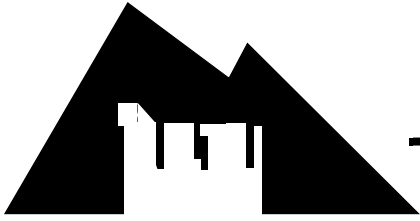


The RAL Seminar Series



NCAR

Hydrometeorological Research in the TERENO-prealpine Observatory: Observation and Coupled Modeling of the Regional Water and Energy Cycle in Complex Terrain

by

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Foothills Lab Building 2, Room 1001
11:00 a.m.*

Multi-compartment and multi-scale long-term observation and research is a crucial prerequisite to approach the scientific challenge of regional climate and climate change analysis. Within the TERENO initiative (Terrestrial Environmental Observatories, <http://www.tereno.net>), a terrestrial climate and climate change observatory is established in the alpine and prealpine environment in southern Germany. Focus is on the observation of hydrometeorological and biogeochemical variables. The observatory consists of a climate stations, Eddy-Covariance flux towers, and lysimeters at three different elevations, and various additional devices for the detection of trace gas emissions of plants and soils.

After an overview on the current status of the TERENO prealpine observatory, the presentation will focus on first results of two recent studies: 1) the coupled modeling of the atmospheric and terrestrial water cycle using the fully-coupled WRF-Hydro modeling system and 2) the quantification of line integrated precipitation by microwave attenuation of commercial telecommunication links. Both efforts leverage and build upon current collaborations between the Karlsruhe Institute of Technology and NCAR.