

# ZACHARY M. LABE, PH.D.

I am a trained atmospheric scientist trying to visualize the signal from a lot of noise.

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## BACKGROUND

- Developed & led innovative research on climate impacts & machine learning
- Published **33 peer-reviewed** scientific articles (journals/technical reports)
- Collaborated with local/federal stakeholders and educational nonprofits
- Presented more than **75 talks** for both 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 **100** journal studies
- Highly experienced in working on large, interdisciplinary teams & mentoring
- Contributor to international global climate & weather assessments annually
- Honored as a Kavli Fellow of the National Academy of Sciences in 2019

## RESEARCH & WORK EXPERIENCE

### Research Physical Scientist (Federal)

#### NOAA Geophysical Fluid Dynamics Laboratory (GFDL)

📅 June 2024 – Ongoing    📍 Princeton, NJ

- Applying AI/ML methods to assess & develop high-resolution climate models for improving climate prediction, projection, and risk assessment

### Postdoc to Associate Research Scholar

#### Princeton University & NOAA GFDL

📅 May 2022 – June 2024    📍 Princeton, NJ

- Designed a framework to attribute extreme events in near real-time using observations, climate models and other data-driven statistical methods

### Postdoc

#### Colorado State University

📅 June 2020 – April 2022    📍 Fort Collins, CO

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

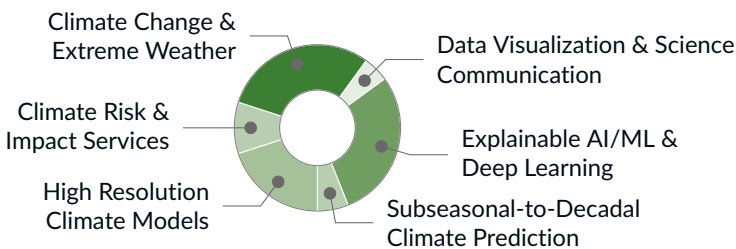
### Graduate Research Assistant

#### University of California, Irvine

📅 September 2015 – June 2020    📍 Irvine, CA

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

## INTERESTS



## EDUCATION

### Ph.D. in Earth System Science

#### University of California, Irvine (CA)

📅 December 2017 – June 2020

### M.Sc. in Earth System Science

#### University of California, Irvine (CA)

📅 September 2015 – December 2017

### B.Sc in Atmospheric Science

#### Cornell University (NY)

📅 August 2011 – May 2015

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

## 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    Visualization  
Interdisciplinary    Kindness    Leadership  
Machine Learning    Team Science  
Communication    Blog/Technical Writing