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

2016- present	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.
2006 – 2011	Research and Teaching Assistant, Division of Earth and Ocean Sciences, Nicholas School of the Environment, Duke University, Durham, NC.

COURSES TAUGHT

1. Climate Science (Stonehill: 2012, 2014, 2015, 2016, 2017, 2018; Bentley: 2012; Wellesley: 2012)
2. The Ethics and Science of Climate Change (Stonehill: 2013, 2016, 2017, 2018)
3. Introduction to Oceanography (Stonehill: 2013, 2015, 2017)
4. Principles of Environmental Science (Stonehill: 2012, 2013, 2014, 2015, 2016, 2017, 2019)
5. Environmental Science Research Methods (Stonehill: 2015, 2016, 2017, 2018)
6. Physical Geology (Stonehill: 2018)

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

1. 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

2. 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.

3. 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.

4. 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

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
2017-2022	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-principal Investigator
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
2009, 2010	Duke University Graduate School Conference Travel Grant
2008	National Science Foundation Graduate Research Fellowship Program, Honorable Mention

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

1. 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.

2. 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.

3. 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.

4. 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.

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

6. 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.

7. 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.

8. 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.

9. 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)***

10. 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.

11. 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

12. 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.

13. 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.

14. 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.

15. 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.

16. 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.

17. 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.

18. 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

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

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

2019	Anna Pinckney *Thesis: A Study of Subsurface Nutrient Pathways in the Gulf of Maine Using a High Resolution Model*
2018	John Irving *Thesis: Modeling Subsurface Nutrient Pathways in the Gulf of Maine*

2018	Elaina McDowell *Thesis: Compositional Changes in the Gulf of Maine Source Waters on Seasonal to Decadal Timescales*
2016	Hayley Bibaud *Thesis: Variability in Massachusetts Snowfall: Changes to the Frequency and Intensity of Snowfall and the Duration of the Winter Season*
2016	Patrick Farrington *Thesis: An analysis of Massachusetts precipitation: changes in the frequency and intensity of rainfall events*
2016	Alexis Johnson *Thesis: Changes in the Lagrangian pathways of the Gulf of Maine Coastal Current from 1988-2015*
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*

NON-THESIS STUDENTS MENTORED

SURE Students	Elaina McDowell (2016, 2017), Hayley Bibaud (2016), John Irving (2017), Taylor Ladue (2019)
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)
Thesis Committees	Matthew Marshall (2017), Parker Dunn (2018), Claire Farnan (2019)
Data Science Mentor	Mark Gambon (2017), Doug Gibbons (2019)

IDEAS COURSES SUPERVISED

Spring, 2018	Find Your Balance (Hannah Parker ’19)
Spring, 2018	Communicating Climate Change: There is no Planet B! (Emily Van Auken, ’18)
Spring, 2017	Food for Thought (Jeremy Halstead ’17 and Mark Gambon ’17)

SERVICE AT STONEHILL

2018- present	General Education Task Force
2016 - present	Environmental Stewardship Committee, faculty representative
2016 – present	Steering committee member and founding member of Earth and Planetary Sciences Program.
2016 - present	General Education Committee, STEM representative
2016 - present	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

2017	Interview Committee for the Dean of the School of Arts and Sciences
2015 – 2016	Search committee member (Ecology)

SERVICE TO OCEANOGRAPHIC COMMUNITY

2019 – present	Mentor Group Leader, Mentoring Physical Oceanography Women to Increase Retention (MPOWIR)
2016 – present	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

2017, 2019	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)*
2018	Faculty Learning Community Participant: Teaching Controversial Science
Spring, 2018	Assessment Conference at New England College, Participant