

# Geowissenschaftliches Kolloquium

## *Joint numerical models and hydrochemical studies of flow and transport processes at basin-scale by example of the North East German Basin and the Western Anatolia geo-thermal system*

Donnerstag, 24. Oktober 2013 - 16.15 Uhr

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Numerical modeling are applied to investigate the role of deep groundwater flow in transferring energy and mass over geological time periods. Two real case studies are presented. In the NEGB, thermally-induced convective flow can generate upward flow of brines. In the SBG, faults are the major pathways for outflow of thermal water and cause natural seawater intrusion.

The different geophysical characteristics of the presented basins allow studying the interaction of different hydrologic regimes which can develop in many geo-thermal systems of the world.

**Dr. Fabien Magri** studied at the University of Milan, Italy. In his master thesis he developed a 2D model of river/groundwater interactions in the Maggia Valley, Switzerland. During his Ph.D, he extended the study of large-scale groundwater flow to heat and solute transport in the North East German Basin. He then applied for a DFG grant that allowed him to deepen the understanding of geothermal heat migration in faulted basins of Western Turkey. Currently, he works at the GFZ- Potsdam as project leader of a DFG research aimed to understand the salinization processes of the Kinneret Lake, Israel.



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