

# BayCEER Kolloquium

Lectures in Ecology and  
Environmental Research

WS 2017/18



UNIVERSITÄT  
BAYREUTH

Thursday

**01.02.2018**

**12:00 in H6, GEO**



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## Stranger Things: Understanding Interactions between Hydrology and Biogeochemistry

Natural systems like catchments, wetlands or streams often do behave in a strange way when it comes to understand internal process couplings between hydrology and biogeochemistry that control nutrient turnover and solute processing. However, I am convinced that we only have the impression that these systems do behave strange because we do not entirely understand how the transformation of solutes and nutrients like nitrate, sulfate or organic matter are influenced by dynamical interactions between hydrological and biogeochemical processes. But how do these interactions between hydrology and biogeochemistry look like? How can we investigate and observe them directly under field conditions? How to understand them qualitatively and quantitatively? And how can we use them in order to better understand and characterize hydrological systems? As part of my research, I am trying to find answers to the questions above which in turn can help us to improve our mechanistic knowledge on how hydrological systems are functioning and to better assess and predict the impact of humanly mediated climate change on terrestrial nutrient cycling.