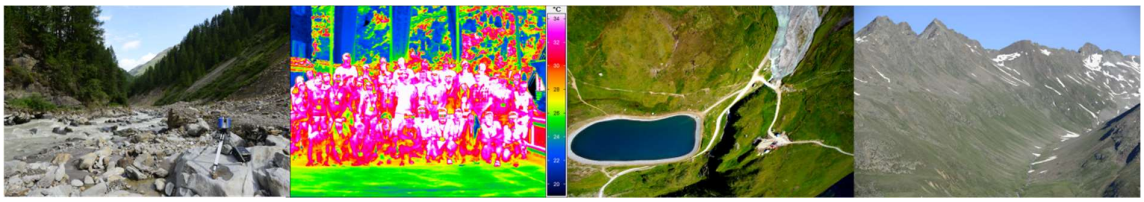
Innsbruck Summer School of Alpine Research 2019

Close Range Sensing Techniques in Alpine Terrain

16.6.2019-22.6.2019



University of Innsbruck, Faculty of Geo- and Atmospheric Sciences
International Society for Photogrammetry and Remote Sensing (ISPRS)
Austrian Academy of Sciences, Institute for Interdisciplinary Mountain Research

Objectives: The main goal of the Joint Summer School 2019 is to provide participants with innovative practical and methodological skills to characterize complex terrain and object features using close- and near range remote sensing techniques. The Summer School will be the third edition after two successful implementations in 2015 and 2017.

Teaching Methods: Theoretical lectures will be complemented by fieldwork assignments and hands-on data processing sessions using different novel software. The assignments will be divided into two different tracks. One track will focus on mountain research, the other on sensor and data processing techniques.

A variety of sensor systems will be available for data acquisition in the high mountain surroundings of the summer school venue, including terrestrial laser scanners, unmanned aerial vehicles and spectral cameras.

A poster session on the participants' current research interests and work will stimulate open exchange and discussion between students and lecturers in a relaxed atmosphere.

Thematic focus will be on mountain research, and will include vegetation characterization, (deformation) monitoring for glaciology, geomorphology and natural hazard research.

Technical focus will be on sensor and data aspects, such as sensor modelling, calibration, data acquisition, 2D and 3D data fusion, geometric methods for information extraction from point clouds and (multispectral) images and data quality assessment.

Theoretical focus will address critical steps within a processing chain, such as impact of registration, choice of stand points during data acquisition and derivation of deformation vectors, issues related to multispectral image analysis etc.

Practical exercises using predominantly open source software, deepen the conveyed knowledge and help all participants establish a workflow for their research.

Venue: The Summer School will take place in and around Obergurgl, at almost 2000 m the highest village in Austria. The main venue is the Obergurgl University Center. Here lectures will take place and accommodation is provided to all participants. Directions will be available via the website. Please note that fieldwork will take place in a mountainous environment, which requires surefootedness.

Intended Audience: This summer school is designed for any well-motivated student; advanced graduate students, PhDs, post-docs and young researchers from any field, provided they have interest in these type of techniques.

How to join? Please register by e-mail (alpine-research-2019@uibk.ac.at) until 30 November, 2018. *Each applicant is requested to send a one page CV, plus either a short motivation letter or an abstract of the participants' current work*. This information will be used by the organizational committee to decide which candidates will be accepted.

When & Where? 17.6.2019-22.6.2019, Obergurgl University Center (Obergurgl, Austria)

Website: http://www.uibk.ac.at/geographie/summerschool/

Participation fee: 450 € (includes accommodation, breakfast, coffee break and dinner)

Important dates:	Registration deadline	30 November 2018
	Communication of final decision of acceptance	15 December 2018
	Deadline for full payment	15 January 2019

Lecturers: Martin Rutzinger (Austrian Academy of Sciences, Austria), Magnus Bremer (Austrian Academy of Sciences, Austria) Bernhard Höfle (University of Heidelberg, Germany), Roderik Lindenbergh (TU Delft, The Netherlands), Sander Oude Elberink (University of Twente - ITC, The Netherlands), Francesco Pirotti (CIRGEO - University of Padova, Italy), Rudolf Sailer (University of Innsbruck, Austria), Marco Scaioni (Politecnico di Milano, Italy), Johann Stötter (University of Innsbruck, Austria), Daniel Wujanz (Technet GmbH, Germany), Thomas Zieher (Austrian Academy of Sciences, Austria)

Keynotes to be confirmed: please visit the website for the updated list of keynotes and topics.