

CV PD Dr. Mag. Mag. Andrea Fischer

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Austrian Academy of Sciences,
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**Main areas of research**

Mountain glaciology, geophysics, permafrost, paleoglaciology, mountain research.

Climate as one of the major forcings of the natural system in high alpine environments, its impact on the living conditions and cultural practices from early Holocene to modern climate change adaptation measures are a central part of the research portfolio. Glaciers as indicators and archives of climate change, but also as part of the hydrological system and as potential sources of hazards play a key role. Having a multidisciplinary academic education, the combination of approaches and methods opens new ground for investigations of a broader perspective on past and future transitions in high mountain areas, with special emphasis on process studies.

Academic career

Venia docendi, University of Innsbruck, 2011.

Dr. rer.nat., Institute for Meteorology (Remote sensing), University of Innsbruck, 2003.

Mag. rer.nat (Physics), University of Graz, 1999.

Mag. rer.nat (Environmental Sciences), University of Graz, 1999.

Former affiliations

University of Innsbruck

Austrian Academy of Sciences, Commission for Geophysical Research

AlpS Research GmbH

Research stays

NSIDC, Boulder, CO; 2012

INACH, Punta Arenas, Chile; 2011

Awards

2014 Corresponding member of the Austrian Academy of Sciences

2013 Austria'13 Österreicher des Jahres im Bereich Forschung

Scientific community

National correspondent of the World Glacier Monitoring Service

Member of the board of the Austrian Geophysical Society

Member of the board of the Environmental History Cluster Austria (EHCA)

Austrian Academy of Sciences:

Member of the Climate and Air Quality Commission of the Austrian Academy of Sciences

Member of the GIS-Science Commission of the Austrian Academy of Sciences

Speaker of Bundesländerinitiative Tirol and Vorarlberg of the Austrian Academy of Sciences

Reviewer for e.g.

Annals of Glaciology, Journal of GIS, International Journal of Climatology, Geophysical Research Letters, Journal of Sustainable Tourism, GW-Unterricht, APCC, Geografica Helvetica, Geografiska Annaler, Journal of Mountain Science, Quaternary International, Polar Research, New Zealand Journal of Hydrology, The Cryosphere, Earth System Sciences, various science funds.

Member of

International Glaciological Society IGS
European Geophysical Society
Austrian Geophysical Society
Österreichische Geographische Gesellschaft
International Association for Ladakh Studies

Publications

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For a complete list of publications please consult: <http://www.andreafischer.at/publications/>

Most important publications of the last 10 years:

- Fischer, A., T. Fickert, G. Schwaizer, G. Patzelt & G. Groß, 2019, Vegetation dynamics in Alpine glacier forelands tackled from space, **Nature Scientific Reports** 9, <https://www.nature.com/articles/s41598-019-50273-2>
- Feng, Z., P. Bohleber, S. Ebser, L. Ringena, M. Schmidt, A. Kersting, P. Hopkins, H. Hoffmann, A. Fischer, W. Aeschbach, M. K. Oberthaler, 2019, Dating glacier ice of the last millennium by quantum technology, **Proceedings of the National Academy of Sciences**, 201816468; DOI: 10.1073/pnas.1816468116.
- Zemp, M., Sajood, A.A., Pitte, P., van Ommen, T., Fischer, A., Soruco, A., Thomson, L., Schaefer, M., Li, Z., Ceballos Lievano, J.L., Cáceres Correa, B.E., Vincent, C., Tielidze, L., Braun, L.N., Ahlstrøm, A.P., Hannesdóttir, H., Dobhal, D.P., Karimi, N., Baroni, C., Fujita, K., Severskiy, I., Prinz, R., Usubaliev, R., Delgado-Granados, H., Demberel, O., Joshi, S.P., Anderson, B., Hagen, J.O., Dávila Roller, L.R., Gadek, B., Popovnin, V.V., Cobos, G., Holmlund, P., Huss, M., Kayumov, A., Lea, J.M., Pelto, M., and Yakovlev, A. (2019): Glacier monitoring to track warming. **Nature**, 576, p. 39. [go.nature.com/34ak25y](https://www.nature.com/34ak25y)
- Magdalena Vuković (Hg.): Von wunderbarer Klarheit: Friedrich Simonys Gletscherfotografien, 1875–1891, mit Texten von Monika Faber, Andrea Fischer, Friedrich Simony und Magdalena Vuković, Wien: Album Verlag, 2019. <https://www.bonartes.org/index.php/publikationen-detail/von-wunderbarer-klarheit.html>
- Vincent, C., A. Fischer, C. Mayer, A. Bauder, S. P. Galos, M. Funk, E. Thibert, D. Six, L. Braun, and M. Huss, 2017. Common climatic signal from glaciers in the European Alps over the last 50 years, **Geophys. Res. Lett.**, 44, 1376–1383, doi:10.1002/2016GL072094.
- Bohleber, P., Sold, L., Hardy, D. R., Schwikowski, M., Klenk, P., Fischer, A., Sirguey, P., Cullen, N. J., Potocki, M., Hoffmann, H., and Mayewski, P., 2017. Ground-penetrating radar reveals ice thickness and undisturbed englacial layers at Kilimanjaro's Northern Ice Field, **The Cryosphere**, 11, 469-482, doi:10.5194/tc-11-469-2017.

- Fischer, A., Helfricht, K., and Stocker-Waldhuber, M., 2016. Local reduction of decadal glacier thickness loss through mass balance management in ski resorts, **The Cryosphere**, 10, 2941-2952, doi:10.5194/tc-10-2941-2016. <http://www.the-cryosphere.net/10/2941/2016/>
- Fischer, A., Seiser, B., Stocker-Waldhuber, M., Mitterer, C., Abermann, J., 2015. Tracing glacier changes in Austria from the Little Ice Age to the present using a lidar-based high-resolution glacier inventory in Austria. **The Cryosphere**, 9 (2), 753-766, doi:10.5194/tc-9-753-2015.
- Hartl, L., Fischer, A., Abermann, J. and Stocker-Waldhuber, M., 2016. Recent speed-up of an Alpine rock glacier: an updated chronology of the kinematics of Outer Hochebenkar rock glacier based on geodetic measurements. **Geografiska Annaler: Series A, Physical Geography**, 98, 129-141. DOI:10.1111/geoa.12127
- Fischer, A. and Kuhn, M., 2013. GPR measurements of 64 Austrian glaciers as a basis for a regional glacier volume inventory, **Annals of Glaciology**, 54 (64), 179–188.