

## Curriculum Vitae

# Kay Helfricht, PhD

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Office address: Institute for Interdisciplinary Mountain Research  
Austrian Academy of Sciences  
Technikerstrasse 21A  
6020 Innsbruck, Austria

**Email:** [kay.helfricht@oeaw.ac.at](mailto:kay.helfricht@oeaw.ac.at)

**Phone:** +43 512 507 49454

**Website:** [mountainresearch.at](http://mountainresearch.at)

<http://orcid.org/0000-0002-8843-7594>

[https://www.researchgate.net/profile/Kay\\_Helfricht](https://www.researchgate.net/profile/Kay_Helfricht)



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### Research interests

Mountain meteorology and hydrology  
snow cover distribution in mountain catchments  
glacier mass balance  
remote sensing of the cryosphere  
applied geophysics

## Academic career

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| Since October 2014            | PostDoc at the Institute for Interdisciplinary Mountain Research (IGF) of the Austrian Academy of Sciences (ÖAW), Innsbruck, Austria; principal investigator of glaciological and meteorological projects  |
| May 2014 – September 2014     | Junior researcher at the Institute for Interdisciplinary Mountain Research (IGF) of the Austrian Academy of Sciences (ÖAW), Innsbruck, Austria; glaciological and hydrological studies   |
| October 2010 – September 2014 | PhD student at the Institute of Meteorology and Geophysics, University of Innsbruck, Austria; Topic: Spatial and temporal variation of water storage in snow and ice at alpine catchments from airborne laser scan measurements. PhD thesis: “Analysis of the spatial and temporal variation of seasonal snow accumulation in Alpine catchments using airborne laser scanning - Basic research for the adaptation of spatially distributed hydrological models to mountain regions” [ <a href="#">download</a> ] |
| February 2012 – March 2012    | University course AG 325 Arctic Glaciology, University Centre in Svalbard UNIS, Longyearbyen   |
| July 2010 – April 2014        | Junior researcher at the alpS - Centre for Climate Change Adaptation, Innsbruck, Austria; Hydrology of glacierized catchments  |
| December 2009 – June 2010     | Research assistant in the Ice and Climate research group of the Institute of Meteorology and Geophysics, University of Innsbruck, Austria: data analyses and direct measurements of glacier mass balance   |
| October 2004 – December 2009  | Studies of Meteorology and Geophysics at the Institute of Meteorology and Geophysics, University of Innsbruck, Austria; Area of specialisation: glaciology and mountain hydrology. Diploma thesis: „Veränderungen des Massenhaushaltes am Hallstätter Gletscher seit 1856“ [ <a href="#">download</a> ]  |

## Projects

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- May 2019 - ongoing *Hidden.Ice - Changing debris cover on Eastern Alpine glaciers: Quantification and hydrological impacts.* Principal investigator, ÖAW Earth System Science Call 2018
- April 2017 - ongoing *GlacierRocks - Glacier-Headwall Interaction and its Influence on Rockfall Activity.* Project partner, PI Georesearch Forschungsgesellschaft, ÖAW Earth System Science Call 2016
- June 2010 – ongoing *Glacier mass balance monitoring on Taschachferner, funded by the Tiroler Wasserkraft AG; Glacier mass balance monitoring on Hallstätter Glacier, funded by the federal state government of Upper Austria*
- October 2015 – June 2019 *pluSnow - Using snow depth data to minimize the error in winter precipitation measurements.* Principal investigator, Dr. Gottfried and Dr. Vera Weiss Science Foundation, Austrian Science Fund (FWF) P 28099-N34
- March 2015 – December 2018 *FUTURELAKES - Formation and future evolution of glacier lakes in Austria.* Project partner, PI University of Salzburg, ÖAW Earth System Sciences ESS
- Mai 2014 – December 2014 *Ice and Water in Tyrol. Climate change impacts.* Project partner, PI University of Innsbruck, funded by the Autonomous Province of Bolzano - South Tyrol;
- July 2013 – March 2014 *StartClim2013.C - Abflussszenarien im Einzugsgebiet der Ötztaler Ache unter Berücksichtigung von zukünftigen Veränderungen der Kryosphäre.* Project lead, alpS – Centre for Climate Change Adaptation
- July 2010 – April 2014 *H03 MUSICALS A - Multiscale Snow – Ice Melt Discharge Simulations for Alpine Reservoirs.* Junior Researcher, alpS – Centre for Climate Change Adaptation, FFG Comet
- August 2006 – June 2010 *Glacier mass balance monitoring on Hallstätter Glacier, Institute of Meteorology and Geophysics, University of Innsbruck*

## Awards and Academia

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| Best Publication Award 2019                 | The open-access, peer-reviewed publication "Calibrated Ice Thickness Estimate for All Glaciers in Austria (Frontiers in Earth Science, April 2019, Vol. 7, Article 68) was awarded by the Anniversary Fund of the City of Vienna for the Austrian Academy of Sciences                                  |
| Dr. Gottfried and Dr. Vera Weiss Prize 2015 | First winner of the prize for meteorology of the Dr. Gottfried and Dr. Vera Weiss science foundation 2015 Awarding of the submitted project "pluSnow - Using snow depth data to minimize the error in winter precipitation measurements" on proposal of the committee of the Austrian Science Fund FWF |
| Werner-Kresser-Prize 2014                   | Award of the Austrian Society of Hydrology (ÖGH) for excellent research in hydrology with focus on water management and water supply.  |
| Reviewer for                                | Nature Communications<br>Advances in Geoscience<br>Advances in Water Research<br>Frontiers<br>Geografiska Annaler: Series A, Physical Geography<br>Hydrology and Earth System Sciences<br>Hydrological Processes<br>Water Resources Research<br>The Cryosphere<br>Sensors, Water                       |
| Member of                                   | International Glaciological Society (IGS)<br>International Association of Cryospheric Sciences (IACS)<br>European Geoscience Union (EGU)   |