

# Curriculum vita of Sebastian Hainzl

## Personal Details:

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## Education

1999 PhD in Physics at the University of Potsdam, Germany

1995-1999 PhD student in the research group "Nonlinear Dynamics" at the University of Potsdam

1995 Diploma in Physics, Thesis in high energy particle physics (advisor: Prof. Dr. Petry)

1990-1995 Studies in Physics at the University of Bonn

1988-1990 Studies in Physics at the University of Kassel

## Professional History

since 2007 Project Scientist at the GeoForschungsZentrum Potsdam, Germany

2004-2007 University of Potsdam, Institute of Geosciences, Research associate with teaching responsibility (Hochschulassistent)

2001-2004 University of Potsdam, Postdoc - Project "Modelling and Analysis of Earthquake Swarms"

1998-2000 University of Potsdam, Postdoc - SFB 555 "Complex Nonlinear Processes" and HSP-project "Analysis and Modelling of Seismic Dynamics"

1995-1998 University of Potsdam, Research Assistant in Nonlinear Dynamics Working Group

1994-1995 University of Bonn, Teaching Fellow in Physics

## Publications since 1999:

### 2007

E. Hintersberger, F. Scherbaum & **S. Hainzl**, Update of likelihood-based ground-motion selection for seismic hazard analysis in Western Central Europe, Bull. Earthquake Eng., 5, 1-16, doi: 10.1007/s10518-006-9018-x (2007).

### 2006

C. Beauval, **S. Hainzl** & F. Scherbaum, The impact of the spatial uniform distribution of seismicity on probabilistic seismic hazard estimation, Bull. Seis. Soc. Am., 96 (6), 2465-2471, doi: 10.1785/0120060073 (2006).

**S. Hainzl**, G. Zöller & I. Main (Editors), Introduction to special issue: Dynamics of seismicity patterns and earthquake triggering, *Tectonophysics*, 424, 135-138 (2006).

**S. Hainzl**, T. Kraft, J. Wassermann, H. Igel & E. Schmedes, Evidence for rainfall-triggered earthquake activity, *Geophys. Res. Lett.*, 33, L19303, doi:10.1029/2006GL027642 (2006).

G. Zöller, **S. Hainzl**, Y. Ben-Zion & M. Holschneider, Earthquake activity related to seismic cycles in a model for a heterogeneous strike-slip fault, *Tectonophysics*, 423, 137-145 (2006).

P. Burton, **S. Hainzl** & S. Lasocki (Editors), Preface of special issue: Spatiotemporal models of seismicity and earthquake occurrence, *Tectonophysics*, 423, 1-2 (2006).

**S. Hainzl**, C. Beauval & F. Scherbaum, Estimating background activity based on interevent-time distribution, *Bull. Seismol. Soc. Am.*, 96, 313-320 (2006).

C. Beauval, **S. Hainzl** & F. Scherbaum, Probabilistic seismic hazard estimation in low-seismicity regions considering non-Poissonian seismic occurrence, *Geophys. J. Int.*, 164, 543-550 (2006).

## 2005

**S. Hainzl** & Y. Ogata, Detecting fluid signals in seismicity data through statistical earthquake modeling, *J. Geophys. Res.*, 110 B05S07, doi: 10.1029/2004JB003247 (2005).

J. Schmedes, **S. Hainzl**, S.-K. Reamer, F. Scherbaum, K.-G. Hinzen, Moment Release in the Lower Rhine Embayment, Germany: Seismological Perspective of the Deformation Process, *Geophys. J. Int.*, 160 (3), 901-909 (2005).

G. Zöller, **S. Hainzl**, M. Holschneider, and Y. Ben-Zion, Aftershocks resulting from creeping sections in a heterogeneous fault, *Geophys. Res. Lett.*, 32, L03308, doi 10.1029/2004GL021871 (2005).

## 2004

**S. Hainzl**, Seismicity patterns of earthquake swarms due to fluid intrusion and stress triggering, *Geophys. J. Int.*, 159, 1090-1096 (2004).

## 2003

**Hainzl, S.**, Self-organization of earthquake swarms, *J. of Geodynamics*, 35(1-2), 157-172 (2003).

Narteau, C., Shebalin, P., **Hainzl, S.**, Zöller, G., and Holschneider, M., Emergence of a band-limited power law in the aftershock decay rate of a slider-block model, *Geophys. Res. Lett.*, 30(11) 10.1029/2003GL017110 (2003).

**Hainzl, S.**, Zöller, G., and Scherbaum, F., Earthquake clusters resulting from delayed rupture propagation in finite fault segments, *J. Geophys. Res.*, 108 (B1), 2003, doi:10.1029/2001JB000610, (2003).

## 2002

**Hainzl, S.**, and Fischer, T., Indications for a successively triggered rupture growth underlying the 2000 earthquake swarm in Vogtland/NW-Bohemia, *J. Geophys. Res.*, 107(B12), 2338, doi:10.1029/2002JB001865 (2002).

Zöller, G., and **Hainzl, S.**, A systematic spatiotemporal test of the critical point hypothesis for large earthquakes, *Geophys. Res. Lett.*, 29(11), 10.1029/2002GL014856 (2002).

Zöller, G., **Hainzl, S.**, Kurths, J., and Zschau, J., A systematic test on precursory seismic quiescence in Armenia, *Natural Hazards*, 26 , 245-263 (2002).

## 2001

**Hainzl, S.**, and Zöller, G., The role of disorder and stress concentration in nonconservative fault systems, *Physica A*, 294 , 67-84 (2001).

Zöller, G., and **Hainzl, S.**, Detecting premonitory seismicity patterns based on critical point dynamics, *Natural Hazards and Earth System Sciences*, 1 , 93-98 (2001).

Zöller, G., **Hainzl, S.**, and Kurths, J., Observation of growing correlation length as an indicator for critical point behavior prior to large earthquakes, *J. Geophys. Res.*, 106 , 2167-2176 (2001).

## 2000

**Hainzl, S.**, Zöller, G., and Kurths, J., Self-organization of spatio-temporal earthquake clusters, *Nonlinear Processes in Geophysics*, 7 , 21-29 (2000).

**Hainzl, S.**, Zöller, G., Kurths, J., and Zschau, J., Seismic quiescence as an indicator for large earthquakes in a system of self organized criticality, *Geophys. Res. Lett.*, 27 , 597-600 (2000).

## 1999

**Hainzl, S.**, Erdbeben und selbstorganisierte Kritizität - Modellierung der raumzeitlichen Erdbebendynamik, PhD thesis, (in German), University of Potsdam (1999).

**Hainzl, S.**, Zöller, G., and Kurths, J., Similar power laws for foreshock and aftershock sequences in a spring-block model for earthquakes, *J. Geophys. Res.*, 104 , 7243-7253 (1999).

**Hainzl, S.**, Zöller, G., and Kurths, J., Self-organized criticality model for earthquakes: quiescence, foreshocks, and aftershocks, *Int. J. Bif. Chaos*, 9 , 2249-2255 (1999).