

# ZACHARY M. LABE, PH.D.

I am a trained atmospheric scientist aiming to address future climate risks and hazards through interdisciplinary partnerships.

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## BACKGROUND

- Developed & led innovative research on climate impacts & machine learning
- Published **33 peer-reviewed** scientific articles (journals/technical reports)
- Presented more than **75 talks** for technical & non-specialist audiences
- Collaborated with local/federal stakeholders & educational science nonprofits
- 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
- 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 – February 2025    📍 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 high-impact climate hazards in near real-time using observations, models, and other data-driven statistical methods

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

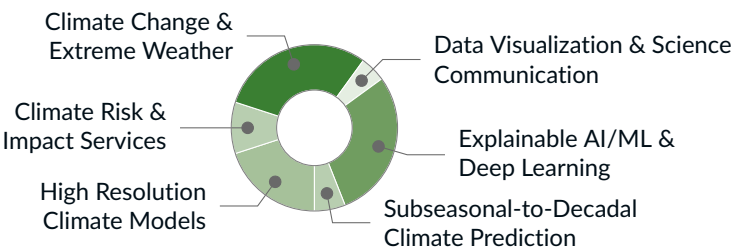
Graduate Research Assistant

**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

## 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