Prof. Dr. Michael Krautblatter

Michael Krautblatter has been conducting research into natural hazards, landslides and permafrost systems since 2004. His main research areas focus on the non-invasive quantification and monitoring of permafrost in unstable rock and soil slopes, the quantification of magnitude, frequency and interconnectivity of landslides and the anticipation of landslides based on thresholds, mechanical models and an understanding of the systems involved. Theory, field, laboratory and modelling based research is currently being performed within the framework of international projects in the Alps (i.e. the Zugspitze) and in Arctic environments. The current focus of the new TUM landslides group is the long, mid and short term anticipation of landslides in alpine regions. Michael Krautblatter studied geography and geology in Passau, Durham and Erlangen. As a postgraduate, he conducted research at the Universities of Erlangen, Oxford and Bonn. He received his PhD (summa cum laude) for his work on permafrost in alpine rock walls and their destabilisation from the University of Bonn. He subsequently continued his academic career in Bonn where he lectured on geomorphology and environmental systems, established a “PermaSlope” research group with PhD students and set up a permafrost laboratory.

Curriculum Vitae

since 09/2012	Technische Universität München, Engineering Geology, Professor Chair of Landslide Research.
03/2012-09/2012	Technische Universität München, Engineering Geology, Interim Professorship on Monitoring, Analysis and Early Warning of Landslides.
07/2009-(07/2015)	University of Bonn, Geography, Senior lecturer (Akademischer Rat auf Zeit) and candidate for habilitation.
05/2005-07/2009	University of Bonn, Ph.D.-Thesis, Detection and quantification of permafrost change in alpine rock walls and implications for rock instability. Summa cum laude.
05/2005-06/2009	University of Bonn, Geography, Ph.D graduate school fellow and lecturer.
02/2005-05/2005	University of Oxford, UK, School of Geography, research invitation to the rock breakdown laboratory (Prof. H. Viles).
09/2004-01/2005	University of Erlangen, Physical Geography, junior lecturer.

10/2001-08/2004	University of Erlangen, Magister Geography, Geology and Economics Magister thesis: The Impact of Rainfall Intensity and other External Factors on Primary and Secondary Rockfall, Supervisor: M. Moser (Engineering Geology).
2002-2004	Scientific assistant in the Engineering Geology, U. of Erlangen (Prof. Moser).
02/03 2002	Invitation to research project “Seismically Induced landslides in Taiwan after the Chi-Chi 1999 Earthquake” (Drs. D. Petley and W. Murphy, Engineering Geology Leeds and Durham Landslide Research Center).
06/2001-10/2001	German-Spanish Chamber of Commerce, Madrid, Leonardo da Vinci Internship.
09/2000-06/2001	University of Durham, UK, Geography (incl. Landslide Research) and Environmental Studies, Sokrates Studentship.
10/1997-06/2000	University of Passau, Geography and Economics, intermediate exam geography.

Key Publications

Krautblatter M, Funk D, Günzel FK: „Why permafrost rocks become unstable: a rock-ice-mechanical model in time and space“. *Earth Surface Processes and Landforms*. in press. Abstract

Dräbing D, Krautblatter M: „P-wave velocity changes in freezing hard low-porosity rocks: a laboratory-based time-average model“. *The Cryosphere*. 2012; 6: 1163–1174. Abstract

Krautblatter M, Moser M, Schrott L, Wolf J, Morche D: „Significance of rockfall magnitude and solute transport for rock slope erosion and geomorphic work in an Alpine trough valley (Reintal, German Alps)“. *Geomorphology.* 2012; 167: 21-34. Abstract

Krautblatter M, Verleysdonk S, Flores-Orozco A, Kemna A: „Temperature-calibrated imaging of seasonal changes in permafrost rock walls by quantitative electrical resistivity tomography (Zugspitze, German/Austrian Alps)“. *Journal of Geophysical Research - Earth Surface*. 2010; 115 (F02003): 1-15. Abstract

Krautblatter M, Moser M: „A nonlinear model coupling rockfall and rainfall intensity based on a four year measurement in a high Alpine rock wall (Reintal, German Alps))“. *Nat. Hazards Earth Syst. Sci.* 2009; 9: 1425–1432. Abstract

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