ZACHARY M. LABE, PH.D.

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BACKGROUND

- Interested in climate attribution, risk/impact assessments, & linkages to policy
- Published **39 peer-reviewed** scientific articles (journal/technical report/book)
- Presented more than **75 talks** for technical & non-specialist audiences
- Conducted over **100 interviews** with local-to-international news media
- Visualize & communicate climate data on social media (**100,000+ followers**)
- Coordinated **6 sessions** at local workshops & international climate meetings
- Participated on **3 grant proposal panels** & reviewed over **50** journal studies
- Honored as a Kavli Fellow of the National Academy of Sciences in 2019

RESEARCH & WORK EXPERIENCE

Climate Scientist
Climate Central, Inc.

📅 May 2025 – Present   📍 Princeton, NJ

- Quantifying and communicating high-impact climate risks locally and regionally with observations, models, and advanced statistical approaches
- Support climate services by co-developing tools & resources to enhance resilience

Research Physical Scientist (Federal)
NOAA Geophysical Fluid Dynamics Laboratory (GFDL)

📅 June 2024 – April 2025   📍 Princeton, NJ

- Led innovative original research on climate impacts & AI/machine learning
- Collaborated with civil engineers to use climate data for infrastructure resiliency
- Contributed to international global climate & weather assessments annually
- Assessed & developed high-resolution global climate models for improving prediction, projection, and risk assessment of natural hazards

Postdoc to Associate Research Scholar
Princeton University & NOAA GFDL

📅 May 2022 – June 2024   📍 Princeton, NJ

- Designed a framework to attribute high-impact climate extremes in near real-time using observations, models, and other data-driven statistical methods
- Collaborated with local/federal stakeholders & educational science nonprofits

Postdoc
Colorado State University

📅 June 2020 – April 2022   📍 Fort Collins, CO

- Leveraged explainable machine learning techniques for identifying new patterns of anthropogenic climate change relative to those from natural variability
- Awarded a Sustainability Leadership Fellowship at Colorado State University with formal training in science communication, policy, and educational outreach

Graduate Research Assistant
University of California, Irvine

📅 September 2015 – June 2020   📍 Irvine, CA

- Implemented new modeling experiments to understand Arctic climate extremes
- Awarded National Science Foundation NRT Fellowship for data science

EDUCATION

Ph.D. in Earth System Science
University of California, Irvine (CA)
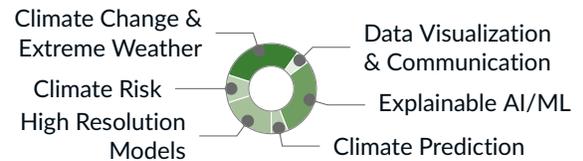
📅 December 2017 – June 2020

B.Sc in Atmospheric Science
Cornell University (NY)

📅 August 2011 – May 2015

- *Distinction in Research*
- Dyson Business Minor for Life Sciences

INTERESTS

Climate Change & Extreme Weather
Climate Risk
High Resolution Models
Data Visualization & Communication
Explainable AI/ML
Climate Prediction

TECHNICAL SKILLS

Python	●●●●●
AI/ML	●●●●○
Shell Scripting	●●●●○
Matlab	●●●○○
R	●●○○○

STRENGTHS

- **Python Tools**

Cartopy · Keras · Matplotlib · Numpy · Pandas · Seaborn · Scikit-learn · SciPy · Statsmodels · Tensorflow · Xarray

- **Other Programming & Software**

Git · HTML · NCL · NCO/CDO · LaTeX

- **High-Performance Computing**

NCAR's Cheyenne/Yellowstone · Linux · NOAA's RDHPCS · CMIP5/6 ESGF

BROADER SKILL SET

Critical Problem-Solving · Team Science · Interdisciplinary · Blog/Technical Writing · Leadership · Machine Learning