

Curriculum Vitæ

Personal Data

Name	Monika Feldmann	Nationality	German (D)
Date of birth	1. May 1994, Laufenburg (CH)	Marital status	unmarried
E-mail	monika.feldmann@unibe.ch		

Education

2022	Graduate Visitor Program, NCAR (USA)
2019-2023	Doctoral studies, environmental remote sensing, EPFL (CH) and MeteoSwiss (CH)
2018	MSc thesis, atmosphere and climate science, MIT (USA)
2016-2018	Master of environmental sciences, ETH Zurich (CH) Major in atmosphere and climate science, Minor in sustainable energy use
2013-2016	Bachelor of environmental sciences, ETH Zurich (CH)

Professional Experience

since 2023	Postdoctoral researcher, University of Bern (CH)
2019-2023	PhD candidate, environmental remote sensing, EPFL (CH) and MeteoSwiss (CH)
2018	Postgraduate researcher at ETH Zurich and Sorbonne (Paris)
2017-2018	Communications assistant in global EHS (Environment, Health & Safety) at Givaudan
2016-2017	Internship in atmospheric dispersion modelling in global EHS at Givaudan
2014-2017	Assistant at ETH Zurich

Volunteer Work

2022	Organization of online poster sessions at ERAD 2022
2019-2022	Organization and moderation of EPFL weather club
2018	Communications of the visiting student association MIT VISTA
2016-2018	Student representative of the "Schweizerische Gesellschaft für Meteorologie"
2015-2016	Actuary of the "Umwelt und Forstfachverein der ETH Zurich"

Languages

German	native language
English	native level
French	fluent
Italian	conversational
Mandarin	basic knowledge
Spanish	basic knowledge

Stays abroad

2022	Graduate Visitor Program at NCAR / Boulder, USA
2018	Visiting student at MIT / Cambridge, USA
2016	Chinese language courses in Singapore and Beijing, China
2012-2013	Au Pair in Auckland, New Zealand
1997-2001	Residence in Mobile, USA

Technical skills

Programming languages	Python and Matlab (advanced) C, Fortran, Bash and R (basics)
Operating systems	Windows, Linux
Office	LaTeX, MS Office, LibreOffice
various	version control and collaboration with Git environment management with Anaconda server management with slurm

Publications

Feldmann, M., Rotunno, R., Germann, U., Berne, A. (under review). Supercell thunderstorms in complex topography - how mountain valleys with lakes can increase occurrence frequency. Under review at Monthly Weather Review

Feldmann, M., Hering, A., Gabella, M., Berne, A. (2023). Hailstorms and Rainstorms Versus Supercells - A Regional Analysis of Convective Storm Types in the Alpine Region. npj Climate and Atmospheric Science 6(19). [doi:10.1038/s41612-023-00352-z](https://doi.org/10.1038/s41612-023-00352-z)

Feldmann, M., Germann, U., Gabella, M., Berne, A. (2021). A Characterisation of Alpine Mesocyclone Occurrence. Weather and Climate Dynamics, 2(4), 1225-1244, [doi:10.5194/wcd-2-1225-2021](https://doi.org/10.5194/wcd-2-1225-2021)

Feldmann, M. and James, C. N., Boscacci, M., Leuenberger, D., Gabella, M., Germann, U., Wolfensberger, D., Berne, A. (2020). R2D2 - A Region-based Recursive Doppler Dealiasing Algorithm for Operational Weather Radar. Journal of Atmospheric and Oceanic Technology, 37(12), 2341-2356, [doi:10.1175/JTECH-D-20-0054.1](https://doi.org/10.1175/JTECH-D-20-0054.1)

Feldmann, M., Emanuel, K., Zhu, L., and Lohmann, U. (2019). Estimation of Atlantic tropical cyclone rainfall frequency in the United States. Journal of Applied Meteorology and Climatology, 58(8), 1853-1866, [doi:10.1175/JAMC-D-19-0011.1](https://doi.org/10.1175/JAMC-D-19-0011.1)

Publications

Sarhadi, A., Rousseau-Rizzi, R., Mandli, K., Neal, J., Wiper, M. P., Feldmann, M., Emanuel, K. (submitted). Climate change intensifies compound flooding risk of tropical and extratropical cyclones in New York City. Submitted to Bulletin of the American Meteorological Society.

Gasparini, B., Münch, S., Poncet, L., Feldmann, M., and Lohmann, U. (2017). Is increasing ice crystal sedimentation velocity in geoengineering simulations a good proxy for cirrus cloud seeding?, *Atmospheric Chemistry and Physics*, 17, 4871-4885, [doi:10.5194/acp-17-4871-2017](https://doi.org/10.5194/acp-17-4871-2017)

Datasets

Feldmann, M., Hering, A., Gabella, M., Berne, A. (2022). Radar-based severe thunderstorm classification in Switzerland from 2016-2021 [Data set]. Zenodo. [doi:10.5281/zenodo.6534510](https://doi.org/10.5281/zenodo.6534510)

Feldmann, M., Germann, U., Gabella, M., Berne, A. (2021). Radar-based mesocyclone detections in Switzerland from 2016-2020 [Data set]. Zenodo. [doi:10.5281/zenodo.5122519](https://doi.org/10.5281/zenodo.5122519)

Feldmann, M. (2019). Climatology of rainfall from Atlantic hurricanes in the USA from radar data [Data set]. Zenodo. [doi:10.5281/zenodo.1745239](https://doi.org/10.5281/zenodo.1745239)

Peer Review

2022-2023	Atmospheric Measurement Techniques
2021	npj Climate and Atmospheric Science
2020	JGR Atmospheres

Conferences and Presentations

Feldmann, M., Gabella, M., Hering, A., Berne, A. (2022). Hailstorms and Rainstorms vs. Supercells - A Comparison of Severe Thunderstorms in the Alpine Region. 2nd North American Hail Workshop

Feldmann, M., Gabella, M., Berne, A. (2022). Supercells vs. Hailstorms and Rainstorms - A Radar-based Comparison of Severe Thunderstorms in the Alpine Region. 11th European Conference on Radar in Meteorology and Hydrology

Feldmann, M., Gabella, M., Berne, A. (2022). Hailstorms and Rainstorms vs. Supercells - A Comparison of Severe Thunderstorms in the Alpine Region. 20th Conference on Mountain Meteorology, AMS

Feldmann, M. (2022). Orographic Convection. Summer School Embry Riddle Aeronautical University

Feldmann, M., Gabella, M., Berne, A. (2022). Hailstorms vs. Supercells - A Comparison of Severe Thunderstorms in the Alpine Region. EGU General Assembly 2022

Feldmann, M. (2022). Supercells in the Alpine Region - From Observations to Idealized Modeling. NCAR MMM Seminar

Feldmann, M. (2022). Superzellengewitter im Schweizer Radarnetzwerk. Kundeninformationstag, MeteoSchweiz im Sicherheitsverbund Schweiz

Feldmann, M. (2021). Numerical Differentiation and Thunderstorm Research. Summer Course MIT

Feldmann, M. (2021). Doppler Velocity Products in Convection – Mesocyclone Detection. MetObs Forecaster Training, MeteoSwiss

Feldmann, M., Emanuel, K., Zhu, L., Lohmann, U. (2021). Estimating Long-Term Tropical Cyclone Rainfall Frequency - A Physics-Based Approach. 34th Conference on Hurricanes and Tropical Meteorology, AMS

Feldmann, M., Germann, U., Gabella, M., Berne, A. (2021). Characterization of Rotation in Severe Convection. 3rd European Hail Workshop

Feldmann, M., Gabella, M., Berne, A. (2021). Characterization of Mesocyclonic Rotation in Severe Convection Over the Swiss Alps. EGU General Assembly 2021



Bern, May 3, 2023