

Publication

TopoToolbox : a set of Matlab functions for topographic analysis

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TopoToolbox contains a set of Matlab functions that provide utilities for relief analysis in a non-Geographical Information System (GIS) environment. The tools have been developed to support the work flow in combined spatial and non-spatial numerical analysis. They offer flexible and user-friendly software for hydrological and geomorphological research that involves digital elevation model analysis and focuses on material fluxes and spatial variability of water, sediment, chemicals and nutrients. The objective of this paper is to give an introduction to the linear algebraic concept behind the software that employs sparse matrix computations for digital elevation model analysis. Moreover, we outline the functionality of the toolbox. The source codes are freely available in Matlab language on the authors' webpage (physio-geo.unibas.ch/topotoolbox).

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