

Lena Pfister

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*21.04.1991 in Aschaffenburg



Professional Career

- since 01/2021 **Post Doc at the Atmospheric Dynamics Group** of the Department of Atmospheric and Cryospheric Sciences at the University of Innsbruck
- 03/2020-09/2020 **Administration of Green Campus** for sustainability efforts of the University of Bayreuth
- Oct 2019 **Manager of the international workshop "Fiber Optic Sensing in Earth and Atmospheric Sciences (FOSES)"** from 8th until 12th of October, Thurnau, Germany
- since 2016 **Research assistant at the Micrometeorology Group of the University of Bayreuth**
- Supervision of practical labs on micrometeorologic measurements and field work
 - Conducted and developed sessions for the practical lab *"Working on large data sets with R"* together with Dr. Wolfgang Babel
 - since January 2018: Assistance in the European Research Council (ERC) funded project *"DarkMix"*: conducting experiments, publishing, attending international conferences, leading and managing a field campaign in the Arctic.
- 09/2013-02/2015 **International School of Bayreuth, Bayreuth**
Supervision of young students and giving sport courses in English and German.
- 2010-2015 **University of Bayreuth, Bayreuth**
Tutor and Laboratory Assistant in different departments: Hydrology, Soil Physics, Organic Chemistry, and Micrometeorology

Education

- Doctoral thesis** *"Improving our understanding of the atmospheric weak wind boundary layer using spatially explicit observations near the ground surface"* in Micrometeorology supervised by Prof. Dr. Christoph Thomas
- 03/2016-12/2020 **PhD student - Micrometeorology**, University of Bayreuth
- 10/2013-02/2016 **M.Sc. Geocology - Environmental Sciences**, University of Bayreuth
- 10/2010-09/2013 **B.Sc. Geocology - Environmental Sciences**, University of Bayreuth

Publications

- under review Zeller M., Huss J., **Pfister L.**, Schulz A., Thomas, C.K., NYTEFOX - Ny-Ålesund Turbulence Fiber Optic Experiment, Svalbard, Norway, *Earth System Science Data*

- provisionally accepted **Pfister L.**, Lapo K., Mahrt L., Thomas, C.K., Thermal submeso motions in the nocturnal stable boundary layer - Part 1: Detection & mean statistics, *Boundary Layer Meteorology*
- provisionally accepted **Pfister L.**, Lapo K., Mahrt L., Thomas, C.K., Thermal submeso motions in the nocturnal stable boundary layer - Part 2: Generating mechanisms & implications, *Boundary Layer Meteorology*
- 2020 Lapo, K., Freundorfer, A., **Pfister, L.**, Schneider, J., Selker, J., Thomas, C., Distributed observations of wind direction using microstructures attached to actively heated fiber-optic cables, *Atmospheric Measurement Techniques*, DOI: 10.5194/amt-13-1563-2020
- 2020 Mahrt L., **Pfister L.**, Thomas C.K., Small-Scale Variability in the Nocturnal Boundary Layer, *Boundary-Layer Meteorology*, DOI: 10.1007/s10546-019-00476-x
- 2019 **Pfister L.**, Lapo K., Sayde C., Selker J., Mahrt L. and Thomas C.K., Classifying the Nocturnal Atmospheric Boundary Layer into Temperature and Flow Regimes, *Quarterly Journal of the Royal Meteorological Society*, DOI: 10.1002/qj.3508
- 2017 **Pfister L.**, Sigmund A., Olesch J. and Thomas C.K., Nocturnal Near-Surface Temperature, but not Flow Dynamics, can be Predicted by Microtopography in a Mid-Range Mountain Valley, *Boundary Layer Meteorology*, DOI: 10.1007/s10546-017-0281-y
- 2017 Sigmund A., **Pfister L.**, Sayde C. and Thomas C.K., Quantitative analysis of the radiation error for aerial coiled-fiber-optic distributed temperature sensing deployments using reinforcing fabric as support structure, *Atmospheric Measurement Techniques*, DOI: 10.5194/amt-10-2149-2017

Conferences and Workshops

- 12/2019 **Pfister L.**, Lapo E. K., Mahrt L., Thomas C.K., Gentle topography induces thermal submeso motions within the stable boundary layer, *American Geophysical Union Fall Meeting 2020*, San Francisco, CA, USA, [AGU2020-A13N-3145](#). (Poster)
- 04/2019 **Pfister L.**, Mahrt L., Lapo K., Sayde C. and Thomas C.K., Investigating thermal micro-fronts near the surface in the nocturnal boundary layer over gentle terrain through spatially explicit observations from fiber-optic distributed sensing, *European Geosciences Union General Assembly 2019*, Vienna, Austria, [EGU2019-10171](#). (Presentation)
- 04/2018 **Pfister L.**, Sayde C., Selker J., Mahrt L. and Thomas C.K., A classification scheme for nocturnal atmospheric boundary layers, *European Geosciences Union General Assembly 2018*, Vienna, Austria, [EGU2018-9113](#). (Presentation)
- 10/2017 **Pfister L.**, Mahrt L., Selker J. and Thomas C.K., Formation of Thermal Microfronts in Gentle Terrain, *BayCEER Workshop 2017*, Bayreuth, Germany. (Poster)

- 03/2017 **Pfister L.**, Mahrt L. and Thomas C.K., Classifying nocturnal Boundary Layer Regimes, *3rd Decennial Workshop "Turbulence in Stably Stratified Planetary Boundary Layers"*, Delft, Netherlands. (Poster)
2. Award: *Outstanding Student Poster*
- 04/2016 **Pfister L.**, Sigmund A., Olesch J. and Thomas C.K., Novel insights into the dynamics of cold-air drainage and pooling on a gentle slope from fiber-optic distributed temperature sensing, *European Geosciences Union General Assembly 2016*, Vienna, Austria, [EGU2016-4984](#). (Presentation)

Experiments

- 02-03/2020 **NYTEFOX - Ny-Ålesund Turbulence Fiber Optic Experiment**, Svalbard, Norway. Managed logistics together with A. Schulz, experiment design with C. K. Thomas and J. Huss, conduction of experiment, and leading students. Publications: Zeller et al. 2020 (in preparation).
- 08/2018 **Wind tunnel experiments with the DarkMix team**, University of Bayreuth, Bayreuth, Germany. Conducting experiments and analyzing data to develop wind direction measurements with fiber-optic distributed sensing (cf. Lapo et al. 2020).
- 06-07/2016 **SCP - Shallow Cold Pool experiment**, 2012, Wellington, Colorado, USA. Introduction to data set and first analysis by Chadi Sayde, John Selker and Larry Mahrt at Oregon State University, Corvallis, Oregon, USA. Publications: Pfister et al. 2019, Mahrt et al. 2020, and both publications under review. Conferences: Delft 2017, EGU 2018 and 2019, AGU 2019.
- 03-04/2015 **CADEX - Cold-air Drainage Experiment**, University of Bayreuth, Bayreuth. Master thesis: Experiment design together with C. K. Thomas, setup and maintenance with Bachelor-Student Armin Sigmund. Conferences: EGU 2016. Publications: Sigmund et al. 2017, Pfister et al. 2017

Languages

- German **First language**
English **Fluent**

Software skills

- Programming/
Statistics R (advanced), Matlab, MS Office
- Writing tools LaTeX, MS Office