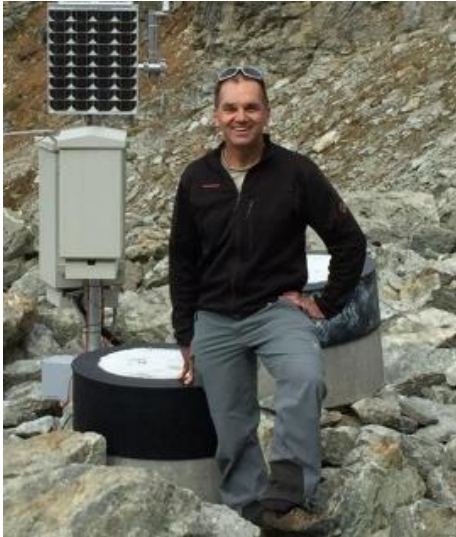


Overview of mountain permafrost research: past developments and future challenges

Prof. Martin Hoelzle - University of Fribourg, Switzerland



Mountain permafrost is very sensitive to climatic changes, potential consequences of its evolution on surface processes, landscape dynamics and natural hazards in high-alpine environments makes knowledge about the temporal and spatial processes fundamentally important also for human beings living in highly populated mountain environments. However, the discussed research field is still a relatively young research topic starting its main activities as recently as in the 1970/80s. Though, during the last 30 to 40 years the combination of new technologies (such as geophysics or remote sensing), mid-to long-term monitoring with different modelling approaches improved our general process understanding and allows today to answer current highly relevant research questions related to surface processes and natural hazard. The paper will discuss some important past developments and tries to outline some future challenges.