



A visual interface for the SUPERFLEX hydrological modelling framework

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The SUPERFLEX framework is a modular modelling system for conceptual hydrological modelling at the catchment scale. This work reports the development of a visual interface for the SUPERFLEX model. This aims to enhance the communication between the hydrologic experimentalists and modelers, in particular further bridging the gap between the field soft data and the modeler's knowledge. In collaboration with field experimentalists, modelers can visually and intuitively hypothesize different model architectures and combinations of reservoirs, select from a library of constructive functions to describe the relationship between reservoirs' storage and discharge, specify the shape of lag functions and, finally, set parameter values. The software helps hydrologists take advantage of any existing insights into the study site, translate it into a conceptual hydrological model and implement it within a computationally robust algorithm. This tool also helps challenge and contrast competing paradigms such as the "uniqueness of place" vs "one model fits all". Using this interface, hydrologists can test different hypotheses and model representations, and stepwise build deeper understanding of the watershed of interest.