



## **Multi-method monitoring of recent landslide activity in the Swabian Alb (Germany)**

**R. Bell** (1), W. Schauerte (2), T. Glade (1) and H. Kuhlmann (2)

(1) Dep. of Geography, University of Bonn, Germany; (2) Dep. of Geodesy, University of Bonn, Germany (rainer@giub.uni-bonn.de/+49-228-739099)

Numerous landslides of varying magnitude have occurred in the Swabian Alb in the past. Limestones superposed on marls and clays mainly cause the susceptibility to landsliding in this Cuesta landscape.

Within this study, the Oeschingen landslide complex is investigated in detail. It consists of various large landslide blocks on slopes and covers approximately 1.3 km<sup>2</sup>. On top of the large landslide blocks numerous small rotational and translational landslides occurred. One destroyed house and cracks in some other houses indicate recent landslide activity. Six inclinometers of different depth were installed across the whole landslide complex. In addition a tachymetric surveying network was set up to improve the resolution of point information on landslide activities and to validate especially the measurements of the inclinometers. Unfortunately, not all inclinometers are based in bedrock due to available drilling equipment. Therefore, it might be possible that the inclinometers are moving downslope within the landslide mass, even though no activity is measured due to parallel movement.

The results of inclinometer measurements show only very slow and shallow movements during the last year (up to 4 mm/year). However, one inclinometer indicates movement down to 10 m depth. These results led to the installation of a high-precision tachymetric network since DGPS would not be accurate enough. The analysis of the second tachymetric survey is still continuing but first results will be presented at the conference. This study contributes to the project Integrative landslide risk analysis and risk evaluation in the Swabian Alb, Germany (InterRISK).