



UFZ-Seminar



Research Unit

Water Resources and Environment



6 March 2023, 3 p.m.
Seminar Room 1, Brückstr. 3a, Magdeburg

Matthias Mauder

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will give a talk on:

How well can we quantify evapotranspiration - in general and in particular over open water surfaces?

Evapotranspiration represents the link between the water cycle and the surface energy balance. Accurate knowledge of this key variable is therefore essential to predict the evolution of weather, climate, and ecosystems. One of the most direct methods for measuring evapotranspiration is the eddy-covariance method. However, independent measurements of all relevant component of the surface energy balance indicate a general underestimation of the atmospheric turbulent fluxes. One of the main explanations for the observed general underestimation of turbulent fluxes, is transport by secondary circulations that cannot be captured by single-tower eddy-covariance tower flux measurements. A recently developed semi-empirical model to correct for these additional large-scale dispersive fluxes is now available (De Roo et al. 2018, PLOS One, DOI 10.1371/journal.pone.0209022), and we discuss here the options to apply this new method to real-world long-term flux measurement sites, including the effect for measurements over open water surfaces.