



## WSL Institute for Snow and Avalanche Research SLF

The Swiss Federal Institute for Forest, Snow and Landscape Research WSL is part of the ETH Domain. Approximately 600 people work on the sustainable use and protection of the environment and on the handling of natural hazards.

The Research Unit "Avalanches and Prevention" investigates the formation and movement of snow avalanches. Their Research Group "Avalanche Formation and Dynamics" is offering from **summer or fall 2022**, a position as a:

# PhD student in Engineering/ Physics (f/m/d)

Your research is part of the SNSF funded project "The pulsing nature of powder snow avalanches", and aims at providing a better understanding of the origin of high-energy pulses present inside the turbulent suspension of powder snow avalanches, and assesses their influence on the overall flow dynamics. This research has the potential to improve avalanche risk management in high mountain regions, as well as to be similarly relevant to other particle-laden gravity currents, such as pyroclastic flows, or turbidity currents.

To this end, you will process and interpret existing data collected at the full-scale Vallée de la Sionne avalanche test site, generate new methods to collect missing data, and interpret the experimental results also in combination with the experimental framework developed in New Zealand for pyroclastic flow research. The project is in collaboration with international scientists and is highly interdisciplinary, and as such you will be working in a international team. Your work place will be the WSL Institute for Snow and Avalanche Research SLF in Davos. The PhD thesis will be supervised by Dr. Betty Sovilla (SLF) and Prof. Filippo Coletti (ETH Zurich). The PhD degree will be awarded by the ETH Zurich.

You hold a Master degree in mechanical engineering, environmental engineering, experimental physics or a related field. You have a background in fluid dynamics and knowledge on turbulent suspensions. Experience in image processing is beneficial. Previous experience in scripting languages (e.g. Python, IDL, Matlab, R) is indispensable. You have enthusiasm for field measurements and experience in high-alpine environments is desirable. You must be fluent in English. German knowledge is beneficial.

Please send your complete application to Clemens Güdel, Human Resources SLF, by uploading the requested documents through our webpage. Applications via email will not be considered. Dr. Betty Sovilla, phone +41 (0)81 417 02 63 , e-mail [betty.sovilla@slf.ch](mailto:betty.sovilla@slf.ch), will be happy to answer any questions or offer further information. The WSL strives to increase the proportion of women in its employment, which is why qualified women are particularly called upon to apply for this position.

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