KRISTIN C. BURKHOLDER, PH.D.

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EDUCATION

2006 – 2011	Ph.D. Physical Oceanography; Nicholas School of the Environment, Duke University. Dissertation: *Subtropical to Subpolar Lagrangian Pathways in the North Atlantic and Their Impact on High Latitude Property Fields.*
2002 – 2006	B.S. Chemistry; Bucknell University; *Magna Cum Laude.*

RESEARCH AND PROFESSIONAL INTERESTS

Large-scale ocean circulation; Gulf of Maine circulation and its variability; climate change; climate change education and communication; women in science.

EMPLOYMENT

2020- present	Associate Professor of Environmental Science, Environmental Sciences and Studies Department, Stonehill College, Easton, MA.
2016- 2020	Assistant Professor of Environmental Science, Environmental Sciences and Studies Program, Stonehill College, Easton, MA.
2015 – 2016	Instructor of Environmental Science, Environmental Sciences and Studies Program, Stonehill College, Easton, MA.
2012 – 2014	Postdoctoral Teaching Fellow, Environmental Sciences and Studies Program, Stonehill College, Easton, MA.
Spring 2012	Visiting Lecturer, Environmental Studies Program, Wellesley College, Wellesley, MA.
Spring 2012	Adjunct Assistant Professor, Department of Natural and Applied Sciences, Bentley University, Waltham, MA.

COURSES TAUGHT

1. Climate Science (Stonehill: 2012, 2014-2018, ’20, ’21, ’23, ‘24; Bentley: ’12; Wellesley: ‘12)
2. The Ethics and Science of Climate Change (Stonehill: 2013, 2016, 2017, 2018)
3. Introduction to Oceanography (Stonehill: 2013, 2015, 2017, 2019, 2023, 2025)
4. Principles of Environmental Science (Stonehill: 2012, 2013, 2014, 2015, 2016, 2017, 2019, 2020)
5. Environmental Science Research Methods (Stonehill: 2015, 2016, 2017, 2018, 2019)
6. Physical Geology (Stonehill: 2018, 2020, 2021, 2022, 2023, 2024)
7. Senior Seminar (Stonehill: 2020, 2021, 2022, 2023)

PUBLICATIONS (* denotes co-authorship by an undergraduate student)

1. Behl, M., Clem, S., Mouw, C., Legg, S., Hackett, E., Burkholder, K., Karnauskas, K., Gille, S., Freeman, L., Venayagamoorthy, K. and J. Miller (2025), Mentors: The Hidden Beneficiaries of Mentoring. *Oceanography. In revision.*

2. Burkholder, K., Lee, J., Kime, M.*, Calabro, C.* and J. Manning (2024), Decadal-Scale Variability in the Gulf of Maine Coastal Current: The Impact of Changing Climate Conditions on Coastal Circulation. *Journal of Geophysical Research: Oceans,* 129, e2023JC020512, doi: 10.1029/2023JC020512

3. Hirst, R., Wai-Ling Packard, R., Liotta, L., Bleakley, B., Lombardi, P. and K. Burkholder (2021), Faculty Learning at the Individual and Group Level: A Multi-Year Analysis of an Interdisciplinary Science FLC Focused on Inclusive Teaching and Mentoring, *J. Coll. Sci. Teach.,* 50(6).

4. Burkholder, K.C., Devereaux, J.*, Grady, C.*, Solitro, M.* and S. Mooney (2017), Longitudinal Study of the Impacts of a Climate Change Curriculum on Undergraduate Student Learning: Initial Results, *Sustainability*, 9(913), doi: 10.3390/su9060913

5. Burkholder, K. C. and M. S. Lozier (2014), Tracing pathways of the North Atlantic meridional overturning circulation's upper limb, *Geophysical Research Letters*, 41(12), 4254-4260, doi: 10.1002/2014GL060226.

6. Burkholder, K. C. and M. S. Lozier (2011), Subtropical to subpolar pathways in the North Atlantic: Deductions from Lagrangian trajectories, *J. Geophys. Res.*, 116, C07017, doi:10.1029/2010JC006697.

7. Burkholder, K. C. and M. S. Lozier (2011), Mid-depth Lagrangian pathways in the North Atlantic and their impact on the salinity of the eastern subpolar gyre. *Deep Sea Research I*, doi:10.1016/j.dsr.2011.08.007.

GRANT ACTIVITIES

2023-present	National Sea Grant Marine Debris Community Action Coalitions: Special Projects "H": *Massachusetts Marine Debris from Source to Stellwagen,* co-Principal Investigator. $286,284.
2022-present	Maine Sea Grant Program Development Award: *Student-Built, Satellite-Tracked, Fishermen-Deployed Drifters: A Relaunch*, Principal Investigator. $5,000.
2018-2020	Maine Sea Grant Program Development Award: *A Lagrangian Study of the Subsurface Pathways in the Gulf of Maine Using a High-Resolution Model of Ocean Circulation*, Principal Investigator. $5,000.
2017-2023	National Science Foundation (NSF), Strand 2: S-STEM: Design and Dev- Type 1; *Overcoming the Challenges to the Science Education of a Liberal Arts College for Economically Disadvantaged Students*, Co-Investigator. $999,999.
2019	Northeast Cyberteam, Selected Project, *Tracing Oceanic Pathways Using High Resolution Model Output*
2017	Inclusive Excellence Grant; *The Stonehill Dove Campaign*.
2017	Dean's Publishing Support Grant
2013, 2016	Stonehill College Center for Teaching and Learning Pedagogy Travel Grant

2008 National Science Foundation Graduate Research Fellowship Program, Honorable Mention.

CONFERENCE PRESENTATIONS (* denotes a contribution from an undergraduate student)

1. Burkholder, K. and B. Bray, 2024. Massachusetts Marine Debris From Source to Stellwagen: A Comprehensive Suite of Tools for Environmental Educators. *Sea Grant Marine Debris Symposium,* Silver Springs, MD.

2. Cucinotta, S.*, Burkholder, K. and G. Gawarkiewicz, 2024. Surface Drifter Trajectories on Georges Bank: An Investigation of the Influence of Warm Core Rings on Drifter Velocities. *American Geophysical Union Ocean Sciences Meeting,* New Orleans, LA.

3. Lee, J., Burkholder, K., Kime, M.*, Calabro, C.* and J. Manning, 2024. Decadal-Scale Variability in the Gulf of Maine Coastal Current: The Impact of Changing Climate Conditions. *American Geophysical Union Ocean Sciences Meeting,* New Orleans, LA.

4. Pelletier, E., Burkholder, K. and J. Manning, 2024. Student-Built, Fishermen-Deployed, Satellite-Tracked Drifters off the Coast of New England. *American Geophysical Union Ocean Sciences Meeting,* New Orleans, LA.

5. Burkholder, K., Buckley, J., A. Bennett and B. Bray, 2023. From Source to Stellwagen: A Comprehensive Suite of Tools for Environmental Educators. *Sea Grant Marine Debris Symposium.* Held virtually.

6. Manning, J., Pelletier, E. and K. Burkholder, 2023. Student-Built, Satellite-Tracked, Fisherman-Deployed Drifters. *Building a Cost-Effective Coastal Biogeochemical Observing Network in Collaboration with the Commercial Fishing Community; An OCB Scoping Workshop.* Woods Hole, MA.

7. Calabro, C.*, J. Manning, R. He and K. Burkholder, 2022. Examining Long-term Changes in a Coastal Current: Modeled and Observed Drifter Trajectories in the Gulf of Maine. *American Geophysical Union Ocean Sciences Meeting,* Honolulu, HI. Held virtually.

8. Kime, M.* and K. Burkholder, 2022. Analyzing Interannual Variability in the Gulf of Maine Spring Bloom. *American Geophysical Union Ocean Sciences Meeting,* Honolulu, HI. Held virtually.

9. Burkholder, K., T. Ladue* and R. He, 2020. Following the Nutrients: Subsurface Lagrangian Pathways in the Gulf of Maine. *American Geophysical Union Ocean Sciences Meeting,* San Diego, CA.

10. Ladue, T.*, R. He and K. Burkholder, 2019. Comparing Subsurface Property Fields Within High Resolution Models of the Gulf of Maine. *Gulf of Maine 2050 International Symposium,* Portland, ME.

11. J. Irving*, E. McDowell*, A. Pinckney*, T. Ladue*, R. He, and K. Burkholder, 2019. Modelling Subsurface Lagrangian Pathways in a Changing Gulf of Maine. *Gulf of Maine 2050 International Symposium*, Portland, ME.

12. Pinckney, A.*, J. Irving*, E. McDowell*, R. He and K. Burkholder, 2018. Subsurface Nutrient Delivery in the Gulf of Maine: A Study of Subsurface Lagrangian Pathways in a High Resolution Ocean Model. *American Geophysical Union Annual Meeting,* Washington D.C.

13. McDowell, E.*, K. Burkholder and R. He, 2018. Compositional Changes in the Gulf of Maine Source Waters on Seasonal to Decadal Timescales. *American Geophysical Union Ocean Sciences Meeting*, Portland, OR.

14. Irving, J.*; K. Burkholder and R. He, 2018. Modelling the subsurface pathways of nutrient rich water in the Gulf of Maine. *American Geophysical Union Ocean Sciences Meeting*, Portland, OR.

15. Burkholder, K. C. and S. Mooney, 2016. Changing minds about the changing climate: a longitudinal study of the impacts of a climate change curriculum on undergraduate student knowledge and attitudes. *American Geophysical Union Annual Meeting,* San Francisco, CA.

16. Bibaud, H.* and K.C. Burkholder, 2016. Variability in the frequency and intensity of Massachusetts snowfall. *American Geophysical Union Annual Meeting,* San Fancisco, CA.

17. McDowell, E.* and K.C. Burkholder, 2016. Assessing the impact of ocean warming on the subsurface property fields in the Gulf of Maine. *American Geophysical Union Annual Meeting,* San Francisco, CA.

18. Burkholder, K.C. and S. Mooney, 2016. Longitudinal study of the impacts of a climate change curriculum on undergraduate student attitudes, knowledge and action. *Association for Environmental Studies and Sciences Annual Meeting,* Washington D.C.

19. Johnson, A.* and K.C. Burkholder, 2016. Changes to the Lagrangian pathways of the Gulf of Maine Coastal Current from 1988-2015. *4th Annual Environmental Research Colloquium,* Boston, MA.

20. Farrington, P.* and K.C. Burkholder, 2016. An analysis of Massachusetts precipitation: changes in the frequency and intensity of rainfall events. *4th Annual Environmental Research Colloquium,* Boston, MA. ***(Outstanding Presentation by an Undergraduate, 3ed Place)***

21. Mooney, S., J. Devereaux* and K.C. Burkholder, 2014. Climate Change Conversations and the Community. *Association for Environmental Studies and Sciences Annual Meeting,* New York, NY.

22. Burkholder, K.C. and M. S. Lozier, 2014. Tracing the pathways of the upper limb of the North Atlantic Meridional Overturning Circulation. *American Geophysical Union Ocean Sciences Meeting*, Honolulu, HI

23. Burkholder, K.C. and M. S. Lozier, 2012. Lagrangian pathways connecting the subtropical and subpolar gyres in the North Atlantic. *American Geophysical Union Fall Meeting*, San Francisco, CA.

24. Lozier, M.S., S. F. Gary, K.C. Burkholder, A. S. Bower and C.W. Böning, 2011. Lagrangian pathways connecting the subtropical and subpolar gyres in the North Atlantic. *European Geophysical Union*, Vienna, Austria.

25. Burkholder, K.C. and M. S. Lozier, 2011. Northward Transport in the North Atlantic: How Do Warm Waters Reach High Latitudes? *National Council for Science and the Environment (NCSE) National Conference on Science, Policy and the Environment: Our Changing Oceans.* Washington, DC.

26. Burkholder, K. C. and M. S. Lozier, 2010. Spatial and temporal variability in subtropical to subpolar gyre exchange in the North Atlantic. *2010 U.S. Atlantic Meridional Overturning Circulation Annual Meeting*, Miami, FL.

27. Burkholder, K. C. and M. S. Lozier, 2010. Wind induced variability in subtropical to subpolar gyre exchange in the North Atlantic. *American Geophysical Union Ocean Sciences Meeting*, Portland, OR.

28. Burkholder, K. C. and M. S. Lozier, 2009. The impact of gyre dynamics on the mid-depth salinity signature of the eastern North Atlantic. *European Geosciences Union General Assembly*, Vienna, Austria.

29. Cashman, K. E. and M. S. Lozier, 2008. Variability in the northward penetration of Mediterranean Overflow Water *American Geophysical Union Ocean Sciences Meeting*, Orlando, FL.

FELLOWSHIPS AND HONORS

2020	Outstanding Faculty Service Award, *Given to Members of the Science Faculty Learning Community*
2018	Stonehill College Student Life Jean Hamler Diversity and Social Justice Award, *Given to Members of the Science Faculty Learning Community*
2006	Phi Beta Kappa, Bucknell University
2002-2006	Dow Chemical Company Scholarship
2005	American Chemical Society Undergraduate Award in Analytical Chemistry
2003	President's Award for Distinguished Academic Achievement, Bucknell University.

CRUISES AND SEA EXPERIENCE

2007	CLIMODE Research Cruise: Woods Hole, MA to Saint George's, Bermuda.
2005	SEA Education Association: Honolulu, HI to San Francisco, CA.

PROFESSIONAL SOCIETIES

2009- 2011 and 2016- present	Mentoring Physical Oceanography Women to Increase Retention (MPOWIR)

2007 – present American Geophysical Union

INVITED TALKS, SEMINARS AND PANELS

May, 2023	The Student Drifter Program, *Enabling Tools for Citizen Science in Ocean Data Collection,* The Ocean Race, Newport, RI. *Invited Speaker.*
February, 2023	Prayers for a Feverish Planet, *Nakamichi Concert Series*, co-organizer and speaker.
October, 2021	Women in STEM Panel Discussion, *Melrose Middle School,* held virtually.
July, 2021	Math and the Gulf of Maine, *Girls Get Math,* Easton, MA.
May, 2021	Career Pathways Combining Education with Oceanography, *MPOWIR Seminar Series*, held virtually.
November, 2020	What Happened and What's to Come: A Post-Election Panel Discussion. *Martin Institute Event Series,* held virtually.
June, 2020	The Environmental Impact of COVID-19, *Biology Department COVID-19 Seminar Series,* held virtually.
December, 2018	*The Adventures, Opportunities and Challenges of Being a Geoscience Faculty Member at a Primarily Undergraduate Institution,* American Geophysical Union Fall Meeting, Washington D.C. *Co-convener and panelist.*
April, 2017	Climate Change and New England: Why Should We Care? *First Lutheran Church of Brockton, Lenten Lunch Series,* Brockton, MA.
April, 2016	Climate Change in New England: Will We Be "Feeling the Bern" or are Climate Change Predictions All "Trumped" Up? *Recreate '68 Seminar Series*, Easton, MA.
April, 2013	Climate Change and Boston: Why Should You Care? *Sigma Pi Alpha Sorority Regional Meeting*, Danvers, MA.

THESIS STUDENTS MENTORED

2025	Jacob Smith *Thesis: Title TBD*
2024	Samantha Cucinotta *Thesis: The Impact of Warm Core Rings on Drifter Position and Velocity in the Georges Bank Shelfbreak Jet. Post Graduate Plans: Employment, Rhode Island Department of Environmental Management.*
2022	Meredith Kime *Thesis: Analyzing the Interannual Variability of the Gulf of Maine Spring Bloom. Post Graduate Plans: Ph.D. program in physical oceanography, Columbia University.*
2022	Cassie Calabro *Thesis: Examining Long Term Changes in the Gulf of Maine Coastal Current. Post Graduate Plans: Employment, Clean Harbors.*
2021	Nick Porter *Thesis: The Influence of Turbulence on Nutrient Distribution Pathways in the Gulf of Maine. Post Graduate Plans: Masters program in physical oceanography, UMass Dartmouth.*
2019	Anna Pinckney *Thesis: A Study of Subsurface Nutrient Pathways in the Gulf of Maine Using a High Resolution Model. Post Graduate Plans: Ph.D. program in earth and atmospheric sciences, University of Colorado Boulder.*

2018	John Irving *Thesis: Modeling Subsurface Nutrient Pathways in the Gulf of Maine. Post Graduate Plans: Ph.D. program in ocean and atmospheric sciences, Florida State University.*
2018	Elaina McDowell *Thesis: Compositional Changes in the Gulf of Maine Source Waters on Seasonal to Decadal Timescales. Post Graduate Plans: employment.*
2016	Hayley Bibaud *Thesis: Variability in Massachusetts Snowfall: Changes to the Frequency and Intensity of Snowfall and the Duration of the Winter Season. Post Graduate Plans: Masters program in resource management, University of New Hampshire.*
2016	Patrick Farrington *Thesis: An analysis of Massachusetts precipitation: changes in the frequency and intensity of rainfall events. Post Graduate Plans: employment.*
2016	Alexis Johnson *Thesis: Changes in the Lagrangian pathways of the Gulf of Maine Coastal Current from 1988-2015. Post Graduate Plans: Ph.D. program in physical oceanography, University of Rhode Island.*
2014	Kaylie Bissonnette *Thesis: Calanus Finmarchicus transport and retention within the Southern Gulf of Maine and its impact on the distribution of the North Atlantic right whale. Post Graduate Plans: Masters in environmental management, Duke University.*

NON-THESIS STUDENTS MENTORED

SURE Students	Elaina McDowell (2016, 2017), Hayley Bibaud (2016), John Irving (2017), Taylor Ladue (2019), Cassie Calabro (2021), Meredith Kime (2021)
Semester Students	Jess Devereaux (Fall, 2015), Hayley Bibaud (Spring, 2016), Elaina McDowell (Spring, 2016), Emily Van Auken (Fall, 2016 and Fall, 2017), John Irving (Spring, 2017), Anna Pinckney (Spring, 2018), Taylor Ladue (Spring, 2019) and Kaitlin Kornachuk (Spring, 2019), Cassie Calabro (2021), Meredith Kime (2021), Samantha Cucinotta (2023), Mya Carswell (2023), Jacob Smith (2024)
Thesis Committees	Matthew Marshall (2017), Parker Dunn (2018), Claire Farnan (2019), Molly McCutcheon (2021), Kristina McEvoy (2023)
Data Science Mentor	Mark Gambon (2017), Doug Gibbons (2019)

IDEAS (STUDENT-LED) COURSES AND STUDENT CLUBS SUPERVISED

Spring, 2018	IDEAS: Find Your Balance (Hannah Parker ’19)
Spring, 2018	IDEAS: Communicating Climate Change (Emily Van Auken, ’18)
Spring, 2017	IDEAS: Food for Thought (Jeremy Halstead ’17 and Mark Gambon ’17)
2019-present	Students for Environmental Action, Faculty Mentor
2020-present	Outdoor Recreation Club, Faculty Mentor

SERVICE AT STONEHILL

2022- present	Chair, Environmental Sciences and Studies Department
2019-2022	Director, Environmental Sciences and Studies Program

Fall, 2022	Interim Co-Vice President of Faculty Senate
2021- present	Faculty Senate, STEM representative (2021-2024) and at large representative (2024-present)
2018- 2020	General Education Task Force
2023- present	Faculty Athletic Representative
2022- present	Team Faculty Liaison, Women's Ice Hockey
2016 - 2022	Environmental Stewardship Committee, faculty representative
2016 – present	Steering committee member Earth and Planetary Sciences Program.
2016 - 2021	General Education Committee, STEM representative
2016 - 2020	Marine Studies Consortium, Stonehill Representative, Secretary (2017-2018) and President (2019-present)
2013 – present	Advisor, Environmental Sciences and Studies Program
2013 – present	Environmental Sciences and Studies Program Steering Committee Member
Summer, 2019	General Education Working Group, Member
2017	Interview Committee for the Dean of the School of Arts and Sciences
2015 – Present	Search committee member (Ecology, Computer Engineering, Math)
2022	Search committee chair (Farm Director)

SERVICE TO COMMUNITY

2024–Present	NECHE Evaluator
2019 – Present	Mentor Group Leader, Mentoring Physical Oceanography Women to Increase Retention (MPOWIR)
2016 – 2019	Steering Committee Member, Mentoring Physical Oceanography Women to Increase Retention (MPOWIR)
2019, 2015	National Science Foundation Proposal Reviewer
October, 2017	Invited Senior Scientist, *Pattullo Conference* (Sponsored by Mentoring Physical Oceanography Women to Increase Retention (MPOWIR)), Warrenton, VA.
December, 2016	Volunteer Judge for the Outstanding Student Presentation Awards, *American Geophysical Union Annual Meeting*, San Francisco, CA
February, 2014	Volunteer judge of student presentations, *American Geophysical Union Ocean Sciences Meeting*, Honolulu, HI

CONTINUING EDUCATION

2025-present	Higher Education Resource Services (HERS) Leadership Institute, Participant
2022-2023	Stonehill LEAD Program (Leadership Exploration and Development), Participant
2017-present	Faculty Learning Community Participant: Supporting At-Risk STEM Students (*supported by the NSF grant: Overcoming the Challenges to the Science Education of a Liberal Arts College for Economically Disadvantaged Students)*
2022	Maine Fishermen's Forum, Attendee
2018	Faculty Learning Community Participant: Teaching Controversial Science
Spring, 2018	Assessment Conference at New England College, Participant