Department of Atmospheric and Environmental Sciences

**Kathrin Alber**

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**EDUCATION**

**University at Albany, SUNY, Albany, NY, USA 09/2019-present**

*Ph.D. Student, Department of Atmospheric and Environmental Science (DAES)*

*Advisor: Dr. Liming Zhou*

**George Mason University, Fairfax, VA, USA 08/2017-08/2018**

*M.S. Thesis, Atmospheric, Oceanic & Earth Sciences Department (AOES)*

*Advisor: Dr. Kathy Pegion*

**University of Basel, Switzerland 01/2016-01/2019**

*M.S. in Geoscience, Department of Atmospheric Sciences*

*Advisor: Dr. Eberhard Parlow*

**University of Basel, Switzerland 08/2012-01/2016**

*B.S. in Geoscience, Department of Atmospheric Sciences*

*Advisor: Dr. Eberhard Parlow*

**RESEARCH EXPERIENCE**

**Graduate Research Assistant 09/2019-present**

*DAES, University at Albany*

* Analyzing thunderstorm activity and trends over the Congo Rainforest
* Investigating changes in the timing and intensity of the diurnal cycle of convection   
  over the Congo Rainforest
* Assessing the effects of drying trend and different modes of variability on the diurnal   
  cycle of convection over the Congo Rainforest
* Passed Ph.D. qualification exam (Dec 2020) and Ph.D. prospectus (Nov 2021)

**Research Investigator 08/2017-08/2018**

*AOES, George Mason University*

* Analyzed the predictability of the North Atlantic Oscillation

**Research Investigator 08/2015-09/2015**

*Gobabeb Research and Training Centre, Namibia*

* Quantified fog distribution in the Namib desert

**PUBLICATIONS**

**Peer-reviewed:**

**Alber, K.,** Raghavendra, A., Zhou, L. et al., 2021. Analyzing intensifying thunderstorms over the Congo Basin using the Gálvez-Davison index from 1983–2018. Clim. Dyn. 56, 949–967 (2021). <https://doi.org/10.1007/s00382-020-05513-x>

**Alber, K.,** Zhou, L., and Raghavendra, A., 2021. A shift in the diurnal timing and intensity of deep convection over the Congo Basin during the past 40 years. Atmos. Res. 264, 0169-8095. <https://doi.org/10.1016/j.atmosres.2021.105869>

**CONFERENCE PRESENTATIONS**

**102nd AMS Annual Meeting 2022**

A shift in the diurnal timing and intensity of deep convection over the Congo Basin during the past 40 years.

**(Oral)**

**101st AMS Annual Meeting 2021**

Analyzing intensifying thunderstorms over the Congo Basin using the Gálvez-Davison index from 1983–2018. **(Oral)**

**HONORS AND AWARDS**

Master’s Thesis, Zeno Karl Schindler Foundation **2017**

Master’s Thesis, Karitative Stiftung Dr. Gerber-ten Bosch **2017**

**INTERNSHIPS**

**Meteotest, Bern, Switzerland 08/2018-02/2019**

Internship weather forecasting

* Analyzed weather patterns using different models
* Issued daily written weather forecasts for newspapers, TV channels, and websites
* Performed multiple live weather radio interviews every day
* Provided personalized weather information on the phone for individual people,   
  helicopter operations, and mountaineers
* Taught weather, climate, and natural disaster classes for elementary school classes
* Prepared weather reports for insurance companies

**MeteoNews, Zürich, Switzerland 10/2015-03/2016**

Internship weather forecasting

* Analyzed weather patterns using different models
* Issued daily written weather forecasts for newspapers, TV channels, and websites

**WORKSHOPS AND SUMMER SCHOOLS**

NCAR Trustworthy Artificial Intelligence for Environmental Science (TAI4ES) **06/2022**

* Summer school on developing trustworthy AI for the earth and environmental sciences

**TECHNICAL SKILLS**

**Programming:** MATLAB, Python, GrADS, Linux shell scripting

**Datasets:** ERA-Interim, ERA5, GridSat-B1, MODIS, MERRA-2,

NOAA CPC, TRMM, IMERG, GLEAM, CMORPH

**Version control:** Git, Github

**Platforms:** Mac, Windows, Linux

**SERVICE AND OUTREACH**

**PROFESSIONAL**

**Journal Reviewer:** Journal of Climate

**Session Co-Chair:** AMS 102nd annual meeting, Session 8A African Climate Variability and Change **2022**

**UNIVERSITY AT ALBANY**

**Organizer:** DAES Climate group weekly meetings **2020-2021**

**UNIVERSITY OF BASEL**

**Mentor:** Open lecture auditorium for refugees and asylum seekers **2017**

**VOLUNTEER EXPERIENCE**

**Adirondack Mountain Rescue**

* Technical rescue committee member **2022-present**
* Active field member **2022-present**

**Thacher Climbing Coalition**

* Board member **2021-present**
* Membership chair **2020-present**

**Swiss Alpine Club** **2014-2019**

* Climbing and mountaineering guide for children and young adults

**LANGUAGES**

German (Native), English (Fluent), Spanish (Proficient), French (Conversational), Norwegian (Basic)

**PROFESSIONAL AFFILIATIONS**

Canadian Avalanche Association **2022-present**

American Avalanche Association **2022-present**

American Meteorological Association **2020-present**

**OTHER CERTIFICATIONS**

**The American Institute for Avalanche Research and Education (AIARE)**

* AIARE Avalanche Rescue **2022**
* AIARE 1 **2021**