



Cities on Volcanoes 9
November 20-25, 2016
Puerto Varas, Chile

'Understanding volcanoes and society: the key for risk mitigation'



LaharFlow: a web-based lahar hazard model

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Keywords: Lahar, Hazard model, web-tool

Mathematical models are important tools for the mitigation of hazards caused by lahars. In this poster we introduce LaharFlow, a web-based dynamic hazard model of lahars. LaharFlow is a web interface to a shallow-layer model of lahars on terrain obtained from the Shuttle Radar Topography Mission (SRTM). The model simulates the motion of a two-phase mixture of fluid and entrained solid material. The flow can be initiated as either a finite volume instantaneous release or as a flow rate specified as a time series. The main page of LaharFlow is designed to guide the user through the set up of the model, and to display model results. The web page initiates computations on a remote server and therefore computations can be performed on mobile devices. We present applications of LaharFlow and discuss the interpretation of the results, particularly with respect to uncertainty in model parameters, initial conditions and the topographic data.