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Using pedology to link macropore flow across scales: pore to pedon to landscape

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This presentation discusses how pedological knowledge and concepts can support the development of simple but realistic conceptual frameworks for predictive modelling of the impacts of soil structure on water flow and solute transport in the unsaturated zone, linking across scales (soil pore to pedon to landscape). The feasibility of such hydropedological approaches is first discussed using examples taken from the literature. As an illustration, we show one application from our own recent research, where we have used data-mining techniques to support the development and evaluation of a simple decision tree to classify the susceptibility of soils to macropore flow from easily available site and soil information.