

Stefan Kollet is a researcher in the field of hydrology and earth system modeling, primarily affiliated with the Institute of Bio- and Geosciences (IBG-3) at Forschungszentrum Jülich and the University of Bonn in Germany. His research focuses on the development and application of integrated terrestrial modeling systems, specifically the Terrestrial Systems Modeling Platform (TSMP), to simulate complex interactions between the atmosphere, land surface, and subsurface water cycles. By utilizing high-performance computing, he investigates the feedback mechanisms between groundwater, soil moisture, and atmospheric processes to improve the accuracy of regional and continental-scale water resource predictions and climate projections. His work frequently addresses the challenges of bridging the gap between physical models and observations through data assimilation and deep learning.