The DFG Research Training Group on Urban Water Interfaces (UWI) invites to a guest lecture by

Prof. Dr. Sascha Oswald, Institute of Earth and Environmental Sciences, University of Potsdam

Wednesday, 22nd March 2017, 12:15 pm, TU Berlin, Geoinformation in Environmental Planning Lab, Room EB 414a

Lecture title:

Groundwater interfaces in an urban area - transfer of surface water to drinking water and the potential of novel soil moisture sensing for assessing groundwater recharge

Abstract
Groundwater is a valuable resource especially in an urban area depending on local drinking water supply. Besides the natural replenishment of groundwater via areal recharge, also bank filtration is used to increase the amount available for groundwater abstraction. Then an important issue is how the quality of surface-waters, typically carrying a number of pollutants in water courses dominated by urban areas, affects groundwater quality. We investigated in a case study including monitoring and 3-D numerical modelling how water and solutes are transferred in a bank filtration situation. A special focus is on the spatial and temporal variability and the use of heat as natural tracer. Furthermore we apply a novel, non-invasive method for sensing soil moisture, via detection of neutrons originating from cosmic-rays, that delivers spatial averages on a scale of hectares. We explore its potential to contribute to obtain groundwater recharge estimates on that scale and if this can be applied to urban areas as a built environment.

Detailed information about Prof. Sascha Oswald can be found at:
http://www.geo.uni-potsdam.de/member-details/show/182.html

How to find TU Berlin, Geoinformation in Environmental Planning Lab:
http://www.geoinformation.tu-berlin.de/menue/profile_and_current/contact/parameter/en/