Isabela Le Bras

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RESEARCH INTERESTS

I am an observational physical oceanographer studying the large scale ocean circulation. My recent research focus has been on better understanding how dense waters are formed and spread into the deep North Atlantic, and how Arctic freshwater impacts the Atlantic's overturning circulation.

EDUCATION

Ph.D. in Physical Oceanography 2011–2017
Massachusetts Institute of Technology – Woods Hole Oceanographic Institution Joint Program
"Dynamics of North Atlantic Western Boundary Currents"
Thesis adviser: John M. Toole

B.A. in Physics, Minor in Mathematics 2006–2010
University of California, Berkeley
Highest honors in physics and general scholarship

APPOINTMENTS

Assistant Scientist II 2024–present
Woods Hole Oceanographic Institution (WHOI)

Assistant Scientist I 2020–2024
Woods Hole Oceanographic Institution (WHOI)

Postdoctoral Scholar 2017–2020
Scripps Institution of Oceanography
Postdoctoral adviser: Fiamma Straneo

Graduate Research Assistant 2011–2017
Woods Hole Oceanographic Institution
Graduate supervisor: John M. Toole

SUBMITTED PUBLICATIONS

1. U. Miller, J. Palter, E. Park, D. Atamanchuk, K. Fogaren, Y. Fu, J. Karstensen, J. Koelling, **I. A. Le Bras**, H. Nagao, D. Nicholson, H. Palevsky, M. Yoder, "The central role of the Labrador Sea in North Atlantic ventilation", **under review in Nature Geosciences**, (*Role: Led the Irminger Sea component of the project. Met with postdoc Miller regularly to discuss the mechanisms responsible for Labrador Sea ventilation and how to interpret the data. Provided detailed feedback on the manuscript.*).

2. J. A. Kosty, M.-L. Timmermans, **I. A. Le Bras**, "Dynamic Modes and Energy Pathways in the Changing Beaufort Gyre", **submitted to Journal of Geophysical Research: Oceans**, (*Role: Co-PI on the Beaufort Gyre project, ensured quality control of the moored data. Provided graduate student Kosty with feedback on the scientific interpretation and manuscript.*).

PEER-REVIEWED PUBLICATIONS

Of the 31 publications listed below, 11 are as first author, which means I conceived of and led the study independently. Where I am not first author, my role is specified. According to google scholar, I have an h-index of 15.

31. M.-L. Timmermans, **I. A. Le Bras**, J. O' Brien, A. Margevich, P. Macoun, B. Williams, S. Zimmerman, "Introduction to the Special Collection on the Arctic Ocean'sChanging Beaufort Gyre", *Journal of Geophysical Research: Oceans* doi.org/10.1029/2025JC023013, 130, e2025JC023013 (2025). *Role: Co-led the Beaufort Gyre project, had scientific discussions with Prof. Timmermans and provided feedback on the manuscript.*

30. **I. A. Le Bras**, M.-L. Timmermans, "Can the Marked Arctic Ocean Freshwater Content Increases of the Last Two Decades Be Explained Within Observational Uncertainty?", *Journal of Geophysical Research: Oceans* doi.org/10.1029/2024JC021061, 130, e2024JC021061 (2025).

29. M. F. de Jong, K. E. Fogaren, **I. A. Le Bras**, L. McRaven, H. I. Palevsky, "Atmospheric forcing dominates the interannual variability of convection strength in the Irminger Sea", *Journal of Geophysical Research: Oceans* doi.org/10.1029/2023JC020799, 130,e2023JC020799 (2025). *Role: Provided a corrected OOI Irminger moored profiler temperature and salinity dataset. Contributed to the interpretation of the data and editing of the manuscript.*

28. U. K. Miller, K. E. Fogaren, D. Atamanchuk, C. Johnson, J. Koelling, **I. A. Le Bras**, M. Lindeman, H. Nagao, D. P. Nicholson, H. Palevsky, E. Park, M. Yoder, J. Palter, "Oxygen optodes on oceanographic moorings: recommendations for deployment and in-situ calibration", *Front. Mar. Sci.* doi.org/10.3389/fmars.2024.1441976, 11:1441976 (2024). *Role: Provided Irminger Sea optode mooring data and auxiliary calibration datastreams for analysis. Met regularly with the group (monthly meetings) and provided input on at-sea optode calibration procedures as well as feedback throughout the calibration and writing process.*

27. F. Li, Y. Fu, M. S. Lozier, **I. A. Le Bras**, M. F. de Jong, Y. Wang, A. Sanchez-Franks, "Deep circulation variability through the eastern subpolar North Atlantic", *Journal of Climate* doi.org/10.1175/JCLI-D-23-0487.1, 37, 6221–6234 (2024). *Role: Contributed to the interpretation of results and manuscript editing. Corresponded with Feili Li and helped develop ideas about the storage of dense waters in the Irminger Gyre.*

26. F. W. Goldsworth, H. L. Johnson, D. P. Marshall, **I. A. Le Bras**, "Saturation of destratifying and restratifying instabilities during down-front wind events: a case study in the Irminger Sea", *Journal of Geophysical Research: Oceans* doi.org/10.1029/2023JC020365,

129, e2023JC020365 (2024). *Role: Contributed to the formulation of research questions, interpretation of results, and manuscript editing. Met with Fraser Goldsworth periodically, provided observational constraints from which to initalize and force model runs, and provided feedback on the connection between the model output and the observations.*

25. N. Beaird, F. Straneo, **I. A. Le Bras**, R. Pickart, W. Jenkins, "Glacial Meltwater in the Current System of Southern Greenland", *Journal of Geophysical Research: Oceans* doi.org/10.1029/2023JC019658, 128, e2023JC019658 (2023). *Role: Contributed to the interpretation of results and manuscript editing. Prepared mooring data for analysis and met with Nick Beaird periodically to discuss how to incorporate the moored observations.*

24. **I. A. Le Bras**, "Labrador Sea Water spreading and the Atlantic Meridional Overturning Circulation", *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* doi:10.1098/rsta.2022.0189, **381**: 20220189 (2023).

23. D. G. Evans, N. P. Holliday, S. Bacon, **I. A. Le Bras**, "Mixing and air-sea buoyancy fluxes set the time-mean overturning circulation in the subpolar North Atlantic", *Ocean Science* doi:10.5194/os-19-745-2023, 19 (3) (2023).
Role: Contributed to the interpretation of results and manuscript editing. Met with Gwyn Evans periodically and pointed out the role of mixing in altering the water mass structure.

22. **I. A. Le Bras**, J. Willis, I. Fenty,, "The Atlantic meridional overturning circulation at 35N from deep moorings, floats, and satellite altimeter", *Geophysical Research Letters* doi:10.1029/2022GL101931, 50, e2022GL101931 (2023).

21. H. Palevsky, S. Clayton and coauthors (including **I. A. Le Bras**), "OOI Biogeochemical Sensor Data: Best Practices & User Guide. Version 1.1.1. (peer-reviewed, GOOS endorsed practice)", *Ocean Observatories Initiative, Biogeochemical Sensor Data Working Group, 135pp* doi:10.25607/OBP-1865.2, (2023).
Role: Attended the scoping workshop and contributed to the oxygen section (chapter 2) including worked examples of oxygen calibration procedures.

20. A. Arroyo, M. L. Timmermans, **I. A. Le Bras**, A. Proshutinsky, W. Williams, S. Zimmerman, "Declining O2 in the Canada Basin halocline consistent with physical and biogeochemical effects of Pacific Summer Water warming", *Journal of Geophysical Research: Oceans* doi:10.1029/2022JC019418, 128 (4) (2022).
Role: Contributed to the interpretation of results and manuscript editing. Met with graduate student Ashley Arroyo periodically and provided feedback on the framing of her results.

19. **I. A. Le Bras**, J. Callies, T.C. Biló, F. Straneo, J. Holte, H. L. Johnson, "Slantwise Convection in the Irminger Sea", *Journal of Geophysical Research: Oceans* doi:10.1029/2022JC019071, 127, (2022). Editor highlight in EOS magazine

18. T.C. Biló , F. Straneo, J. Holte, **I. A. Le Bras**, "Arrival of New Great Salinity Anomaly Weakens Convection in the Irminger Sea", *Geophysical Research Letters* doi.org/10.1029/2022GL098857, (2022).
Role: Quality controlled and calibrated the first four years of Cape Farewell mooring data and established the methodology. Contributed to the interpretation of results and manuscript editing.

17. D. Atamanchuk, J. Palter, H. Palevsky, **I. A. Le Bras**, J. Koelling, and D. Nicholson., "Linking Oxygen and Carbon Uptake with the Meridional Overturning Circulation Using a Transport Mooring Array", *Oceanography,* doi.org/10.5670/oceanog.2021.supplement.02-03, (2021).
Role: Led the Irminger Sea portion of the project to add biogeochemical sensors to the OSNAP array and contributed to manuscript editing.

16. B. Berx, and coauthors (including **I. A. Le Bras**), "Climate-Relevant Ocean Transport Measurements in the Atlantic and Arctic Oceans", *Oceanography* **doi.org:10.5670/oceanog.2021.supplement.02-04**, (2021).
Role: Participated in large-scale ocean observing projects such as OSNAP and the Beaufort Gyre Observing System. Contributed to manuscript editing.

15. F. Li, M. S. Lozier, N. P. Holliday, W. Johns, **I. A. Le Bras**, B. Moat, S. Cunningham, M. F. de Jong, "Observation-based estimates of heat and freshwater exchanges from the subtropical North Atlantic to the Arctic", *Progress in Oceanography* doi:10.1016/J.POCEAN.2021.102640, (2021).
Role: Met and corresponded with Feili Li and provided feedback about the budget framework and interpretation of the results. Assisted with manuscript editing.

14. A. Pacini, R. S. Pickart, **I. A. Le Bras**, F. Straneo, and N. P. Holliday, "Cyclonic eddies in the West Greenland Boundary Current System", *Journal of Physical Oceanography* doi:10.1175/JPO-D-20-0255.1, 2087–2102 (2021).
Role: Met with graduate student Astrid Pacini periodically and provided feedback on the framing of her results. Provided a higher temporal resolution OSNAP Cape Farewell moored dataset for this study and contributed to manuscript editing.

13. F. Li, and coauthors (including **I. A. Le Bras**), "Subpolar North Atlantic western boundary density anomalies and the Meridional Overturning Circulation", *Nature Communications* doi:10.1038/s41467-021-23350-2, (2021).
Role: Provided the calibrated OSNAP Cape Farewell moored dataset and participated in discussions at OSNAP project meetings. Contributed to manuscript editing.

12. **I. A. Le Bras**, F. Straneo, M. Muilwijk, L. H. Smedsrud, F. Li, M. S. Lozier, and N. P. Holliday, "How much Arctic fresh water participates in the subpolar overturning circulation?", *Journal of Physical Oceanography* doi:10.1175/JPO-D-20-0240.1, 955–973 (2021).

11. A. Pacini, R. S. Pickart, F. Bahr, D. J. Torres, A. Ramsey, J. Holte, J. Karstensen, M. Oltmanns, F. Straneo, **I. A. Le Bras**, G. W. K. Moore, M. F. de Jong, "Mean Conditions and Seasonality of the West Greenland Boundary Current System near Cape Farewell", *Journal of Physical Oceanography* doi:10.1175/JPO-D-20-0086.1, 2849–2871 (2020).
Role: Met with graduate student Astrid Pacini periodically and provided feedback on the framing of her results. Provided the calibrated OSNAP Cape Farewell moored dataset and contributed to manuscript editing.

10. **I. A. Le Bras**, F. Straneo, J. Holte, M.F. de Jong, and N. P. Holliday , "Rapid export of waters formed by convection near the Irminger Sea's western boundary", *Geophysical Research Letters* doi.org/10.1029/2019GL085989, (2020). Editor highlight in EOS magazine

9. **I. A. Le Bras**, M. Sonnewald, and J.M. Toole, "A barotropic vorticity budget for the subtropical North Atlantic based on observations", *Journal of Physical Oceanography* doi: 10.1175/JPO-D-19-0111.1, (2019).

8. E. Frajka-Williams, and coauthors (including **I. A. Le Bras**), "Atlantic Meridional Overturning Circulation: Observed transports and variability", *Frontiers in Marine Science* **6**, (2019).
Role: Wrote section 1.4 of the supplementary information. Contributed to manuscript editing.

7. J. Hopkins, N. P. Holliday, D. Rayner, L. Houpert, **I. A. Le Bras**, F. Straneo, C. Wilson, and S. Bacon, "Transport variability of the Irminger Sea Deep Western Boundary Current from a mooring array", *Journal of Geophysical Research: Oceans* **124**, (2019).
Role: Gridded the CTD and LADCP data (Figure 7) during a stay at the National Oceanography Centre working with Penny Holliday. Contributed to the interpretation of results and manuscript editing.

6. M. S. Lozier, F. Li, and coauthors (including **I. A. Le Bras**), "A sea change in our view of overturning– first results from the Overturning in the Subpolar North Atlantic Program", *Science* **363**, 516–521 (2019).
Role: Provided the calibrated OSNAP Cape Farewell moored dataset and participated in discussions at OSNAP project meetings. Contributed to manuscript editing.

5. **I. A. Le Bras**, F. Straneo, J. Holte, and N. P. Holliday , "Seasonality of Freshwater in the East Greenland Current System from 2014 to 2016", *Journal of Geophysical Research: Oceans* **123**, (2018).

4. **I. A. Le Bras**, S. Jayne, and J. M. Toole, "The interaction of recirculation gyres and a deep boundary current", *Journal of Physical Oceanography* **48**, 573-590 (2018).

3. J. M. Toole, M. Andres, **I. A. Le Bras**, T. Joyce and M. McCartney, "Moored observations of the Deep Western Boundary Current in the NW Atlantic: 2004-2014", *Journal of Geophysical Research: Oceans* **122**, 7488-7505 (2017).
Role: Contributed to data preparation (I was a graduate student working with much of the same data and helped to identify issues). Produced figures 2, 4, and 6, and contributed to manuscript editing.

2. **I. A. Le Bras**, I. Yashayaev, and J. M. Toole, "Tracking Labrador Sea Water property signals along the Deep Western Boundary Current", *Journal of Geophysical Research: Oceans* **122**, 5348-5366 (2017).

1. **I. A. Le Bras** and T. Karin (co-first authors), A. Kehlberger, K. Singer, N. Daniilidis, and H. Haeffner, "Transport of charged particles by adjusting RF voltage amplitudes", *Applied Physics B* **106**, 117-125 (2012).

WHITE PAPERS

1. X. Liang, M. Messié, L. Smith, Z. Erickson, P. Heimbach, **I. A. Le Bras**, H. Pillar, C. Schultz, and C. Stock, "Pathways Connecting Climate Changes to the Deep Ocean: Tracing Physical, Biogeochemical, and Ecological Signals From Surface to Deep Sea Workshop Report", *28pp.* doi:10.1575/1912/72119, (2025).

MENTORING

MIT-WHOI Joint Program Ph.D. students
Hiroki Nagao: 2022-present
Marta Faulkner: 2023-present (co-advised by Mike Spall)

Ph.D. thesis committees
Lilli Enders (MIT-WHOI Joint Program): 2025-present
Julia Steckling (University of Bergen, Norway): 2024-present
Ellen Park (MIT-WHOI Joint Program): 2022-present
Ashley Arroyo (Yale): 2020-2025

Undergraduate students
Clara Barden (WHOI SSF): 2024 (co-advised by Mike Spall)
Blake Mincey (WHOI SSF): 2024
Megan Knight (WHOI SSF): 2021
Nash Keyes (Yale): 2021 (co-advised by Mary-Louise Timmermans)

INVITED PRESENTATIONS

SNAP North Atlantic virtual seminar — June 2025
"Observations of a direct boundary current ventilation pathway"

US CLIVAR/OCB Pathways Connecting Climate Changes to the Deep Ocean webinar — Apr 2024
"Pathways for dense waters into the deep North Atlantic: lessons from OSNAP and OOI"

Consortium for the Advancement of Marine Arctic Sciences (CAMAS) — Feb 2024
"Arctic Ocean budgets of volume, mass, and freshwater (2003-2020)"

University of Rhode Island Graduate School of Oceanography PO seminar — Sep 2023
"Slantwise convection in the Irminger Sea"

US CLIVAR summit POS panel presentation (virtual) — Aug 2023
"Observing the Atlantic Meridional Overturning Circulation"

CLIVAR Workshop on Meeting AMOC Observation Needs in a Changing Climate (virtual) — Jul 2023
"The AMOC at 35N from deep moorings, floats, and satellite altimeter"

European Geoscience Union (virtual) — Apr 2023
"The AMOC at 35N from deep moorings, floats, and satellite altimeter"

Royal Society AMOC meeting (virtual) — Dec 2022
"Labrador Sea Water spreading and the Atlantic Meridional Overturning Circulation"

NOAA GFDL formal seminar (virtual) — Nov 2022
"Slantwise convection in the Irminger Sea"

University of Rhode Island, physical oceanography seminar (virtual) — Mar 2021

"How much Arctic fresh water participates in the subpolar overturning circulation?"

NASA Goddard Institute for Space Studies, sea level rise seminar (virtual) Mar 2021
"How much Arctic fresh water participates in the subpolar overturning circulation?"

CLIVAR POS panel webinar (virtual) Oct 2020
"How much Arctic fresh water participates in the subpolar overturning circulation?"

Woods Hole Oceanographic Institution seminar Mar 2019
"Seasonality of Freshwater in the East Greenland Current System"

Lamont Doherty Earth Observatory, Ocean and Climate Physics Seminar Nov 2018
"Seasonality of Freshwater in the East Greenland Current System"

Ocean Sciences Meeting, Portland, Oregon Feb 2018
"Observing and Modeling the Deep Western Boundary Current"

LEAD AUTHOR PRESENTATIONS

Arctic and Subarctic Ocean Fluxes May 2025
"Connecting Arctic freshwater content changes to the Straits"

European Geoscience Union (virtual presentation) April 2025
"Observations of a direct boundary current ventilation pathway"

WHOI physical oceanography seminar July 2024
"Arctic Ocean budgets of volume, mass, and freshwater (2003-2020)"

Arctic Subarctic Ocean Fluxes May 2024
"Arctic Ocean budgets of volume, mass, and freshwater (2003-2020)"

WHOI physical oceanography seminar Nov 2022
"Slantwise convection in the Irminger Sea"

AGU OOI-OSNAP special session (virtual presentation) Dec 2021
"Boundary Current Ventilation in the Irminger Sea"

Arctic and Subarctic Ocean Fluxes (virtual presentation) Oct 2021
"Revisiting the Arctic freshwater budget from 2004 to 2010"

WHOI physical oceanography seminar Mar 2021
"How much Arctic fresh water participates in the subpolar overturning circulation?"

Ocean Carbon Biogeochemistry Meeting (virtual poster) Jun 2021
"Boundary Current Ventilation in the Irminger Sea"

European Geoscience Union (virtual Pico presentation) Apr 2021
"How much Arctic fresh water participates in the subpolar overturning circulation?"

Arctic and Subarctic Ocean Fluxes (ASOF) (virtual presentation) Oct 2020

"How much Arctic fresh water participates in the subpolar overturning circulation?"

Caltech oceanography group seminar — Jan 2020
"Freshwater, Convection, and Overturning in the Irminger Sea"

Ocean Sciences Meeting, San Diego, CA (oral presentation) — Feb 2020
"Rapid export of waters formed by convection near the Irminger Sea's western boundary"

U Mass Dartmouth seminar — Oct 2019
"The East Greenland Current System: Seasonality of Freshwater and Boundary Current - Convection Interactions"

Ocean Obs'19, Honolulu, HI (poster) — Sep 2019
"Observing the link between convection and deep water export"

Applied Physics Laboratory - University of Washington seminar — Jun 2019
"Seasonality of Freshwater in the East Greenland Current System"

EGU Meeting, Vienna, Austria (poster presentation) — Apr 2019
"Convection and deep water export in the Irminger Sea"

Scripps Institution of Oceanography, CASPO Seminar — Jan 2019
"Seasonality of Freshwater in the East Greenland Current System"

AGU Fall Meeting, Washington D.C. (poster) — Dec 2018
"Freshwater budgets for the ocean east of Greenland"

Oregon State University, College of Earth, Ocean and Atmospheric Sciences seminar — Oct 2018
"Seasonality of Freshwater in the East Greenland Current System"

Ocean Sciences Meeting, Portland, OR (oral presentation) — Feb 2018
"Seasonality of Freshwater in East Greenland Current System"

Irminger Sea Workshop, Southampton, UK (oral presentation) — Nov 2017
"Seasonality of Freshwater in East Greenland Current System"

Scripps Institution of Oceanography, CASPO Seminar — Oct 2017
"Advection and Stirring of the Deep Western Boundary Current"

Bjerknes Center, GFI seminar, Bergen, Norway — May 2017
"Observing and modeling sitrring of the Deep Western Boundary Curent"

USAMOC meeting, Santa Fe, NM (oral presentation) — May 2017
"Labrador Sea Water property changes along the Deep Western Boundary Current"

Oregon State University, College of Earth, Ocean and Atmospheric Sciences seminar — Mar 2017
"Stirring in the Deep Western Boundary Current"

EGU meeting, Vienna, Austria (poster) — Apr 2017
"A vorticity budget for the Gulf Stream"

Ocean Sciences Meeting, New Orleans, LA (poster) — Feb 2016

"Line W Measurements of the Deep Western Boundary Current reflect changes in Labrador Sea Convection"

Ocean Sciences Meeting, New Orleans, LA (poster) Feb 2016
"Clubes de Ciencia: Intensive science workshops in Mexico provide a unique opportunity for teaching, scientific and cultural exchange"

Series of seminars in Germany
1. GEOMAR, Kiel; 2. Marum, Universität Bremen; 3. Universität Hamburg Jan 2016
"Observing and Modeling Stirring of the Deep Western Boundary Current"

RAPID-USAMOC International Science Meeting, Bristol, UK (oral presentation) Jul 2015
"A decade of Line W observations of the Deep Western Boundary Current"

Graduate Climate Conference, Pack Forest, WA (poster) Oct 2014
"Deep western boundary current exchange with the interior"

Ocean Sciences Meeting, Honolulu, HI (poster) Feb 2014
"Testing classic theories of western boundary currents in the North Atlantic"

TEACHING

Fall 2025, Fall 2024: Co-instructor for MIT-WHOI Joint Program graduate school course "12.808: Introduction to Observational Physical Oceanography"

October 2020: Guest lecture on ocean convection in Boston College Oceanography class (virtual). Professor Hilary Palevsky.

April 2018: Guest lecture on water mass analysis and the overturning circulation for ice-ocean interactions course, Scripps Institution of Oceanography, CA. Professor Fiamma Straneo.

September 2016: Teaching assistant for introductory course on github and python through the Software Carpentry program, Woods Hole, MA.

January 2016: Designed and taught 3 lectures of an undergraduate short-course entitled "Anthropocene", Woods Hole, MA.

January 2015: Created curriculum and taught a week-long, all-day workshop on ocean physics to college and high school students using lab experiments and numerical simulations (in English and Spanish) at UABC in Ensenada, Mexico through Clubes de Cienca program.

Spring 2014: Took course through MIT's Teaching and Learning Laboratory on teaching methods culminating in MIT Teaching Certificate, Cambridge, MA.

Fall 2013: Teaching assistant for introduction to observational physical oceanography, MIT course 12.808 with Dr. Magdalena Andres and Dr. Jake Gebbie. MIT-WHOI Joint Program.

Summer 2013 and 2015: Short Course Instructor for graduate student math refresher. MIT-WHOI Joint Program.

PROFESSIONAL ACTIVITIES

Panel member: US National Oceanic and Atmospheric Administration's Atlantic Oceanographic and Meteorological Laboratory five-year review, 2025 (participated in week-long visit and helped compile a report, I was representing physical oceanography observing); US CLIVAR Processes, Observations, and Phenomena (POS) Panel (2020-2022)

WHOI committees: Scientific Staff Executive Committee (SciSEC, 2025-present), PO retreat organization (2025), PO recruitment committee (2024-), PO website committee (2020-2022), CDEI subcommittee for faculty hiring (2020-2022), PO ad hoc hiring committee (2021)

Scientific conference organizing committees: RAPID/OSNAP meeting hosted at WHOI (2025), WHOI Polar Day (2025), US CLIVAR/OCB Pathways Connecting Climate Changes to the Deep Ocean Workshop (2024)

Reviewer: National Science Foundation; Nature; Journal of Physical Oceanography; Geophysical Research Letters; Science Advances; Journal of Geophysical Research: Oceans; Journal of Climate; Nature Scientific Reports; Ocean Modelling; Ocean Science Discussions; Earth System Science Data Discussions (ESSDD)

Session chair: EGU meeting 2019, Ocean Circulation and Climate Open Session; Graduate Climate Conference 2013, Physical Oceanography session

Mentoring Physical Oceanography Women to Increase Retention: Group mentor (2024-), Steering committee member (2016-2020)

MEDIA

- ECCO website featured publication, "Deep Ocean Slowdown? Yes and no, as ECCO helps to show.", `https://ecco-group.org/storymaps.htm?id=88`, (2023).
- Derouin, S, "When winds and currents align, ocean mixing goes deep", *Eos* , `https://doi.org/10.1029/2022EO220515` (2022).
- Showstack, R., "Waiting on the next freshwater flush", *Oceanus* , `https://www.whoi.edu/oceanus/feature/waiting-on-the-next-freshwater-flush/` (2022).
- Interview with I. A. Le Bras, B. Keisling, and B. Ludka, "A conversation on building safe spaces for the LGBTQ+ community in the geosciences", *Nature Communications* **12**, 4058 (2021).
- Pratt, S.E., "Larger role for shallow intermediate waters in ocean circulation", *Eos* **101**, `https://doi.org/10.1029/2020EO141674` (2020).

- Le Bras, I.A., "Detours on the Oceanic Highway", *Oceanus* , `https://www.whoi.edu/oceanus/feature/deep-western-boundary-current/` (2014).

OUTREACH

2024: Lecture for the WHOI summer undergraduate students "The freshwater budget of the Arctic Ocean"

2023: Panelist for WHOI Ocean Encounters virtual event "The Arctic: Our planet on thin ice". Over 500 people in attendance.

2021: Panelist for Boston College SACNAS chapter (Society for Advancement of Chicanos/Hispanics and Native Americans in Science) career path discussion.

2020: Two presentations to summer undergraduate students from underrepresented backgrounds "Chimneys into the deep ocean: measuring the ocean circulation around Greenland."

2018, 2020: Organized LGBTQ+ networking event at Ocean Sciences Meeting.

2019: Talked about science careers and did experiments with groups of underrepresented sixth graders from San Diego on the Scripps Pier in collaboration with Birch Aquarium.

2018: Did experiments with students at Ocean Beach Elementary School for their "Science Night".

2015-2016: Judge for Falmouth High School Science Fair.

2014: Submerge! New York City marine science festival. Manned booth of hands-on activities for WHOI. Estimated more than 4000 people in attendance.

2014: Article for the general public: "Detours on the oceanic highway" Oceanus Magazine.

RESEARCH CRUISE PARTICIPATION

Fall 2021: Beaufort Gyre Observing System aboard CCGS Louis S. St Laurent
Responsible party for WHOI moorings and ice stations.
Chief Scientist: Sarah Zimmerman; Cambridge Bay, Canada. (30 days)

Summer 2020: Overturning in the Subpolar North Atlantic Program (OSNAP) cruise AR45.
Responsible party for cruise dissolved gas component and CTD watchstander.
Chief Scientist: Robert Pickart; Woods Hole, MA. (35 days)

Fall 2018: Overturning in the Subpolar North Atlantic Program (OSNAP) cruise AR30-06.
Cape Farewell mooring specialist and responsible party for CTD χ-pod measurements.
Chief Scientist: Robert Pickart; Reykjavik, Iceland (42 days)

July 2017: Sermilik fjord research expedition. CTD specialist.
Chief Scientist: Fiamma Straneo; Tassilaq, Greenland (14 days)

May 2014: Line W research cruise KN218. CTD watch leader.
Chief Scientist: John M. Toole; Woods Hole, MA (14 days)

Aug 2012: Line W research cruise KN208. CTD watch stander.
Chief Scientist: John M. Toole; Woods Hole, MA (14 days)

May 2012: WOCE/CLIVAR A22 hydrography cruise AT20-1A. CTD watch stander.
Chief Scientist: Ruth Curry; Woods Hole, MA - Bridgetown, Barbados (30 days)