

EINLADUNG ZUM VORTRAG

im Rahmen des Forschungsseminars (Doktoratsstudium) SS 2013

am MONTAG, 29. APRIL 2013, 17 UHR c.t.

INSTITUT FÜR GEOGRAPHIE UND REGIONALFORSCHUNG
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INVISIBLE GEOMORPHOLOGY: THE GEOPHYSICS AND GEOCHEMISTRY OF EROSION

Much of what Geomorphology is concerned with is not seen. By employing techniques and approaches borrowed from other Geosciences, and by considering the far field effects of geomorphic processes, we can better resolve the dynamics of landscapes and increase the visibility of Geomorphology. For example, seismological techniques can be used to determine what happens where in a landscape, when and with what magnitude. Thus, seismological observations can resolve the connections between different geomorphic processes at the landscape scale, and help probe the link between meteorological forcing and geomorphic response. Such observations can also provide a backdrop against which the impact of erosion on chemical weathering and the transfer of carbon from the short, superficial cycle into geological storage can be considered. Using examples from active mountain belts around the world, this lecture will explore the interface of Geomorphology with Geophysics and Geochemistry and seek to make invisible geomorphology a bit more visible.

Niels Hovius is head of the Section Geomorphology at the GeoForschungsZentrum Potsdam of the Helmholtz Society and has a chair at the University of Potsdam. Earlier, he lectured Earth Sciences at the University of Cambridge and was a fellow of Churchill College. Niels has a broad interest in the physical and chemical biological processes shaping Earth's surface, and especially their interactions. Using a combination of observational, modeling and theoretical approaches, he has worked on erosion from grain impact to orogen scale, and its implications for crustal deformation and global biogeochemical cycles.

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