

BayCEER Kolloquium

Lectures in Ecology and
Environmental Research

WS 2019/20



UNIVERSITÄT
BAYREUTH

Donnerstag/Thursday

21.11.2019

12:00 in H6, GEO

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Quantification of subsurface properties using the groundwater response to Earth and atmospheric tides

Quantifying groundwater flow and storage changes requires knowledge of the spatial distribution of groundwater system properties. Expanding such knowledge is currently limited by the effort and cost involved in groundwater investigations. In this colloquium, a new and passive approach to quantify subsurface hydro-geomechanical properties will be outlined. This is based on the ubiquitous response to Earth tides and atmospheric forcing embedded in standard groundwater and atmospheric pressure measurements. An overview of the recent developments illustrates that such methods hold the potential to rapidly increase the spatial knowledge of groundwater system properties. However, further developments are required before such methods can routinely be applied to standard groundwater monitoring datasets.