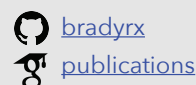


RILEY BRADY

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, 2021

Atmospheric and Oceanic Sciences
Focus in Ocean Biogeochemistry

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) • QGIS •
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

McKinsey & Company

Senior Data Scientist, Climate Analytics
Founding member of the climate analytics team, delivering bespoke analyses of
projected climate change impacts on companies and non-profits from a variety of
sectors. Develop and maintain internal python software for statistical climate model
downscaling and projections of physical hazard risks, such as water stress, drought,
flooding, extreme precipitation, heat stress, and landslides.

University of Colorado Boulder

Computational Science Graduate Fellow
Led 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

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

Los Alamos National Laboratory

Visiting Researcher, Theoretical Division
Ran parallel, global simulations of the DOE's ocean model on 10,000 CPU cores. [Led study](#) investigating the 3-D flow of dissolved carbon in the Southern Ocean. 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

Undergraduate Researcher, Marine Science
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

NOAA Hollings Scholar, Physical Sciences Division
Led 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

NSF REU Scholar, Institute of Marine Sciences
Assessed 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 tagging hammerhead sharks off coastal North Carolina.