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Geomorphologische Systeme & Risikoforschung



EINLADUNG ZUM GASTVORTRAG im Rahmen des Forschungsseminars (Doktoratsstudium) SS 2015

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INSTITUT FÜR GEOGRAPHIE UND REGIONALFORSCHUNG Universität Wien • Universitätsstr. 7/5 • 1010 Wien

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## PROBABILISTIC LANDSLIDE HAZARD ANALYSIS

In this speech, a general framework for probabilistic landslide hazard analysis is presented. With respect to other quantitative hazard assessment approaches, this probabilistic landslide hazard analysis has the advantage to provide hazard curves and maps, and to be applicable to all typologies of landslides, if necessary accounting for both their onset and transit probability. The method is based on the assessment of a landslide onset frequency, a runout frequency for long-runout landslides, and on the local definition of landslide intensity, which can be expressed through different parameters, according to landslide typology. For long runout landslides, the runout and spatially-varying intensity and uncertainty are considered. Examples for rockfalls and debris flows will be presented and discussed.

Paolo Frattini is Associate Professor at University of Milano Bicocca . His research interests include: (i) the study and modeling of shallow landslides triggering mechanisms and analysis of the effect of climate change; (ii) the development of rainfall thresholds for the initiation of shallow landslides; (iii) the analysis of landslide susceptibility with statistic multivariate models and physically-based models; (iv) risk analysis and cost benefit analysis; (v) statistical analysis of landslide inventories; (vi) study and modeling of propagation processes for long-runout, high-velocity landslides (debris flows, rock falls and rock avalanches) and use of mathematical models for mitigation measures planning and design; (vii) uncertainty modeling for natural hazard assessment

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