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## SEMINAR

<i>Date</i>	<i>Friday January 15<sup>th</sup>, 2010</i>
<i>Meeting Room</i>	<i>ETH Hönggerberg, HIL G 36.1 at 10 am</i>
<i>Name</i>	<i>Tobias Vogt</i>
<i>Institute</i>	<i>EAWAG, Swiss Federal Institute of Aquatic Science and Technology, Department Water Resources and Drinking Water, Überlandstrasse 133, 8600 Dübendorf, Switzerland</i>

### Time Series Analysis of Natural Tracers for Quantification of Riverbank Filtration

#### Abstract:

Riverbank infiltration is assumed to cause a substantial removal in fecal coliforms, pesticides, and organic pollutants relative to the river water. While the number of river restoration projects increases, their effects on riverbank filtration and groundwater quality are still not well understood. For detailed research on river water infiltration in restored and channelized river sections, advective groundwater travel times to observation and production wells are crucial parameters. I use time series analysis of natural tracers like temperature and electrical conductivity to quantify travel times. I present different methods for different frequencies to calculate travel time distributions, mixing ratios and mean travel times.