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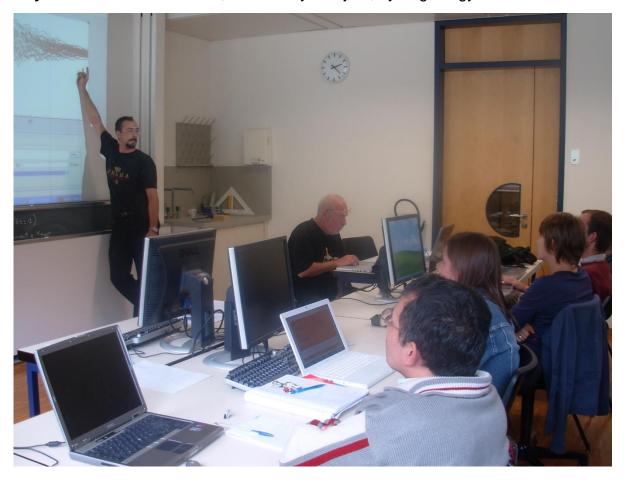
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Advanced study course

Model Calibration and Uncertainty Analysis Using PEST

Client: Centre for Hydrogeology and Geothermics (CHYN; Univ. of Neuchâtel)

Keywords: model calibration, uncertainty analysis, hydrogeology

Summary: PEST (Parameter ESTimation) is a general-purpose, model-independent, parameter estimation and model predictive uncertainty analysis package. It is the most advanced software available for calibration and predictive uncertainty analysis of groundwater, subsurface reservoir, surface water, land use and, actually, any kind of parameterized model. The course provides attendees with the foundations of parameter estimation theory, an understanding of the sources of uncertainty in predictions made by numerical models, and experience in using PEST to calibrate groundwater flow and transport models, and surface water models, and to explore the uncertainties of predictions made by these models. This course was tought in Neuchâtel, in cooperation with John Doherty, the author of PEST.