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Research in the Grisons

## CERC in Davos brings together know-how

A new competence center for alpine natural hazards is being developed

Last year, a new research center was founded in Davos that will bundle scientific know-how on climate change, extreme events and natural hazards in Alpine regions. The “Climate Change, Extremes, and Natural Hazards in Alpine Regions Research Center”, CERC for short, is part of the WSL Institute for Snow and Avalanche Research SLF. It is funded by the Canton of Graubünden, ETH Zurich and WSL.



*This rockfall has left clear traces at the Seehorn in Davos 2020. Image: Peter Bebi*

Environmental scientist Peter Bebi, director of CERC, is responsible for the establishment process. He explains why the research center was founded and what purpose it serves: “With CERC, we are expanding the SLF’s research spectrum without starting from scratch. Our ambition is that CERC will quickly be perceived as a center of excellence for alpine natural haz-

ards and the alpine environment. We want to be the first point of contact for problems related to these topics. Above all, we want to improve the interface between research and practice by better meeting the needs of the canton of Graubünden, other mountain cantons as well as the communities. Our expertise is intended to make a useful contribution to the social and economic development of Graubünden.”

Bebi describes the six main research areas: “The research unit ‘Alpine Environment and Natural Hazards’, which was newly created in the summer and is headed by Nadine Salzmann, focuses on the four topics of permafrost, remote sensing, alpine mass movements and mountain ecosystems. Regarding mountain ecosystems, we are investigating, for instance, how the protective function of forests changes under the influence of various disturbances such as bark beetles or forest fires. Under the topic ‘Alpine mass movements’ we understand debris flows, avalanches and rockfall. What is new is that we will create a new position for a professor in Davos for this topic together with ETH Zurich. Remote sensing is a very interdisciplinary cross-sectional topic. In remote sensing, we use

drones, infrared measurements and sensors to collect data for the early detection and monitoring of natural hazard processes. In connection with permafrost, we are particularly interested in the subsequent processes triggered by the thawing of permafrost. Two other research groups are working on the focus areas ‘Weather and climate extremes in the Alpine region’ and ‘Risk and resilience’ (risk communication, analysis and management), completing the list of topics.”

CERC has been recruiting new employees since the beginning of 2021. Bebi is delighted that the research center is creating attractive, long-term positions for highly qualified scientists in Davos: “We have already filled seven new positions, which in turn will generate additional jobs.” To accommodate the new employees, an extension building with laboratories, offices and storage space is currently under construction at the SLF and should be ready for move-in in the fall of 2022.

Peter Bebi and Daniela Heinen

CERC is a research center sponsored by the Canton of Graubünden and WSL and supported by ETH Zurich. It is part of the WSL Institute for Snow and Avalanche Research SLF in Davos. Details on the main research areas: <https://cerc.slf.ch>

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*Peter Bebi*