy and Geophysics (IUGG)
2013: The Golden Owl, ETH teaching award for *Inverse Theory* class (best teaching in Earth Sciences)
2011: Keiiti Aki young scientist award by the American Geophysical Union
2008: Geophysical Journal International Student Paper Award
2008: Invited talk at the 58th Meeting of Nobel Laureates in Physics
2002-2003: Fulbright Scholarship