

EINLADUNG ZUM VORTRAG

im Rahmen des Forschungsseminars (Doktoratsstudium) SS 2012

am MONTAG, 14. MAI 2012, 17 UHR c.t.

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

HÖRSAAL 5A

Professor

Alexander BRENNING

Department of Geography and
Environmental Management,
University of Waterloo, Canada



UNCOVERING THE POTENTIAL OF STATISTICAL TOOLS IN GEOMORPHOLOGY

Statistical tools are critically important for geomorphological research and practice. Among the milestones of geomorphology that required such tools are Horton's stream law, the Universal Soil Loss Equation, and the Hjulstrom-Sundborg curves. Today, whether landslide susceptibility is modeled or frequency-magnitude relationships of floods are analyzed, statistical tools allow geomorphologists to examine environmental controls and make predictions while assessing the underlying uncertainties. Innovative methods from computational statistics and machine learning are currently gaining popularity due to their ability to model highly complex relationships, while more traditional statistical approaches from sampling to hypothesis testing should not be forgotten as they can provide clear answers in controlled situations. This talk examines the potential – and limitations – of statistical methods in geomorphology with regards to historical achievements, current practice and future directions.

Alexander Brenning is Assistant Professor of Geomatics at the University of Waterloo, specializing in spatial modeling in particular in mountain geomorphology and cryospheric research. Having conducted pioneering research on rock glaciers in Chile using a variety of geomatics methods, innovative statistical geocomputation methods are driving his current research in landslide susceptibility modeling and permafrost distribution modeling. Remote sensing and precision agriculture are additional fields in which Alexander's methodological approaches have found fertile ground.

Organisiert von
Arbeitsgruppe *Geomorphologische Systeme und Risikoforschung*
Institut für Geographie und Regionalforschung
Universität Wien