RILEY X. BRADY

(303) · 735 · 5689 ◇ riley.brady@colorado.edu ◇ rileyxbrady.com
Institute of Arctic and Alpine Research, University of Colorado
Campus Box 450 ◇ Boulder, CO 80309

EDUCATION

University of Colorado Boulder — *Boulder, CO*
Ph.D. Candidate in Atmospheric & Oceanic Sciences — *Expected 2021*
M.S. in Atmospheric & Oceanic Sciences — *2018*

University of South Carolina — *Columbia, SC*
B.S. in Marine Science (Emphasis in Physical Oceanography) — *2016*
Magna Cum Laude, Honors College, Phi Beta Kappa
Leadership Distinction in Research

Otto-Friedrich Universität Bamberg — *Bamberg, Germany*
Minor in German Studies — *2014*

RESEARCH APPOINTMENTS

University of Colorado Boulder — *Boulder, CO*
Graduate Research Assistant, Institute of Arctic and Alpine Research — *2016–Present*

Los Alamos National Lab — *Los Alamos, NM*
Graduate Research Assistant, Theoretical Division — *Summer 2018*

University of South Carolina — *Columbia, SC*
Undergraduate Research Assistant, Ecosystem Oceanography & Climate Change Lab — *2012–2016*

NOAA Earth System Research Lab — *Boulder, CO*
NOAA Hollings Scholar, Physical Sciences Division — *Summer 2015*

UNC Institute of Marine Sciences — *Morehead City, NC*
NSF REU Scholar, Coastal Fisheries Ecology Lab — *Summer 2013*

HONORS AND AWARDS

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

Institutional
- Algernon Sydney Sullivan Award, U. South Carolina (3 recipients) — *2016*
- Outstanding Undergraduate in Marine Science, U. South Carolina (2 recipients) — *2016*
- Outstanding Senior Award, U. South Carolina — *2016*
- Magellan Research Scholar, South Carolina Office of Undergraduate Research — *2014*
- Science Undergraduate Research Fellow, South Carolina Honors College — *2012*
- McNair Scholar, U. South Carolina (Valued at $130,800) — *2012*

Meetings
- 1st Place, Oceanography, Earth System and Space Science Poster Conference — *2016*
- Best Student Talk, Eastern Pacific Ocean Conference — *2015*
- Outstanding Student Presentation Award, Ocean Sciences Meeting — *2014*
- 1st Place, Morning Oral STEM Session, South Carolina Discovery Day — *2013*

PUBLICATIONS

Peer-Reviewed:

1. **Brady, RX**, NS Lovenduski, MA Alexander, M Jacox, and N Gruber (2019), On the role of climate modes in modulating the air-sea CO_2 fluxes in eastern boundary upwelling systems, *Biogeosciences*, 16, 329–346, DOI: 10.5194/bg-16-329-2019. [PDF]

2. **Brady, RX**, MA Alexander, NS Lovenduski, and RR Rykaczewski (2017), Emergent anthropogenic trends in California Current upwelling, *Geophys. Res. Lett.*, 44, 5044–5052, DOI: 10.1002/2017GL072945. [PDF]

Conference Proceedings:

1. Dutta, S, **RX Brady**, ME Maltrud, PJ Wolfram, and R Bujack (2019), Leveraging Lagrangian analysis for discriminating nutrient origins, *EnvirVis*.

SKILLS & INTERESTS

Computer Languages	Python, MATLAB, shell scripting, C/C++ (familiar), OpenMP (familiar)
Core Developer	climpred
Software Contributions	esmlab, mpas-analysis, LIGHT (MPAS online particle tracking)
Data & Databases	Running ESM simulations, CMIP5/6, NetCDF, NCO, CDO
Design	ParaView, HTML, CSS, LaTeX, Vector Graphics
Foreign Language	English (native), German (comfortable)
Music	acoustic guitar, blues harmonica, vocals
Hobbies	trail running, road cycling, rock climbing, snowboarding, hiking, camping

GRADUATE COURSEWORK

Biogeochemical Oceanography	The Global Carbon Cycle
Intro to Physical Oceanography	Intro to Atmospheric Radiation
Dynamics of the Atmosphere and Oceans	Partial Differential Equations
Atmospheric Thermodynamics	Modeling in Applied Mathematics
Introduction to Time Series	Chaotic Dynamics
High-Performance Scientific Computing	

PROFESSIONAL ACTIVITIES, OUTREACH, & MENTORING

· Judge, Boulder Valley School District Science Fair *2019*
· Referee, *JGR: Oceans*, *Earth System Science Data* [Publons] *2018–present*
· Member, Climate Gamers [Ice Ages Video] [Climate Models Video] *2018–present*
· Scientist, Skype a Scientist (video calls with high school science classes) *2018–present*
· Judge, SOARS Poster Conference *2017*
· Programming Mentor for Gabriela Negrete-Garcia (SOARS) *2017*
· Committee Lead, oceanography faculty search; prospective student; mentorship *2017–present*
· Ambassador, Office of Fellowships; Office of Undergraduate Research; Sustainable Carolina *2013–2016*

TEACHING & GRADING

University of Colorado Boulder
Grader, *Biogeochemical Oceanography* (20 students) *Spring 2019*
Guest Lecturer, *Our Changing Climate* (Latent and Sensible Heat) *Fall 2018*
University of South Carolina

Grader, *Ordinary Differential Equations* (39 students) *Spring 2016*
Lecturer, *University 101* (20 students) *Fall 2015*

University of Texas Rio Grande Valley
Guest Lecturer, *Intro to Scientific Computing for Earth Sciences* *Spring 2019*
(Color Theory and Matplotlib; Plotting with Shapefiles)

SELECTED PRESENTATIONS

Conferences:

1. Brady, RX, NS Lovenduski, MA Alexander, MG Jacox, and N Gruber. On the role of climate modes in modulating the air-sea CO_2 fluxes in Eastern Boundary Upwelling Systems. 12th Graduate Climate Conference: Pack Forest, WA. November 2018. (Talk)
2. Brady, RX, NS Lovenduski, MA Alexander, MG Jacox, and N Gruber. What controls the variability of CO_2 fluxes in Eastern Boundary Upwelling Systems? Ocean Sciences Meeting: Portland, OR. February 2018. (Talk) [Slides]
3. Brady, RX and NS. Lovenduski. CO_2 flux variability in Eastern Boundary Upwelling Systems. 10^{th} International Carbon Dioxide Conference: Interlaken, Switzerland. August 2017. (Poster) [PDF]
4. Brady, RX, RR Rykaczewski, and MA Alexander. Emergence of anthropogenic trends in California Current upwelling in the presence of internal climate variability. CESM Workshop: Breckenridge, CO. June 2016. (Talk) [Slides]
5. Brady, RX, RR Rykaczewski, and MA Alexander. Emergence of anthropogenic trends in California Current upwelling in the presence of internal climate variability. Ocean Sciences Meeting: New Orleans, LA. February 2016. (Poster) [PDF]
6. Brady, RX, RR Rykaczewski, and MA Alexander. The influence of natural variability on future California Current upwelling. AGU Fall Meeting: San Francisco, CA. December 2015. (Talk) [Slides]
7. Brady, RX, MA Alexander, and RR Rykaczewski. Quantifying natural and anthropogenic variation in California Current upwelling. Eastern Pacific Ocean Conference: South Lake Tahoe, CA. September 2015. (Talk) [Slides]
8. Brady, RX, and RR Rykaczewski. Consequences of changing high-pressure zones on future coastal upwelling. Ocean Sciences Meeting: Honolulu, HI. February 2014. (Poster) [PDF]

Invited:

1. Brady, RX, NS Lovenduski, MA Alexander, MG Jacox, and N Gruber. On the role of climate modes in modulating the air-sea CO_2 fluxes in Eastern Boundary Upwelling Systems. EBUS Webinar Series. March 2019 (Talk)
2. Brady, RX, M Maltrud, P Wolfram, and NS Lovenduski. Southern Ocean Carbon Hotspots in E3SM. Climate, Ocean, and Sea Ice Modeling (COSIM) Team: Los Alamos, NM. August 2018. (Talk)
3. Brady, RX, RR Rykaczewski, and MA Alexander. Emergence of Anthropogenic Trends in California Current Upwelling in the Presence of Natural Climate Variability. NCAR Oceanography Section: Boulder, CO. March 2016. (Talk)

Workshops:

1. Brady, RX. Introduction to Git Version Control. ATOC Graduate Student Forum: Boulder, CO. March 2019.

2. Brady, RX. Effective Use of Color in Scientific Visualization. Scientific Programming and Data Visualization (ATOC Course). Boulder, CO. November 2018. [Slides]

3. Brady, RX. Effective Use of Color in Scientific Visualization. ATOC Graduate Student Forum: Boulder, CO. October 2018.