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Land movement analysis from terrestrial laser scanner (LiDAR) (Conference Paper)

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Abstract

In March 2018 the Reina del Cisne (Cuenca) landslide was triggered by a hillslope cut for the construction of a small access road to a house. The landslide is conditioned by the lithology of the slope (mainly sands) and its high slope (up to 40°). From March to June 2018, the period analyzed in this work, the landslide has caused partial to total structural damages in some houses, scarps in a crop field and the total blockage of the road that triggered it. Field visits since March'18 and the comparison of the point clouds obtained with terrestrial laser scanner in May and June 2018, carried out with CloudCompare, have revealed the high activity of this slip. An affected house has been analyzed in 3D and it has experienced downhill sinking and tilting with local displacements of up to 91 cm in 20 days. © 2020 SPIE.

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