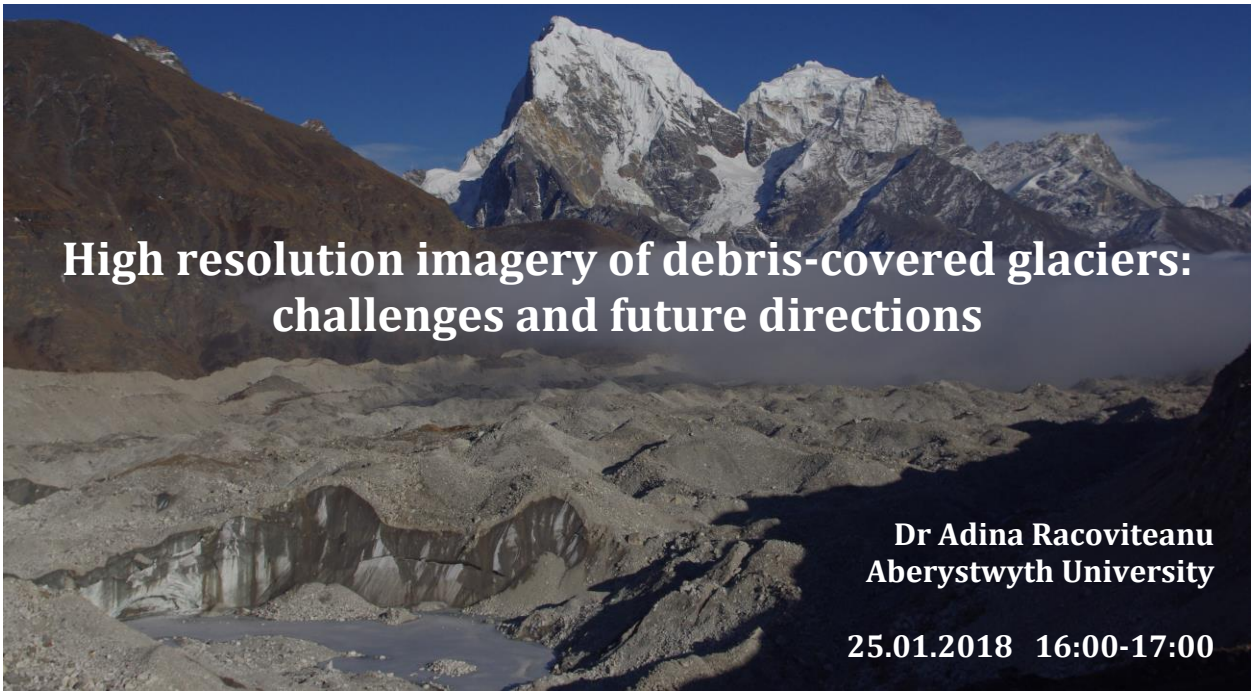
ACINN Graduate Seminar, Innsbruck University

Location: Seminar Room on the 8th Floor of Bruno-Sander-Haus (60819SR)

Thursday, 25 Jan 2018, 16:00



Debris-covered glaciers have become 'hot topics' in glaciology in the last few years, with respect to their contribution to water resources (runoff, streamflow) and hazards associated with the formation of potentially dangerous, fast-growing moraine-dammed lakes. Some of these features are highly dynamic, fast-evolving and growing, some are short-lived. High spatial and temporal resolution satellite data are increasingly becoming available, and can be used to detect the surface dynamics of the debris cover, but this analysis remains challenging and there is still no established standardized methodology.

This talk will provide an overview of current mapping techniques and challenges. I will then present innovative image processing techniques (thermal, texture and sub-pixel techniques) that are proposed to identify supraglacial debris features in a quasi-automated manner, with a focus on the Himalayas. Combining these various tools provides an integrative approach to assess the vulnerability of high altitude areas to glacier changes and glacier-related hazards.

Dr. Adina Racoviteanu's research focuses on decadal glacier surface changes at high altitudes using remote sensing and GIS. Currently a Ser Cymru research fellow at Aberystwyth University (UK), she focuses on identifying rapidly changing debris covered glaciers in the Andes and the Himalayas using multi spatial and temporal satellite imagery.

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