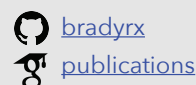


RILEY BRADY

Computational ocean biogeochemist
interested in seasonal-to-decadal forecasting of
the Earth's biosphere, high-performance
computing, open-source software, and data
visualization.

call 804 432 2724
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Education

University of Colorado Boulder, PhD

Atmospheric and Oceanic Sciences

Expected April 2021

University of South Carolina, BS, 2016

Marine Science, *Magna Cum Laude*

Leadership Distinction in Research

South Carolina Honors College

Tools

Proficiency

python (dask, numpy, xarray) • MATLAB •
git • bash • ParaView • NCO/CDO

Experience

C/C++ • OpenMP • MPI • javascript •
NCL • R • Fortran • HTML/CSS

Open-Source Software

Core Developer

[climpred](#): verification of climate and weather forecasts

[esmtools](#): a toolbox for Earth system model analysis

[xskillscore](#): metrics for verifying forecasts

Contributor

[esmlab](#): NCAR package for analyzing climate models

[LIGHT](#): Lagrangian particle tracking system

[MPAS-Analysis](#): analyses for the MPAS climate model

Awards

DOE Computational Science Graduate Fellow (\$450,000)

Goldwater Scholar (\$7,500)

NOAA Hollings Scholar (\$30,000)

Runner-up, Data Viz and Storytelling Competition

4x scientific conference presentation awards

U. South Carolina McNair Scholar (\$130,000)

Experience

University of Colorado Boulder

Jun 2016–present

Computational Science Graduate Fellow

Boulder, CO

Lead research studies related to [decadal predictability of ocean carbon](#) and [internal climate variability](#) of air-sea CO₂ fluxes. Supervised 6 undergraduate students through diversity programs. [Wrote open-source python software](#) for verifying weather and climate forecasts. Gave 20+ presentations and workshops at scientific conferences and academic institutions.

Oak Ridge National Laboratory

May 2020–present

Visiting Researcher, Computational Earth Sciences

Remote

Assessed subseasonal-to-decadal predictability of the terrestrial growing season in a coupled, global Earth system model.

Los Alamos National Laboratory

May–Aug 2018

Visiting Researcher, Theoretical Division

Los Alamos, NM

Ran parallel, global simulations of the DOE's ocean model on 10,000 CPU cores. Modified Fortran code base to add biogeochemical "sensors" to autonomous floats in a Lagrangian particle tracking system. Visualized unstructured Eulerian and Lagrangian model output in ParaView, [resulting in a visualization award](#).

University of South Carolina

Sep 2012–May 2016

Undergraduate Researcher, Marine Science

Columbia, SC

Downloaded, post-processed, and stored petabytes of climate model output from the Coupled Model Intercomparison Project (CMIP5) using NCO, CDO, and MATLAB. Collaborated on studies projecting the long-term impacts of anthropogenic climate change on ocean circulation in the California Current.

NOAA Earth System Research Laboratory

May–Aug 2015

NOAA Hollings Scholar, Physical Sciences Division

Boulder, CO

Lead a [peer-reviewed published study](#) isolating the response of ocean circulation in the California Current to anthropogenic climate change and internal climate variability. Processed and analyzed output from the CESM Large Ensemble project.

University of North Carolina at Chapel Hill

May–Aug 2013

NSF REU Scholar, Institute of Marine Sciences

Morehead City, NC

Collaborated on a field campaign assessing the influence of hard clams on shallow-water primary production, seeking creative solutions for seagrass degradation. Worked with lab instruments for organic matter analysis. Assisted in long-term project tagging hammerhead sharks off coastal North Carolina.