Rock Avalanche and Debris Flow: A Case Study

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Landslides are one of the costliest natural hazards. The direct annual cost of landslide damage has been estimated at $124 million in Canada. As two type of landslides, rock avalanche and debris flow are important subjects of study in hazard mapping and risk mitigation, especially with the increase of extreme rainfall events and climate change. In this talk, I will share the approach generally used to back calculate the flow and erosion characteristics of landslides. A rock avalanche and a debris flow occurred in Wenjiagou, China, in 2008 and 2010, respectively, are taken as an example. In addition, four different hazard scenarios are numerically studied to assess the rationality of mitigation measures in the Wenjiagou.

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