



## **Developing a monitoring expert system for hazardous rock walls in high mountain areas – concept and preliminary results, Kitzsteinhorn (3203 m), Hohe Tauern, Austria**

Ingo Hartmeyer (1,2), Markus Keuschnig (1,2), Jan-Christoph Otto (2), and Lothar Schrott (2)

(1) alpS - Centre for Climate Change Adaptation Technologies, Innsbruck, Austria (Hartmeyer@alps-gmbh.com, Keuschnig@alps-gmbh.com), (2) Research Group Geomorphology and Environmental Systems, Department of Geography and Geology, University of Salzburg

The project MOREXPERT investigates short and medium term responses of slope stability to climatic changes in high alpine rock walls. The study contributes to the question how man and infrastructure at risk are potentially affected by these responses. Based on a combination of geophysical, geothermal and geotechnical methods, surface and subsurface conditions are monitored within the study area at Kitzsteinhorn (3.203m), Hohe Tauern. Factors controlling slope stability in steep bedrock, most notably freeze/thaw and permafrost dynamics, are identified and analyzed with respect to changing climatic conditions. The fundamental goal of the study is to achieve a better understanding of processes operating in high alpine rock walls. Furthermore a general decision-support-system for slope stability assessment in steep bedrock is developed.