

Kathrin Alber

Department of Atmospheric and Environmental Sciences
University at Albany, State University of New York
1400 Washington Avenue, Albany, NY 12222

<https://kathrinalber.github.io>

kalber2@albany.edu

EDUCATION

University at Albany, SUNY, Albany, NY, USA	09/2019-present
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Ph.D. Student, Department of Atmospheric and Environmental Science (DAES)

Advisor: Dr. Liming Zhou

George Mason University, Fairfax, VA, USA	08/2017-08/2018
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M.S. Thesis, Atmospheric, Oceanic & Earth Sciences Department (AOES)

Advisor: Dr. Kathy Pegion

University of Basel, Switzerland	01/2016-01/2019
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M.S. in Geoscience, Department of Atmospheric Sciences

Advisor: Dr. Eberhard Parlow

University of Basel, Switzerland	08/2012-01/2016
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B.S. in Geoscience, Department of Atmospheric Sciences

Advisor: Dr. Eberhard Parlow

RESEARCH EXPERIENCE

Graduate Research Assistant	09/2019-present
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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
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AOES, George Mason University

- Analyzed the predictability of the North Atlantic Oscillation

Research Investigator	08/2015-09/2015
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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

103rd AMS Annual Meeting, Denver, CO 01/2023
Influence of the Madden-Julian Oscillation on the diurnal cycles of deep convection and precipitation over the Congo Basin (Oral)

Graduate Climate Conference, Pack Forest, WA 10/2022
Influence of the Madden-Julian Oscillation on the diurnal cycles of deep convection and precipitation over the Congo Basin (Poster)

102nd AMS Annual Meeting 01/2022
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 01/2021
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

INTERSHIPS

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
Models: Weather Research and Forecasting Model (WRF)
Version control: Git, Github
Platforms: Mac, Windows, Linux

SERVICE AND OUTREACH

PROFESSIONAL

Journal Reviewer: Journal of Climate, Journal of Applied Meteorology and Climatology, Atmospheric Research, Climate Dynamics

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**

VOLUNTEER EXPERIENCE

Thunderbolt Volunteer Ski Patrol **2022-present**

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

- Climbing and mountaineering instructor for children and young adults **2014-2019**

LANGUAGES

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

PROFESSIONAL AFFILIATIONS

Canadian Avalanche Association **2022-present**
American Avalanche Association (Affiliate Member) **2022-present**
American Meteorological Association **2020-present**

OTHER CERTIFICATIONS

AAI Professional Level 1 Avalanche Course (Pro 1)	2023
Outdoor Emergency Care Course (OEC)	2022
Wilderness First Responder (WFR)	2022
DEC Basic Wildland Search Skills	2022
The American Institute for Avalanche Research and Education (AIARE)	
▪ AIARE Avalanche Rescue	2022
▪ AIARE 1	2021
Mountain Rescue Association	
▪ Situational awareness in search and rescue	2022
▪ Risks in mountain rescue operations	2022
▪ Psychological first aid	2022
▪ General backcountry safety	2022