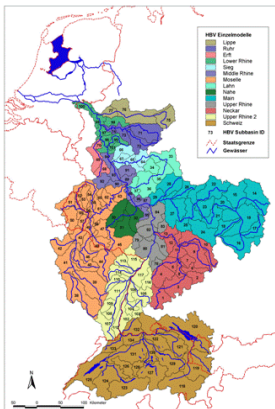


Announcement of the course in the winter semester 2014/15

Large-scale hydrological modeling

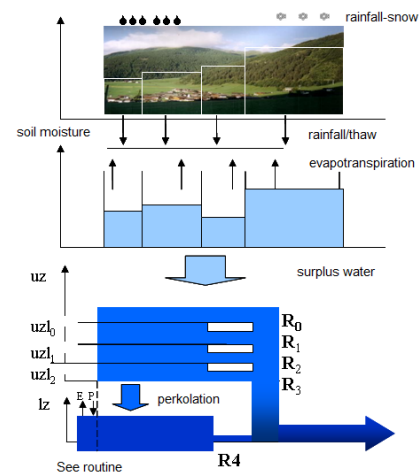
Gustav-Meyer-Allee 25, 13355 Berlin - Gebäude TIB 13b, Raum 578



Modeling of the most important processes for water budget in a catchment area and the wave propagation in a river is carried out depending on the given task in different spatial and temporal scales. For this purpose, individual or coupled models/blocks are used as river basin model (RBM). The focus here is the application of the models on a large scale (macro-scale), i.e. the simulation of the most important phenomena in the major river basins of Germany. As part of the course, numerous examples will be taught through which the model concepts for different water management issues will be used. A particular focus here is on the rainfall-runoff modeling with a semi-distributive conceptual model. For this model a complete exercise is carried out with model simulation and evaluation of results.

Following contents will be covered:

- Water balance processes in the catchment area, hydrodynamic processes in the river
- Required model strategies and specific spatial subdivisions of the water balance, rainfall-runoff models and flood routing models to describe these processes (e.g. water balance model to calculate the water availability, rainfall-runoff models, hydrological and hydrodynamic flood routing models)
- Coupling of models of different scales to obtain suitable boundary conditions
- Determination of design values for levels for extreme meteorological events
- Impacts of climate change on water availability and use of the river basin modeling for water level and discharge forecasting



The course *Large-scale hydrological modeling* (1 SHW = 1.5 ECTS) is being offered at the TU Berlin in the Master's program in Civil Engineering within the competence field of water. It is part of the module Modeling Hydro- and Environmental Systems II. Moreover, it is also suitable for students of Geo- and Environmental Sciences. The course takes place in cooperation with the Federal Institute of Hydrology (www.bafg.de).

Schedule: **Tuesday 31.03.2015 10:00 Uhr bis 12:30 Uhr und 13:30 bis 17:00 Uhr**
Wednesday 01.04.2015 09:00 Uhr bis 12:30 Uhr und 13:30 bis 17:00 Uhr

Contact: Qing Zhang, M.Sc. Tel. 030-314-72306, qing.zhang@wahyd.tu-berlin.de