

CURRICULUM VITAE

Dr. Bernhard Schuberth

Date of Birth: 21.7.1977
Place of Birth: Regensburg, Germany

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Professional Experience

- Since January 2013 **Senior Scientist**, Geophysics Section, Dept. of Earth and Environmental Sciences, Ludwig-Maximilians-Universität München (LMU), Munich, Germany
- Mar. 2012 – Dec. 2012 **Assistant Professor**, Geophysics Section, Dept. of Earth and Environmental Sciences, LMU, Munich, Germany
- Feb. 2010 – Jan. 2012 **Marie-Curie Fellow**, Seismology Section, UMR GéoAzur, Sophia Antipolis, France
- Jul. 2009 – Jan. 2010 **Post-Doc in computational seismology and geodynamics**, LMU Munich, Germany
- 2004 – 2009 **Ph.D. student in computational seismology and geodynamics** within the International Graduate College *THESIS* of the *Elite-Netzwerk Bayern*, LMU Munich
- Mar./Apr. 2004 **Graduate Assistant**, Geophysics Section, LMU Munich
Simulation of rotational motions induced by teleseismic events for comparison with ring laser data from the geodetic observatory Wettzell, Germany

Education

- Jul. 2009 **Ph.D.** (Dr. rer. nat.) *summa cum laude* in Geophysics
Thesis: *Thermal, Elastic and Seismic Signature of High-Resolution Mantle Circulation Models*
- Feb. 2004 **Diplom** in Geophysics *with distinction*
Thesis: *The Spectral Element Method for Seismic Wave Propagation – Theory, Implementation and Comparison to Finite Difference Methods*
- 1997 – 2004 **Studies of Geophysics**, LMU Munich

Awards

- Mar. 2008 **Best Oral Presentation**, German Geophysical Society (DGG), 67th Annual Meeting 2007, Aachen, Germany
- Juli 2005 **55th Lindau Nobel Laureate Meeting**, young researcher attendee
- Jun. 2004 **Edison Award – Silver Prize** for the diploma thesis, General Electrics Foundation and the Institute of International Education
- 2002 – 2008 **Fellowship** from e-fellows.net

Lecturing

- Since 2009 **Introduction to Earth System Sciences (Solid Earth Part)**, given within the Masters Program *ESPACE*, Technical University Munich
- Since 2012 **Globale Geophysik I and II**, Lecture and Practicals given within the *Bachelor of Geosciences* program, LMU Munich

Funding

- 2010 **Marie-Curie Intra-European Fellowship** within the 7th European Community Framework Programme (PIEF-GA-2009-235861)
Budget: **173401,73 €**
- 2009 **Access to DEISA supercomputing infrastructure** within the DEISA Extreme Computing Initiative (DECI-5)
Computing Budget: **760,000 CPU-hours**
- 2009 **Access to the National Supercomputer HLRB II** of the Leibniz Supercomputing Centre, Munich
Computing Budget: **1.7 million CPU-hours**

Field Experience

- Dec. 2003 – Mar. 2004 **Installation and maintenance of seismometers** (Type Mars Lite) in the Bavarian Forest
- Aug. – Oct. 2002 **Expedition to the Arctic Sea onboard the RV Polarstern**
- Marine reflection seismics
 - Helicopter airborne magnetic surveys

Internships and Working Experience

- Nov. 2002 – Feb. 2004 **Student Assistant**, LMU Munich
- Aug. – Oct. 2002 **Student Assistant** on board the **RV Polarstern**, Arctic Expedition ARK XVIII/2, Alfred Wegener Institute for Polar und Marine Research
- Oct. 2001 – Mar. 2002 **Working Student**, S.u.B. Handelshaus GmbH, Munich
- Aug. – Sep. 2001 **Student Trainee**, TiNOX GmbH, Munich
- Mar. – Jul. 2001 **Student Assistant**, German Geodetic Research Institute (DGFI), Munich
- Nov. 2000 – Jan. 2001 **Working Student**, Legal Dept., Hypovereinsbank Munich
- Apr. – Aug. 2000 **Student Trainee**, Dept. for Satellite Navigation, Astrium Space GmbH (EADS), Ottobrunn
- Nov. 1999 – Oct. 2000 **Student Assistant**, German Geodetic Research Institute (DGFI), Munich
- Oct. 1999 **Student Trainee**, Institute of Atmospheric Physics, German Aerospace Center (DLR), Oberpfaffenhofen
- Mar. 1999 **Working Student**, Legal Dept., Hypovereinsbank Munich

Languages

Business Fluent **German** (native), English, French

Critical Skills

- 9 years of experience in **development and application of wave propagation software** (e.g., *SPECFEM3D_GLOBE*)
- 6 years of experience in **development and application of fluid dynamics software** for mantle convection (e.g., *TERRA*)
- **Experience in application of modern thermodynamic mineral physics models** for non-linear temperature to seismic velocity conversion
- **Extensive knowledge of FORTRAN and MPI programming** and related optimization strategies
- **Experience in writing research proposals**, scientific papers, internal/external reports
- **Experience in high-performance computing** at supercomputing facilities such as the *Leibniz Supercomputing Centre (LRZ)*, the *Rechenzentrum Garching* and the *Barcelona Supercomputing Center* (up to 6TB RAM and up to 100 h runtime)
- **Extensive knowledge of different parallel computing architectures** (HITACHI SR8000-F1, SGI ALTIX 3700Bx2, SGI ALTIX 4700, IBM BladeCenter JS21, IBM BlueGene/P)
- Advanced knowledge of (parallel) **3-D visualization software** *Paraview*
- Experience with **visualization of high-resolution 3-D models** (100 million finite elements) on a “Geowall”
- Experience with **seismological software** (*SAC*, *Pitsa*)
- **Comfortable speaking in front of a group**, strong written and verbal communication skills