

Integrated Hydrosystem Modelling

The Research Training Group (RTG) “Integrated Hydrosystem Modelling” at the German Universities of Tübingen, Hohenheim, and Stuttgart targets at developing and applying numerical models of flow and reactive solute transport in coupled hydrosystems comprising of land-surface and subsurface compartments. These models are needed to assess the impacts of environmental change on water quantity and quality at catchment scale. The RTG offers a structured PhD program at the German partner universities with joint international training and supervision. The main work place is in Tübingen; a six-month research stay at a Canadian partner university is integral part of the training.

For the third project phase starting at June 1, 2018, we seek for **8 Doctoral Researchers** (3 years, 75% TV-L E13 according to German public salary system) for the following topics:

Theme A: Flux Balances at the Land Surface

A.9 Bayesian Multi-Purpose Modelling of Processes in the Soil-Crop-Atmosphere Nexus on the Landscape Scale

Theme B: Biogeochemical Reactions in Catchments

B.6 Numerical Simulation of Flow and Biogeochemical Reactive Transport in the Ammer Floodplain

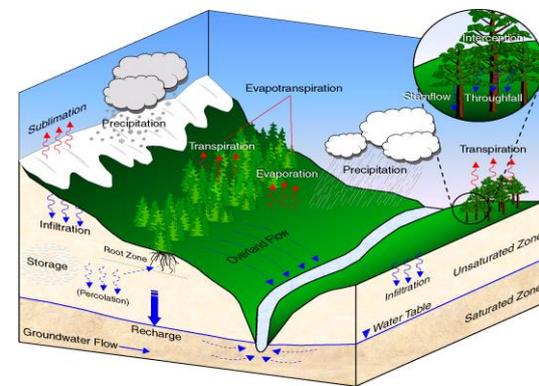
B.7 Development of Reactive-Transport Models of Nitrogen Cycling Informed by Molecular-Biological Data

B.8 Modelling the Fate of Toxicity Equivalents in Streams

B.9 How do Microbes Eat Rocks? Modelling Biogeochemical

Reactions at the Rock/Water Interface in Fractured Limestone Aquifers

B.10 Compound-Specific Isotope Fractionation on the Catchment Scale



Theme C: Uncertainty Assessment of Large-Scale Models

C.7 Overcoming Erroneous Overconfidence in Parameter Estimation for Soil Moisture Models

C.8 Strategies to Model De-Gassing in Porous Media

Theme D: Evolution of Catchments

D.6 Catchment Scale Simulation of Erosion, Sediment Transport, and Deposition

D.7 Alternative Stable States in Coupled Human-Hydro-Ecological Models

More information including an application form can be found at www.geo.uni-tuebingen.de/hydromod

Applicants must hold a Master or equivalent degree in quantitative geosciences, civil and environmental engineering, physics, applied mathematics, or another field of science and engineering with appropriate specialization. Proficiency in numerical modelling and programming, as well as training in subsurface hydrology is required. Experience in using HydroGeoSphere is beneficial, but not mandatory.

Applications are to be submitted until **January 31st, 2018** to hydromod@ifg.uni-tuebingen.de (**one PDF-file only!**, **max. 5MB**). Applications should include a letter of motivation, CV, Master and Bachelor certificates and transcripts including grades, proof of special qualifications, prints of publications if applicable, the filled out application form, and a list of at least three referees.

The participating universities want to increase the number of female researchers, particularly in the field of modelling, and specifically encourage female candidates to apply. Special gender-equality measures will be employed within the RTG.

Disabled persons will be preferred in case of equal qualification.