ZACHARY M. LABE, PH.D.

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

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in linkedin.com/in/zacharylabe 🐦 twitter.com/ZLabe github.com/zmlabe slideshare.net/ZacharyLabe

BACKGROUND

- Interested in the role of climate change on prediction, extremes, & variability
- Published 18 peer-reviewed scientific articles in high-impact journals
- Contributor to several international annual climate assessment reports
- Experience in mentoring an undergraduate summer research project (REU)
- Presented >50 talks for both technical and non-specialist audiences
- >100 interviews with local to international media outlets on climate change
- Communicate weather/climate data on Twitter (>1 million views per month)
- Selected as a Kavli Fellow of the National Academy of Sciences in 2019

RESEARCH & WORK EXPERIENCE

Postdoctoral Research Associate

Princeton University & NOAA GFDL

📅 May 2022 – Ongoing 📍 Princeton, NJ

- Developing a framework to attribute extreme events in near real-time using climate models and other data-driven methods, like machine learning

Postdoctoral Researcher

Colorado State University

📅 June 2020 – April 2022 📍 Fort Collins, CO

- Leveraged new explainable machine learning methods for extracting patterns of forced climate change from internal 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

- Assessed influences of Arctic amplification and Arctic sea ice on extreme weather by designing novel climate model experiments
- Awarded National Science Foundation NRT-DESE fellowship in the Machine Learning and Physical Sciences Program at the University of California, Irvine
- *Teaching Assistant Courses:* Earth System Physics, Fundamental Processes in Earth and Environmental Studies, Terrestrial Hydrology, Weather Analysis
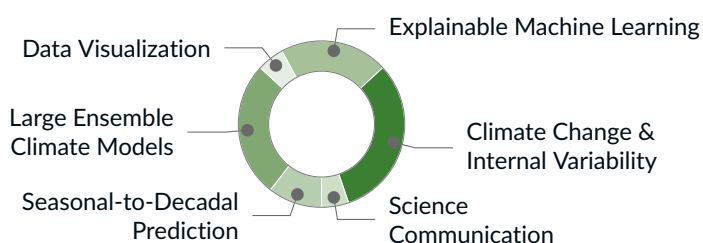
Undergraduate Research Assistant

Cornell University

📅 April 2014 – August 2015 📍 Ithaca, NY

- Evaluated the magnitude, frequency, and dynamics of phenological spring onset using community science observations
- *Teaching Assistant Courses:* Basic Meteorology Lab, Computer Programming and Meteorological Software

INTERESTS

Data Visualization · Explainable Machine Learning · Large Ensemble Climate Models · Climate Change & Internal Variability · Seasonal-to-Decadal Prediction · Science Communication

EDUCATION

Ph.D. in Earth System Science

University of California, Irvine

📅 September 2017 – May 2020

- Thesis: The effects of Arctic sea-ice thickness loss and stratospheric variability on mid-latitude cold spells

M.Sc. in Earth System Science

University of California, Irvine

📅 September 2015 – September 2017

B.Sc in Atmospheric Science

Cornell University

📅 August 2011 – May 2015

- Distinction in Research
- Dyson Business Minor for Life Sciences

TECHNICAL SKILLS

Python ● ● ● ● ●
Matlab ● ● ● ○ ○
bash   ● ● ● ○ ○
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

Data-driven Science · Visualization · Interdisciplinary · Kindness · Leadership · Machine Learning · Team Science · Communication · Blog/Technical Writing