

Institut für Meereskunde  
Universität Hamburg  
Bundesstraße 53  
20146 Hamburg, Germany

**e:** eleanor.frajka@uni-hamburg.de  
**t:** +49(0)40 42838-9540  
**web:** eleanorfrajka.com  
**ORCID:** 0000-0001-8773-7838

### Biography

I am a physical oceanographer who uses ocean observations to investigate ocean dynamics and circulation in a changing climate. I have a particular interest in problems spanning scales (from micro- to large-scale) or spheres (biogeosphere, cryosphere, atmosphere), and in methods that leverage traditional observations with new platforms and satellite data.

### Professional Experience

<b>Universität Hamburg</b> , Professor	2022 - present
<b>National Oceanography Centre</b> , Visiting Fellow	2022 - present
<b>National Oceanography Centre</b> , Science Leader	2022
<b>National Oceanography Centre</b> , Principal Research Scientist	2018 - 2022
<b>University of Southampton</b> , Associate Professor	2016 - 2018
<b>NASA Jet Propulsion Laboratory</b> , Visiting scientist	2016
<b>University of Southampton</b> , Lecturer	2012 - 2016
<b>National Oceanography Centre</b> , Senior Research Fellow	2009 - 2012

### Education

<b>Univ. of Washington</b> , Ph.D. in Physical Oceanography (with Peter Rhines)	2009
<b>University of Washington</b> , M.Sc. in Applied Mathematics	2009
<b>University of Washington</b> , M.Sc. in Oceanography (with Eric Kunze)	2005
<b>Harvard University</b> A.B. with honors in Applied Math (with Ana Barros)	2002

### Awards, Honours & Fellowships

Ocean Observing Team Award, The Oceanography Society	2021
Nicholas P. Fofonoff award, American Meteorological Society	2021
EGU Outstanding Early Career Scientist award	2017
Steinbach Scholar at Woods Hole Oceanographic Institution (WHOI)	2016
Vice Chancellor's teaching award (UoS FNES, £1000 prize)	2015
Fellow of the Higher Education Academy (FHEA)	2015
Excellence in Teaching Award, category: Best Feedback (UoS FNES)	2014
Outstanding student paper award, AGU/ASLO Ocean Sciences	2008
WHOI Geophysical Fluid Dynamics Fellowship	summer 2004
UW Program on Climate Change Fellowship	summer 2002
Summer Undergraduate Research Fellow at Scripps Inst. of Oceanogr.	summer 2000
Certificate of Distinction for teaching (Harvard)	2000
Research Science Institute at the Massachusetts Institute of Technology	1997

### Funding, competitive

<b>EU Horizon Europe, EPOC (PI)</b> . €8M. <i>with D. Desbruyeres, L. de Steur, V. Gunn, R. Ingvaldsen, J. Marotzke, R. Msadek, M. Rhein, J. Robson, D. Thornalley, W. von Appen.</i> Explaining and Predicting the Ocean Conveyor.	2022 - 2027
<b>UKRI-funded (ERC) fellowship PycnoGen (co-I)</b> . €3.5M. <i>with A. C. Naveira Garabato (PI)</i> , Generation of the global ocean's internal pycnocline in the ice-covered Southern Ocean.	2022 - 2027

<b>NERC Highlight topic, DEFIANT</b> (co-I). £5M. <i>with J. Wilkinson (PI), A. Shepherd, D. Feltham, M. Meredith, A. Naveira Garabato.</i> Understanding the Antarctic sea-ice decline in 2016, its representation in models and future predictions.	2021 - 2025
<b>PLOCAN Eastern Boundary Current from Gliders (EBC-glider)</b> (co-I). <i>with A. Hernandez-Guerra (PI),</i> Evaluate autonomous measurements for dynamic height and the contribution of local upwelling processes.	2023
<b>NERC UK BGC Argo array</b> (co-I). £1.5M. <i>with B. A. King (PI), N. Briggs, N. P. Holliday, M. S. Donnelly,</i> UK contribution to a global integrated biogeochemical autonomous ocean sensing network.	2021 - 2023
<b>NERC Next generation multi-disciplinary array (BGC-RAPID)</b> (co-I). £570k. <i>with P. J. Brown (PI), S. Loucaides, S. Fowell, D. Rayner,</i> Install lab-on-a-chip BGC sensors (pH, TAlk, nitrate, phosphate) and pCO <sub>2</sub> and pH sensors on the RAPID eastern boundary array.	2021 - 2022
<b>NERC Net Zero Oceanographic Capability (NZOC)</b> (co-I). £250k. <i>with L. Storey (PI),</i> NERC scoping project to inform planning for the future low carbon oceanographic research capability.	2020
<b>NERC Large Grant, DeCAdeS</b> (co-I), NE/T012714/1. £3.4M. <i>with A. Jenkins (PI), A. Naveira Garabato, T. Bracegirdle, A. Hogg, D. Jones, P. Holland, L. Boehme, A. G. Nurser, A. Phillips.</i> Drivers of Oceanic Change in the Amundsen Sea.	2020 - 2025
<b>Lloyd's Register autonomy demonstrator, ALADDIN</b> (co-I). £165k. Assuring Long-term Autonomy through Detection and Diagnosis of Irregularities in Normal operation	2020
<b>ERC Starting Grant Fellowship, TERIFIC</b> (PI), 803140. €1,999k. Freshwater pathways and convection/restratification in the Labrador Sea.	2018 - 2023
<b>NERC Standard grant, BLT Recipes</b> (co-I), NE/S001433/1. £889k. <i>with A. Naveira Garabato (PI), M.-J. Messias.</i> To assess the influence of bottom boundary layer turbulence on overturning.	2018 - 2023
<b>NERC Standard grant, DynOPO</b> (co-I), NE/K013181/1. £968k. <i>with A. Naveira Garabato (PI), M. Meredith, P. Abrahamsen, K. Nicholls.</i> Determine Orkney Passage outflow variability of Antarctic Bottom Water.	2015 - 2019
<b>NERC Standard grant, MerMEED</b> (PI), NE/N001745/1. £1,048k. <i>with A. Naveira Garabato.</i> Determine the levels and mechanisms of dissipation of mesoscale eddies at the western boundaries of the oceans.	2016 - 2019
<b>NERC Technology grant, FreshWATERS</b> (co-I), NE/P003176/1. £171k. <i>with A. Sóbester (PI).</i> Design air-launched technology for drifter deployment.	2016 - 2017
<b>NERC Sensors on AUVs, GLISENEx</b> (co-I), NE/J020184/1. £150k <i>with A. Martin (PI), S. Painter.</i> Use novel sensors on a Seaglider as part of the FASTNet project on UK shelf-edge exchange.	2013 - 2017
<b>Leverhulme Trust Research Fellowship</b> (PI), £14k A basinwide approach to the AMOC.	2016
<b>Southampton Marine &amp; Maritime Institute stimulus fund</b> (co-I), £15k. <i>with A. Sobester (PI), A. Naveira Garabato, A. Phillips.</i> Proof-of-concept exercises using an remotely piloted vehicle to deploy an AUV.	2016
<b>Huckabay Teaching Fellowship (UW)</b>	2008
<b>National Science Foundation</b> Graduate Research Fellowship, 3 years	2004 - 2007
<b>National Defense Science &amp; Engineering Graduate</b> , Fellowship, 2 years	2002 - 2004

Field Experience	(responsibility in brackets)	
<b>MS. Merian</b> , (bottom pressure sensors), EPOC deployment cruise, 3 weeks		Sep 2022
<b>Qaqortoq, Greenland</b> , (gliders), Small boat, 2 weeks		Dec 2021
<b>RRS Discovery</b> (instrument allocations), RAPID moorings cruise, 8 weeks		Dec 2020
<b>RRS James Cook</b> (instrument allocations), RAPID moorings cruise, 4 weeks		Mar 2020
<b>Qaqortoq, Greenland</b> , (team lead), Small boat, 1 week		Dec 2019
<b>R/V Walton Smith</b> , (training the PSO), MerMEED VMP/ADCP cruise, 2 weeks		Mar 2018
<b>R/V Walton Smith</b> (as PSO), MerMEED VMP/ADCP cruise, 2 weeks		Oct 2017
<b>RRS James Clark Ross</b> (Autosub), DynOPO process cruise, 7.5 weeks		Mar 2017
<b>R/V Walton Smith</b> (as PSO), MerMEED VMP/ADCP cruise, 1 week		Dec 2016
<b>RRS James Clark Ross</b> (CTD), DynOPO moorings & A23 section, 5 weeks		Mar 2015
<b>RRS James Cook</b> (underway/ADCP), RAPID moorings cruise, 6 weeks		Apr 2014
<b>R/V Knorr</b> (as UK PSO), RAPID moorings cruise, 3 weeks		Apr 2011
<b>RRS Discovery</b> (moorings), RAPID moorings cruise, 5 weeks		Dec 2010
<b>R/V Wecoma</b> (CTD/XCP), Internal waves over the Oregon slope, 2 weeks		Sep 2005
<b>R/V Wecoma</b> (microstructure/XCP), Hawaiian ridge waves & mixing, 3 weeks		Aug 2002
<b>R/V Revelle</b> (CTD/radiosonde), Juan de Fuca ridge movement, 2 weeks		Aug 2000
Teaching Experience	(UHH = Hamburg, UoS = Southampton, UW = Washington)	
<b>Coordinator &amp; instructor</b> , 63-716/7 <i>Regional Oceanography</i> , UHH		2023, 2024
<b>Instructor</b> , 63-705/6 <i>Observational methods and remote sensing</i> , UHH		2022, 2023
<b>Coordinator &amp; instructor</b> , <i>Proposal writing (5 sessions) for ECRs</i> , NOC		2019
<b>Coordinator &amp; instructor</b> , <i>NEXUSS Statistics &amp; Data Analysis</i> , NOC		2018
<b>Invited lecturer</b> , <i>ISNAO summer school</i> , Bonne Bay, Canada		2017
<b>Lead instructor</b> , <i>SOES3010/6005: Large Scale Ocean Processes</i> , UoS		2014 - 2017
<b>co-Instructor</b> , <i>SOES2025: Methods in Oceanography</i> , UoS		2014 - 2017
<b>co-Instructor</b> , <i>SOES3018: Falmouth fieldwork course</i> , UoS		2017
<b>co-Instructor</b> , <i>SOES6070: Advanced fieldwork course</i> , UoS		2012 - 2014
<b>Project coordinator</b> , <i>SOES3035: Research training</i> , UoS		2013
<b>Lead instructor</b> , <i>SOES3016: Oceanography from Space</i> , UoS		2012, 2013
<b>Lead instructor</b> , <i>OCN506: Communicating Science with Figures</i> , UW		2008
<b>Teaching assistant</b> , <i>OCN512: Intro to Fluid Dynamics</i> , UW		2003
<b>Course assistant</b> , <i>Math 1b: Calculus</i> , Harvard University		2000
Mentorship and Supervision		
<b>Postdocs/Research Scientists</b> : Elodie Duyck (2023–present), Louis Clement (2020–22), Darren Rayner (2020–22), Alej Sanchez-Franks (2019–21), Ben Moat (2019–22), Ilona Goszczko (2019–21), Carl Spingys (co-, 2017–20), D. Gwyn Evans (2016–19), Cristian Florindo-Lopez (2016)		
<b>PhD students</b> : Emelie Breunig, Markus Ritschel (co-), Maria-Jesus Rapanague (panel), Morag Forthingham (co-), Chris Auckland (co-), Manish Devana (committee, PhD'23), Delphine Lobelle (co-, PhD'19), Neela Morarji (co-, PhD'18), Freya Garry (PhD'17), Lena Schulze (PhD'16), Victoria Hemsley (co-, PhD'16), Louis Clement (PhD'14)		
<b>Supervised &gt;30 BSc and MSc dissertations since 2010</b> , including Jemima Rama <sup>†</sup> (MSci, 2016), Jo Ribeiro <sup>†</sup> (MSci, 2015), Lisa Holton* (BSc, 2013), Maren Richter (Kiel Univ., 2014) and Atul Kumar Yadav (IIT Bhubaneswar, 2013). * <i>dissertation award</i> , <sup>†</sup> <i>top student award</i>		

---

## Professional Activities

---

### Service:

CLIVAR AMOC Task Team, co-chair	2021 - present
CLIVAR Atlantic Regional Panel (ARP) co-chair	2021 - present
CLIVAR Atlantic Regional Panel (ARP) member	2019 - 2020
Royal Society Newton International Fellowships, Physical Sciences	2018 - 2022
NERC Peer Review College member	2016 - 2022
NEXUSS Centre for Doctoral Training (co-Director)	2017 - 2018
Women in Ocean and Earth Sciences at Southampton	2014 - 2016
UoS Employability representative	2012 - 2016
UW Student-faculty representative	2008

### Organisation of Sessions/Conferences/Seminars:

AMOC Workshop: Observation needs in a changing climate	2023
NZOC Workshop: 21st century marine scientist	2021
EGU General Assembly, Vienna: Ocean Circulation	2019
IUGG general assembly, Prague: MOC & Deep Currents	2015
AGU Fall Meeting, San Francisco: AMOC, climate variability and change	2014
Ocean Sciences, Honolulu: Frontiers in Oceanographic Data & Methods	2014
US AMOC/UK RAPID international meeting, Baltimore	2013
IAPSO meeting, Gothenburg: Thermohaline circulation and deep currents	2013
EGU General Assembly, Vienna: Ocean Circulation	2013
EGU General Assembly, Vienna: Ocean Circulation	2012
Ocean Sciences, Salt Lake City: Vertical Flow in the Ocean	2012
National Oceanography Centre: Physical Oceanography and Climate Seminar	2010 - 2011
UW: Student Physical Oceanography educational Retreat, Friday Harbor	2003, 2009
UW: Graduate Climate Change Conference, Pack Forest	2008

**Outreach:** Royal Institution Christmas Lectures, guest on episode 2 (2020), RRS Sir David Attenborough launch, talk & marine robotics stand (3 days, 2019), Soapbox Science & Art presenter, Bournemouth Arts Festival (2018), Talked to 300 school kids from Springhill Primary (2018), Kid's version of "heat wave" paper (2016), Discover Oceanography on "Oceanography from Space" to U3A (2015), STEMnet ambassador, Hampshire (2014), Ocean and Earth Day demos for Science & Engineering week, NOC (2012, 2013, 2019)

**Journals refereed:** Nature, Nature Geosci., Nature Comm., J. of Physical Oceanogr., J. of Atmos. and Oceanic Technol., Rev. in Geophys., Geophys. Res. Lett., J. of Geophys. Res.-Oceans, Deep Sea Res., Ocean Science, Progr. in Oceanogr., Remote Sensing of the Env., J. of Climate, Marine Technology Soc. Journal, Annals of Glaciology, Frontiers in Marine Sci.

**Proposals refereed:** NERC, NSF, Royal Society International Fellowships, Norwegian Research Council, National Defense Science & Engineering Graduate research fellowship, NASA Earth & Space Science Fellowships, German research vessels (GPF), EuroFleets vessels

---

## Training and Certification

---

**Autonomous Vehicles:** Sailbuoy pilot training, Offshore Sensing AS, 5 days (6/2019), Seaglider pilot training, Kongsberg, 5 days (9/2017)

**Safety & First aid:** DRK First Aid, 8 hours (11/2022), IOSH Managing Safety in a Research Environment, 15 hrs (10/2018), First Aid at Work, 15 hrs (11/2019), ITC Certificate in Outdoor First Aid, SCQF Level 5, 16 hrs (2/2015)

**Seagoing:** Certificate in Proficiency in Designated Security Duties, 10 hrs (9/2020); STCW Personal Survival techniques certificate (updated 1/2017, 2010); ENG1 seafarer medical fitness certificate (1/2020, 3/2014); British Antarctic Survey medical (9/2014)

**Diving:** PADI Open Water (1996), Advanced diver No. 0009962148 (2000)

**Teaching:** "Flipped Learning", 4 hrs (2015); "Revitalising your Virtual Learning Environment", 2 hrs (2015); Postgraduate certificate in academic practice (PCAP) training, 24 hrs (2013); "Engaging Students in Research & Inquiry", 3 hrs (2013); "Effective Teaching and Learning in the Large

Classroom Setting” by NAGT, 4 hrs (2012); “Supervising a PhD student,” 3 hrs (2010)

**Other:** “Excelling at Academic Interviews,” 7 hrs (2015); “Springboard: Women’s development programme,” 32 hrs (2015); “ThinkWrite: Quality Papers”, 7 hrs (2013); “Building & Leading High Performing Teams”, 7 hrs (2013); “Managing your Academic Career: for Women”, 7 hrs (2013); “Climate Communications: Tools & Tips” at AGU fall mtg, 7 hrs (2012)

---

Peer-reviewed Publications (citation information at [GOOGLE SCHOLAR](#))

Peer-reviewed journal papers: 63 Times cited: 4361 h-index: 33

---

- [63] Chafik, Holliday, Bacon, Baker, Desbruyères, **Frajka-Williams**, et al. “Observed mechanisms activating the recent subpolar North Atlantic Warming since 2016”. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 2262 (2023). doi: 10.1098/rsta.2022.0183.
- [62] Clément, **Frajka-Williams**, von Oppeln-Bronikowski, Goszczko, and de Young. “Cessation of Labrador Sea Convection Triggered by Distinct Fresh and Warm (Sub)Mesoscale Flows”. *Journal of Physical Oceanography* 8 (2023). doi: 10.1175/jpo-d-22-0178.1.
- [61] **Frajka-Williams**, Foukal, and Danabasoglu. “Should AMOC observations continue: how and why?” *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 2262 (2023). doi: 10.1098/rsta.2022.0195.
- [60] McCarthy, Burmeister, Cunningham, Düsterhus, **Frajka-Williams**, Graham, et al. “Climate change impacts on ocean circulation relevant to the UK and Ireland” (2023). doi: 10.14465/2023.reu05.cir.
- [59] Berx, Volkov, Baehr, Baringer, Brandt, Burmeister, et al. “Climate-relevant ocean transport measurements in the Atlantic and Arctic Oceans”. *Oceanography* 4 (2022). doi: 10.5670/oceanog.2021.supplement.02-04.
- [58] Evans, **Frajka-Williams**, and Naveira Garabato. “Dissipation of mesoscale eddies at a western boundary via a direct cascade”. 1 (2022). doi: 10.1038/s41598-022-05002-7.
- [57] Jackson, Biastoch, Buckley, Desbruyeres, **Frajka-Williams**, Moat, et al. “The evolution of the North Atlantic meridional overturning circulation since 1980”. *Nature Rev. Earth & Environ.* (2022). doi: 10.1038/s43017-022-00263-2.
- [56] Naveira Garabato, Yu, Callies, Barkan, Polzin, **Frajka-Williams**, et al. “Kinetic energy transfers between mesoscale and submesoscale motions in the open ocean’s upper layers”. *J. Phys. Oceanogr.* 1 (2022). doi: 10.1175/JPO-D-21-0099.1.
- [55] Danabasoglu, Castruccio, Small, Tomas, **Frajka-Williams**, and Lankhorst. “Revisiting AMOC Transport Estimates from Observations and Models”. *Geophys. Res. Lett.* (2021). doi: 10.1029/2021GL093045.
- [54] Sanchez-Franks, **Frajka-Williams**, Moat, and Smeed. “A dynamically based method for estimating the Atlantic overturning circulation at 26°N from satellite altimetry”. *Ocean Sci. Disc.* (2021). doi: 10.5194/os-2021-10.
- [53] Spingys, Naveira Garabato, Legg, Polzin, Abrahamsen, Buckingham, et al. “Mixing and Transformation in a Deep Western Boundary Current: A Case Study”. *J. Phys. Oceanogr.* (2021). doi: 10.1175/JPO-D-20-0132.1.
- [52] Evans, **Frajka-Williams**, Naveira Garabato, Polzin, and Forryan. “Mesoscale eddy dissipation by a “zoo” of submesoscale processes at a western boundary”. *J. Geophys. Res.-Oceans* 11 (2020). doi: 10.1029/2020JC016246.
- [51] Fernandez-Castro, Evans, **Frajka-Williams**, Vic, and Naveira Garabato. “Breaking of internal waves and turbulent dissipation in an anticyclonic mode water eddy”. *J. Phys. Oceanogr.* 7 (2020). doi: 10.1175/JPO-D-19-0168.1.
- [50] Lobelle\*, Beaulieu, Livina, Sevellec, and **Frajka-Williams**. “Detectability of an AMOC decline in current and projected climate changes”. *Geophys. Res. Lett.* 20 (2020). doi: 10.1029/2020GL089974.

- [49] Moat, Smeed, **Frajka-Williams**, Desbruyeres, Beaulieu, Johns, et al. "Pending recovery in the strength of the meridional overturning circulation at 26°N". *Ocean Sci.* 4 (2020). doi: 10.5194/os-16-863-2020.
- [48] Volkov, Meinen, Schmid, Moat, Lankhorst, Dong, et al. "Atlantic meridional overturning circulation and associated heat transport". *State of the Climate in 2019*. Ed. by Blunden and Arndt. 2020.
- [47] **Frajka-Williams**, Ansorge, Baehr, Bryden, Chidichimo, Cunningham, et al. "OceanObs19: Atlantic meridional overturning circulation: Observed transports and variability". *Frontiers in Marine Science* (2019). doi: 10.3389/fmars.2019.00260.
- [46] Garry\*, McDonagh, Blaker, Roberts, Desbruyeres, **Frajka-Williams**, et al. "Model-derived uncertainties in deep ocean temperature trends between 1990–2010". *J. Geophys. Res.-Oceans* (2019). doi: 10.1029/2018JC014225.
- [45] Hirschi, **Frajka-Williams**, Blaker, Sinha, Coward, Hyder, et al. "Loop Current variability as a trigger of coherent Gulf Stream transport anomalies". *J. Phys. Oceanogr.* (2019). doi: 10.1175/JPO-D-18-0236.1.
- [44] Meinen, Johns, Moat, Smith, Johns, Rayner, et al. "Structure and variability of the Antilles Current at 26.5°N". *J. Geophys. Res.-Oceans* (2019). doi: 10.1029/2018JC014836.
- [43] Naveira Garabato, Dotto, Hooley, Bacon, Tsamados, Ridout, et al. "Phased response of the subpolar Southern Ocean to changes in circumpolar winds". *Geophys. Res. Lett.* (2019). doi: 10.1029/2019GL082850.
- [42] Naveira Garabato, **Frajka-Williams**, Spingys, Legg, Polzin, Forryan, et al. "Rapid mixing and exchange of deep-ocean waters in an abyssal boundary current". *Proc. Natl. Acad. Sci. USA* 27 (2019). doi: 10.1073/pnas.1904087116.
- [41] Testor, de Young, Rudnick, Glenn, Hayes, Lee, et al. "OceanObs19: OceanGliders: a component of the integrated GOOS". *Frontiers in Marine Science* (2019). doi: 10.3389/fmars.2019.00422.
- [40] Worthington\*, **Frajka-Williams**, and McCarthy. "Estimating the Deep Overturning Transport Variability at 26°N Using Bottom Pressure Recorders". *J. Geophys. Res.-Oceans* (2019). doi: 10.1029/2018JC014221.
- [39] Calafat, Wahl, Lindsten, Williams, and **Frajka-Williams**. "Coherent modulation of the sea-level annual cycle in the United States by Atlantic Rossby waves". *Nat. Comm.* (2018). doi: 10.1038/s41467-018-04898-y.
- [38] Dotto, Naveira Garabato, Bacon, Tsamados, Holland, Hooley, et al. "Variability of the Ross Gyre, Southern Ocean: drivers and responses revealed by satellite altimetry". *Geophys. Res. Lett.* (2018). doi: 10.1029/2018GL078607.
- [37] Evans\*, Lucas, Hemsley\*, **Frajka-Williams**, Naveira Garabato, Martin, et al. "Annual cycle of turbulent dissipation estimated from Seagliders". *Geophys. Res. Lett.* (2018). doi: 10.1029/2018GL079966.
- [36] **Frajka-Williams**. "Topographic eddies". *Reference Module in Earth Systems and Environmental Sciences*. Elsevier, 2018. doi: 10.1016/B978-0-12-409548-9.10852-8.
- [35] Schulze Chretien\* and **Frajka-Williams**. "Wind-driven transport of fresh shelf water into the upper 30 m of the Labrador Sea". *Ocean Sci.* (2018). doi: 10.5194/os-14-1247-2018.
- [34] Sinha, Smeed, McCarthy, Moat, Josey, Hirschi, et al. "The Accuracy of Estimates of the Overturning Circulation from Basin Wide Mooring Arrays". *Prog. Oceanogr.* (2018). doi: 10.1016/j.pocean.2017.12.001.
- [33] Smeed, Josey, Johns, Moat, **Frajka-Williams**, Rayner, et al. "The North Atlantic Ocean is in a state of reduced overturning". *Geophys. Res. Lett.* (2018). doi: 10.1002/2017GL076350.
- [32] Elipot, **Frajka-Williams**, Hughes, Olhede, and Lankhorst. "Observed basin-scale response of the North Atlantic meridional overturning circulation to wind stress forcing". *J. Climate* (2017). doi: 10.1175/JCLI-D-16-0664.1.

- [31] **Frajka-Williams**, Beaulieu, and Duche. "Emerging negative Atlantic Multidecadal Oscillation in spite of warm subtropics" (2017). doi: 10.1038/s41598-017-11046-x.
- [30] Clement\*, **Frajka-Williams**, Sheen, Brearley, and Naveira Garabato. "Generation of Internal Waves by Eddies Impinging on the Western Boundary of the North Atlantic". *J. Phys. Oceanogr.* (2016). doi: 10.1175/JPO-D-14-0241.1.
- [29] Duche, **Frajka-Williams**, Josey, Evans, Grist, Marsh, et al. "Drivers of exceptionally cold North Atlantic Ocean temperatures and their link to the 2015 European heat wave". *Environ. Res. Lett.* (2016). doi: 10.1088/1748-9326/11/7/074004.
- [28] **Frajka-Williams**, Bamber, and Våge. "Greenland melt and the Atlantic meridional overturning circulation". *Oceanography* (2016). doi: 10.5670/oceanog.2016.96.
- [27] **Frajka-Williams**, Meinen, Johns, Smeed, Duche, Lawrence\*, et al. "Compensation between meridional flow components of the Atlantic MOC at 26°N". *Ocean Sci.* (2016). doi: 10.5194/os-12-481-2016.
- [26] **Frajka-Williams**. "Estimating the Atlantic MOC at 26°N using satellite altimetry and cable measurements". *Geophys. Res. Lett.* (2015). doi: 10.1002/2015GL063220.
- [25] Hemsley\*, Smyth, Martin, **Frajka-Williams**, Damerell, Thompson, et al. "Estimating oceanic primary production using vertical irradiance and chlorophyll profiles from ocean gliders in the North Atlantic". *Environ. Sci. Technol.* (2015). doi: 10.1021/acs.est.5b00608.
- [24] McCarthy, Smeed, Johns, **Frajka-Williams**, Moat, Rayner, et al. "Measuring the Atlantic meridional overturning circulation at 26°N". *Prog. Oceanogr.* (2015). doi: 10.1016/j.pcean.2014.10.006.
- [23] Baringer, McCarthy, Willis, Lankhorst, Smeed, Send, et al. "Global Oceans: Meridional overturning circulation observations in the North Atlantic Ocean". *State of the Climate in 2013*. Ed. by Blunden and Arndt. B. Am. Meteorol. Soc., 2014.
- [22] Carton, Cunningham, **Frajka-Williams**, Kwon, Marshall, and Msadek. "The Atlantic overturning circulation: More evidence of variability and links to climate". *B. Am. Meteorol. Soc.* (2014). doi: 10.1175/BAMS-D-13-00234.1.
- [21] Clément\*, **Frajka-Williams**, Szuts, and Cunningham. "Vertical structure of eddies and Rossby waves and their effect on the Atlantic MOC at 26.5°N". *J. Geophys. Res.-Oceans* (2014). doi: 10.1002/2014JC010146.
- [20] Duche, Cunningham, Hirschi, Blaker, Bryden, Atkinson, et al. "A new index for the Atlantic meridional overturning circulation". *J. Climate* (2014). doi: 10.1175/JCLI-D-13-00052.1.
- [19] Duche, **Frajka-Williams**, Castro\*, Hirschi, and Coward. "Seasonal to interannual variability in density around the Canary Islands and their influence on the AMOC at 26°N". *J. Geophys. Res.-Oceans* (2014). doi: 10.1002/2013JC009416.
- [18] Elipot, **Frajka-Williams**, Hughes, and Willis. "The observed North Atlantic MOC, its meridional coherence and ocean bottom pressure". *J. Phys. Oceanogr.* (2014). doi: 10.1175/JPO-D-13-026.1.
- [17] **Frajka-Williams**. "Sustaining observations of an unsteady ocean circulation". *Philos. T. R. Soc. A* (2014). doi: 10.1098/rsta.2013.0335.
- [16] **Frajka-Williams**, Rhines, and Eriksen. "Horizontal stratification during deep convection in the Labrador Sea". *J. Phys. Oceanogr.* (2014). doi: 10.1175/JPO-D-13-069.1.
- [15] Smeed, McCarthy, Cunningham, **Frajka-Williams**, Rayner, Johns, et al. "Observed decline of the Atlantic meridional overturning circulation 2004 to 2012". *Ocean Sci.* (2014). doi: 10.5194/os-10-29-2014.
- [14] Baringer, Johns, McCarthy, Willis, Garzoli, Lankhorst, et al. "Global Oceans: Meridional overturning circulation and heat transport observations in the Atlantic Ocean". *State of the Climate in 2012*. Ed. by Blunden and Arndt. B. Am. Meteorol. Soc., 2013.
- [13] Cunningham, Roberts, **Frajka-Williams**, Johns, Hobbs, Palmer, et al. "Atlantic MOC slow-down cooled the subtropical ocean". *Geophys. Res. Lett.* (2013). doi: 10.1002/2013GL058464.

- [12] **Frajka-Williams**, Johns, Meinen, Beal, and Cunningham. "Eddy impacts on the Florida Current". *Geophys. Res. Lett.* (2013). doi: 10.1002/grl.50115.
- [11] Mielke, **Frajka-Williams**, and Baehr. "Observed and simulated variability of the AMOC at 26°N and 41°N". *Geophys. Res. Lett.* (2013). doi: 10.1002/grl.50233.
- [10] Roberts, Waters, Peterson, Palmer, McCarthy, **Frajka-Williams**, et al. "Atmosphere drives recent interannual variability of the Atlantic meridional overturning circulation at 26.5°N". *Geophys. Res. Lett.* (2013). doi: 10.1002/grl.50930.
- [9] Baringer, Cunningham, Meinen, Garzoli, Willis, Lankhorst, et al. "Global Oceans: Meridional overturning circulation observations in the subtropical North Atlantic". *State of the Climate in 2011*. Ed. by Blunden and Arndt. B. Am. Meteorol. Soc., 2012.
- [8] McCarthy, **Frajka-Williams**, Johns, Baringer, Meinen, Bryden, et al. "Observed Interannual Variability of the Atlantic MOC at 26.5°N". *Geophys. Res. Lett.* (2012). doi: 10.1029/2012GL052933.
- [7] Baringer, Cunningham, Meinen, Garzoli, Willis, Lankhorst, et al. "Meridional Overturning Circulation Observations in the Subtropical North Atlantic". *State of the Climate in 2010*. Ed. by Blunden and Arndt. B. Am. Meteorol. Soc., 2011. doi: 10.1175/1520-0477-92.6.S1.
- [6] **Frajka-Williams**, Cunningham, Bryden, and King. "Variability of Antarctic Bottom Water at 24.5°N in the Atlantic". *J. Geophys. Res.-Oceans* (2011). doi: 10.1029/2011JC007168.
- [5] **Frajka-Williams**, Eriksen, Rhines, and Harcourt. "Determining vertical water velocities from Seaglider". *J. Atmos. Ocean. Tech.* 12 (2011). doi: 10.1175/2011JTECH0830.1.
- [4] Rayner, Hirschi, Kanzow, Johns, Wright, **Frajka-Williams**, et al. "Monitoring the Atlantic meridional overturning circulation". *Deep-Sea Res. Pt. II* (2011). doi: 10.1016/j.dsr2.2010.10.056.
- [3] **Frajka-Williams** and Rhines. "Physical controls and interannual variability of the Labrador Sea spring phytoplankton bloom in distinct regions". *Deep-Sea Res. Pt. I* (2010). doi: 10.1016/j.dsr.2010.01.003.
- [2] **Frajka-Williams**, Rhines, and Eriksen. "Physical controls and mesoscale variability in the Labrador Sea spring phytoplankton bloom observed by Seaglider". *Deep-Sea Res. Pt. I* (2009). doi: 10.1016/j.dsr.2009.07.008.
- [1] Barros, Kim, **Williams**, and Nesbitt. "Probing Orographic Controls in the Himalayas During the Monsoon Using Satellite Imagery". *Nat. Hazard Earth Sys.* (2004). doi: 10.5194/nhess-4-29-2004.

---

#### Book chapters & non-refereed Publications

---

- [18] **Frajka-Williams**, Brearley, Nash, and Whalen. "New technological frontiers in ocean mixing". *Ocean Mixing: Drivers, Mechanisms and Impacts*. Elsevier, 2022. doi: 10.1016/B978-0-12-821512-8.00021-9.
- [17] deYoung, **Frajka-Williams**, von Oppeln-Bronikowski, and Woodward. "Technicalities: Exploring the Labrador Sea with autonomous vehicles". *The Journal of Ocean Technology* 3 (2020).
- [16] Hendry, Annett, Bhatia, Damerell, Fielding, Firing, et al. "Equity at sea: Gender and inclusivity in UK sea-going science". *Ocean Challenge* (2020).
- [15] Sutherland, Straneo, Moon, Le Bras, **Frajka-Williams**, Bamber, et al. *Freshwater fluxes from the Greenland Ice Sheet*. 2019. doi: 10.18739/A24M9198B.
- [14] **Frajka-Williams**. "Topographic eddies". *Reference Module in Earth Systems and Environmental Sciences*. Elsevier, 2018. doi: 10.1016/B978-0-12-409548-9.10852-8.
- [13] **Frajka-Williams**. *RV Walton Smith Cruise WS17305, 31 Oct - 10 Nov 2017, Miami to Miami, USA. MerMEED microstructure cruise report*. Tech. rep. NOC cruise report-50. National Oceanography Centre, Southampton, 2018.
- [12] **Frajka-Williams** and Griffies. *Boaty's second big adventure in the Orkney Passage*. <https://dynopocruise2017.blogspot.co.uk/2017/04/boatys-second-big-adventure-in-orkney.html>. Blog. 2017.



- [11] **Frajka-Williams** and Templeton. *Boaty McBoatface M44 in Orkney Passage*. <https://vimeo.com/eleanorfracjka/boaty-mcboatface-m44-dynopo>. Animation. Viewed 45,000 times. Vimeo, 2017.
- [10] **Frajka-Williams**. *RV Walton Smith Cruise WS16336, 01 - 07 Dec 2016, Miami to Miami, USA. MerMEED microstructure cruise report*. Tech. rep. NOC cruise report-44. National Oceanography Centre, Southampton, 2017.
- [9] Duchez, Desbruyères, Hirschi, **Frajka-Williams**, Josey, and Evans. “The tale of a surprisingly cold blob in the North Atlantic”. *US CLIVAR Variations* (2016).
- [8] Duchez, **Frajka-Williams**, Josey, Evans, Grist, Marsh, et al. “Cold ocean = hot summer?” *Environmental Science Journal for Teens* (2016).
- [7] **Frajka-Williams**. “Women in Oceanography: A decade later”. *The Oceanography Society magazine* (2014).
- [6] **Frajka-Williams**. “RAPID: Observations of the meridional overturning circulation at 26°N”. *UK Challenger Society: Ocean Challenge* (2011).
- [5] Johns and **Frajka-Williams**. *RV Knorr Cruise KN200-4, 13 Apr–3 May 2011. RAPID Mooring Cruise*. Tech. rep. NOC cruise report-07. National Oceanography Centre, Southampton, 2011.
- [4] **Frajka-Williams**. “The spring phytoplankton bloom and vertical velocities in stratified and deep convecting Labrador Sea, as observed by Seagliders”. PhD thesis. Seattle, WA: College of Ocean and Fishery Sciences, University of Washington, 2009.
- [3] Martini, **Frajka-Williams**, and Mouw. “Conference Report | The Pattullo Conference: Building community through mentoring”. *The Oceanography Society magazine* (2009). doi: 10.5670/oceanog.2009.26.
- [2] **Frajka-Williams**, Kunze, and MacKinnon. “Bispectra of Internal Tides and Parametric Subharmonic Instability”. *arXiv* (2005). doi: physics.ao-ph:1410.0926.
- [1] **Frajka-Williams**. “Convection in a Fluid Loop”. *Proceedings of the WHOI Geophysical Fluid Dynamics program*. with Raffaele Ferrari. 2004.

---

Selected seminars & Invited talks (as presenter)

---

- 2024: EUMETSAT Winter Talk, Darmstadt (seminar - online)
- 2023: AMOC workshop, Hamburg (talk)  
Universität Bremen, DE (seminar)  
GEOMAR, Kiel, DE (seminar)  
Bottom pressure workshop, Rhode Island (talk - online)  
ASOF meeting, Canary Islands (talk - online)
- 2022: AMOC meeting, Royal Society, London (**invited talk**)  
AANChOR AAORIA Workshop, Washington D.C (talk)  
UG2 Glider workshop, Seattle (poster)
- 2021: Leeds, UK (seminar)  
NOC Science & Technology Advisory Committee, UK (talk)  
FDSE summer school, Cambridge, UK (lecture)  
Nordic Overflows workshop, virtual (talk)  
CANAIMOC meeting, virtual (**talk**)  
EGU General Assembly, virtual (pico)
- 2020: OceanSITES, virtual (**invited panelist**)  
NOC Board, UK (talk)  
IOCAG, Canary Islands (seminar)  
Oxford University, UK (seminar)  
UK MetOffice, UK (talk)  
Imperial College London, UK (seminar)

- 2019: Marine Autonomy & Technology Showcase, Southampton, UK (talk)  
 GFDL, Princeton, New Jersey (seminar)  
 Newcastle University, Newcastle, UK (seminar)  
 RRS Sir David Attenborough launch, Birkenhead, UK (talk)  
 OceanObs19, Honolulu, Hawaii (poster)  
 AMOC Metrics, Honolulu, Hawaii (**invited talk**)  
 NERC Science Committee, Swindon, UK (talk)  
 NOC Association, London, UK (talk)  
 CLASS annual science meeting, Plymouth, UK (talk)  
 EGU General Assembly, Vienna, Austria (poster)  
 Royal Society West Indies meeting, Chicheley, UK (poster)  
 RAPID International Review, London, UK (talk)
- 2018: Marine Autonomy & Technology Showcase, Southampton, UK (talk)  
 University College London, London, UK (seminar)  
 Challenger Society for Marine Science, Newcastle, UK (talk)  
 US AMOC/UK RAPID International Meeting, Miami, FL (**invited talk**)  
 University of East Anglia, Norwich, UK (seminar)  
 Ocean Sciences meeting, Portland, OR (talk)  
 Cambridge University, Cambridge, UK (seminar)
- 2017: Marine Autonomy & Technology Showcase, Southampton, UK (talk)  
 RAPID/OSNAP/ACSIS meeting, Oxford, UK (poster)  
 Oceans and Climate public lecture, The Royal Society, London (**keynote**)  
 IAPSO meeting, Cape Town, South Africa (talk)  
 Liege Colloquium on Turbulence, Liege, Brussels (poster)  
 NOC Friday Seminar, Southampton, UK (seminar)
- 2016: EGO Glider meeting, Southampton, UK (poster)  
 NOAA/AOML, Miami, FL (seminar)  
 Woods Hole Oceanographic Institute, Woods Hole, MA (seminar)  
 NASA JPL, Pasadena, CA (seminar)  
 University of Washington, Seattle, WA (seminar)
- 2015: RAPID International Science Meeting, Bristol, UK (talk)  
 IUGG General Assembly, Prague, Czech Republic (talk & **panel member**)  
 CLIVAR Climate Process Team meeting, La Jolla, CA  
 University of Washington, Seattle, WA (seminar)
- 2014: AGU fall meeting, San Francisco, CA (talk)  
 Ocean Sciences, Honolulu, HI (talk)  
 National Oceanography Centre, Liverpool, UK (seminar)  
 Oxford University, Oxford, UK (seminar)
- 2013: IAPSO meeting, Gothenberg, Sweden (talk)  
 Challenger Society: Prospectus 2013, Royal Society, London (**invited talk**)  
 EGU General Assembly, Vienna, Austria (talk)  
 University of Washington, Seattle, WA (seminar)  
 University of East Anglia, Norwich, UK (seminar)
- 2012: AGU Fall Meeting, San Francisco, CA (poster)  
 Bangor University, Bangor, UK (seminar)  
 THOR meeting in Hamburg, Germany. (talk)  
 British Antarctic Survey, Cambridge, UK (seminar)  
 Time series conference in Brest, France (**invited talk**)  
 USAMOC meeting, Boulder, CO (poster)  
 EGU General Assembly, Vienna, Austria (talk)  
 AGU Ocean Sciences, Salt Lake City, UT (poster)

- 2011: WCRP meeting, Denver, CO (poster)  
 RAPID International Science Meeting, Bristol, UK (talk)  
 ZMAW/Klimacampus, Max-Planck-Institut für Meteorologie, Hamburg (seminar)  
 IUGG General Assembly, Melbourne, Australia (talk)  
 IUGG General Assembly, Melbourne, Australia (poster)
- 2010: Challenger Society for Marine Science, Southampton, UK (poster)  
 AGU Ocean Sciences, Portland, OR (talk)  
 Imperial College London, London, UK (seminar)  
 University of Liverpool, Liverpool, UK (seminar)  
 POETS NOC, Southampton, UK (seminar)  
 NOC PO Seminar, Southampton, UK (seminar)
- 2009: ESSAS 2009 Annual Science meeting, Seattle, WA (**invited talk**)  
 PO and Climate, Southampton, UK (seminar)  
 University of Washington, Seattle, WA (seminar)  
 Woods Hole Oceanographic Institution, Woods Hole, MA (seminar)  
 Physical Oceanography Dissertation Symposium. Honolulu, HI (talk)
- 2008: Ocean Sciences meeting, Orlando, FL (**Outstanding Student Talk award**)  
 MPOWIR Pattullo Conference, Charleston, SC (talk)
- 2006: Ocean Sciences meeting, Honolulu, HI (poster)
- 2005: EGU General Assembly, Vienna, Austria (poster)
- 2004: American Physical Society, Seattle, WA (talk)  
 SCOR IAPSO conference on Mixing, Victoria, Canada (poster)  
 AGU Ocean Sciences, Portland, OR (poster)
- 2003: Hawaiian Ocean Mixing Experiment workshop, Mt. Hood, OR (talk)
- 2002: EGU General Assembly, Nice, France (poster)