



the correlation of landslide and strong ground motion in Ms8.0 Wenchuan earthquake

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slope failure triggered by strong earthquake is main factor to bring great losses in Ms. 8.0 Wenchuan earthquake occurred on May 12, 2008, in Sichuan province, south-western China. According to the site investigation, about twenty thousands of slopes were found to lose their stabilities, main including landslides, collapsed rock, debris and ground crack, etc. The paper presents a statistic model describing the correlation between landslide and strong ground motion. In this model, slope stability index (SSI) is defined based on the spatial distribution characteristics of peak ground acceleration (PGA), peak ground velocity (PGV), peak ground displacement (PGD) and earthquake intensity (EI). SSI is related to not only slope parameters such as height, slope natural angle, rock hardness and attitude of stratum, but also PGA or PGV or PGD. This index had successfully been used to quickly assess the slope failure under strong ground motion in this Wenchuan earthquake.