
HDS021-P03

Room: Convention Hall

Time: May 24 17:15-18:45

A hydro-slope stability modeling on shallow landsliding of soil-mantled hillslopes

Yuki Matsushi^{1*}

¹MALT, Univ. Tokyo

This study reports a process-based modeling of initiation of shallow landslides triggered by heavy rainfall. A hydrological model was developed based on high time-resolution monitoring of pressure heads in soil layers by tensiometers for which the model simulates subsurface water behavior on soil-mantled hillslopes. The hydrological model was coupled with a mechanical slope stability analysis for computing changes in factor of safety owing to rainwater supply to the hillslope. The coupling model enables us to simulate slope instability affected by a rainfall event, and to discuss timing and location of the soil sliding.

Keywords: Shallow landslide, slope hydrology, slope stability, soil, disaster mitigation