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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x.com/ZLabe github.com/zmlabe slideshare.net/ZacharyLabe scholar.google.com/citations?user=E6cJPWcAAAAJ

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 – Present 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

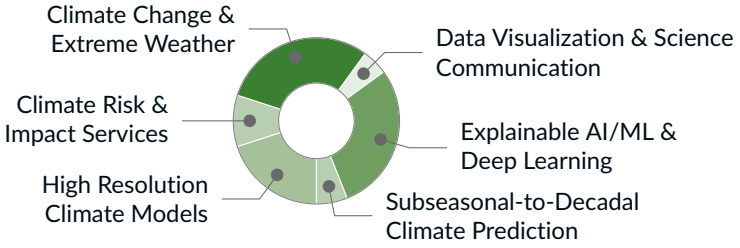
Graduate Research Assistant

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