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Massflow—A software for dynamic modeling and risk evaluation of earth-surfaced flow

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Massflow is based on the depth-integrated continuum and solved by second-order MacCormack-TVD finite difference method. Shared code and friendly GUI are provided for researchers and engineers. It adopted CPU and GPU accelerated algorithm to improve the efficiency. Now around 1000 people adopted Massflow to do their own research. Based the framework, we have done several insightful simulations of real landslides and debris flows. Meanwhile, we are developing a solution for catchment-based rainfall- flood-debris flow prediction. We will introduce the basic of the software, the mechanism and related model to modeling the real hazards, and the framework and finished work of forecasting of catchment flood or debris flow.