

Riley X. Brady

COMPUTATIONAL CLIMATE SCIENCE · OCEAN BIOGEOCHEMISTRY · DATA VISUALIZATION

Institute of Arctic and Alpine Research, University of Colorado, Campus Box 450, Boulder, CO 80309

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Education

University of Colorado at Boulder

M.S. AND PH.D. IN ATMOSPHERIC & OCEANIC SCIENCES

Boulder, CO

Expected 2021

University of South Carolina

B.S. IN MARINE SCIENCE (EMPHASIS IN PHYSICAL OCEANOGRAPHY)

Magna Cum Laude, Honors College, Phi Beta Kappa, Leadership Distinction in Research

Columbia, SC

2012 – 2016

Otto-Friedrich Universität Bamberg

GERMAN STUDIES

Bamberg, Germany

March – July 2014

Research Experience

Ocean Biogeochemistry Research Group

INSTITUTE OF ARCTIC AND ALPINE RESEARCH

Advisor: Nicole Lovenduski

- Currently investigating the response of biogeochemistry in the four major eastern boundary currents to perturbations from anthropogenic climate change and internal climate variability.

Boulder, CO

June 2016 – Present

Ecosystem Oceanography & Climate Change Lab

UNIVERSITY OF SOUTH CAROLINA

Advisor: Ryan Rykaczewski

- Analyzed atmospheric and oceanic output of General Circulation Models (GCMs) from the CMIP5 Project to investigate potential changes to critical physical ocean processes in response to a changing climate.
- Forecasted multi-decadal changes in the California Current Upwelling System while considering uncertainty due to natural variability.

Columbia, SC

September 2012 – May 2016

Physical Sciences Division

NOAA EARTH SYSTEM RESEARCH LAB

Advisor: Michael Alexander

- Used a state-of-the-art perturbed initial conditions climate model ensemble to investigate the relative influence of anthropogenic and natural climate variability on future California Current upwelling.
- Participated in meetings with NCAR, NOAA, and CU Boulder researchers.

Boulder, CO

May – July 2015

Coastal Fisheries Ecology Lab

UNC INSTITUTE OF MARINE SCIENCES

Advisors: Joel Fodrie and Michael Piehler

- Constructed a mesocosm experiment to investigate the impact of *Mercenaria mercenaria* filtration on shallow-water estuarine primary production.
- Gained experience in organic matter analysis, fluorometry, trawling, and species identification.

Morehead City, NC

May – July 2013

Honors & Awards

NATIONAL

- 2016 **Computational Science Graduate Fellow**, Department of Energy
- 2015 **Barry M. Goldwater Scholar**, United States Congress
- 2014 **Ernest F. Hollings Scholar**, National Oceanic and Atmospheric Administration

INSTITUTIONAL

- 2016 **Algernon Sydney Sullivan Award**, University of South Carolina (2 recipients)
- 2016 **Outstanding Undergraduate in Marine Science**, Marine Science Program (2 recipients)
- 2014 **Magellan Research Scholar**, Office of Undergraduate Research
- 2012 **Science Undergraduate Research Fellow**, South Carolina Honors College
- 2012 **McNair Scholar**, University of South Carolina (20 out-of-state recipients)

MEETINGS

- 2015 **Best Student Talk**, Eastern Pacific Ocean Conference
- 2014 **Outstanding Student Presentation Award**, Ocean Sciences Meeting

Publications

1. Brady, RX, MA Alexander, and RR Rykaczewski, 2016: Emergence of anthropogenic trends in California Current upwelling. In preparation for submission to *Geophys. Res. Lett.*

Selected Presentations

1. Brady, RX, Rykaczewski, RR, Alexander, MA. *Emergence of anthropogenic trends in California Current upwelling in the presence of internal climate variability.* CESM Workshop: Breckenridge, CO. June 2016. (Talk)
2. Brady, RX, Rykaczewski, RR, Alexander, MA. *Emergence of anthropogenic trends in California Current upwelling in the presence of natural climate variability.* Ocean Sciences Meeting: New Orleans, LA. February 2016. (Poster)
3. Brady, RX, Rykaczewski, RR, Alexander, MA. *The influence of natural variability on future California Current upwelling.* AGU Fall Meeting: San Francisco, CA. December 2015. (Talk)
4. Brady, RX, Alexander, MA, Rykaczewski, RR. *Quantifying natural and anthropogenic variation in California Current upwelling.* Eastern Pacific Ocean Conference: Lake Tahoe, CA. September 2015. (Talk)
5. Brady, RX, Rykaczewski, RR. *Consequences of changing high-pressure zones on future coastal upwelling.* Ocean Sciences Meeting: Honolulu, HI. February 2014. (Poster)

Skills & Interests

Computer Language	MATLAB, Shell Scripting, LaTeX
Data & Databases	CESM1 Large Ensemble, CMIP5 Project, NetCDF
Foreign Language	English (native), German (proficient)
Music	Acoustic Guitar, Blues Harmonica, Vocals
Hobbies	Running, Road Cycling, Hiking