

DR. JANNES KOELLING

Employment

University of Washington & NOAA PMEL **September 2023 – present**
CICOES Postdoctoral Research Fellow *Seattle, WA, USA*
Investigating oxygen ventilation of the deep ocean in the subpolar North Atlantic using BGC-Argo floats

Dalhousie University **September 2022 – August 2023**
Postdoctoral Researcher *Halifax, NS, Canada*
Working on studying oxygen budgets in the Labrador Sea, and on analyzing Waveglider measurements of oxygen, pCO₂, and pH during a hurricane

Dalhousie University **July 2020 – June 2022**
Postdoctoral Research Fellow at Ocean Frontier Institute *Halifax, NS, Canada*
Project title: Seasonal and interannual variability of oxygen export from the Labrador Sea

Education

Scripps Institution of Oceanography | University of California, San Diego **2013 – 2020**
Ph.D. in Oceanography *La Jolla, CA, USA*
Dissertation title: Variability in formation, properties, and transport of North Atlantic Deep Water
Supervisor: Prof. Uwe Send

Jacobs University **2010 – 2013**
B.Sc. in Earth and Space Sciences *Bremen, Germany*
Thesis title: Erosion of bacterial mats in a gas hydrate field as a function of flow speed
Supervisor: Prof. Laurenz Thomsen

Awards and Fellowships

CICOES Postdoctoral Fellowship **September 2023**

Roger Daley Postdoctoral Publication Award **May 2023**
For Koelling et al. (2022) paper

Ocean Frontier Institute International Postdoctoral Fellowship **July 2020**
Seasonal and interannual variability of oxygen export from the Labrador Sea

Ocean Frontier Institute Visiting International Researcher Fellowship **May 2019**
Studying the impact of lateral exchanges on carbon, oxygen, and nitrate budgets in the Labrador Sea

NASA Earth and Space Sciences Fellowship **September 2016**
Using GRACE Satellite Data to Investigate Variability in Deep Ocean Transports

President's List for Academic Excellence at Jacobs University **2011/2012 and 2012/2013**

Field work

Scripps Institution of Oceanography **2013 – 2020**

- Over 150 days at sea on research cruises on NOAA and NSF vessels in the North Pacific, Irminger Sea, Argentine Basin, California Current, and tropical Atlantic
- CTD watch and sampling (salinity, oxygen, pH, pCO₂), parsing and processing data from moored instruments, and acoustical communications for data downloads and triangulation. Assisted in multibeam surveys and deployments of moorings.
- Chief Scientist on a one-week cruise onboard NOAAS Ronald H Brown in December 2019

Alfred-Wegener-Institut **June–July 2012**

- 7 weeks onboard RV Polarstern in the Fram Strait (Arctic Ocean), mainly responsible for CTD watch

Selected Publications

- Koelling, J.**, Atamanchuk, D., Karstensen, J., Handmann, P., and Wallace, D. W.R. (2022). Oxygen export to the deep ocean following Labrador Sea Water formation. *Biogeosciences*. DOI:10.5194/bg-19-437-2022
- Koelling, J.**, Send, U., and Lankhorst, M. (2020). Decadal Strengthening of Interior Flow of North Atlantic Deep Water Observed by GRACE Satellites, *Journal of Geophysical Research: Oceans*. DOI: 10.1029/2020JC016217
- Atamanchuk, D., **Koelling, J.**, Send, U., and Wallace, D.W.R. (2020): Rapid transfer of oxygen to the deep ocean mediated by bubbles, *Nature Geoscience*. DOI: 10.1038/s41561-020-0532-2
- Koelling, J.** (2020). Variability in formation, properties, and transport of North Atlantic Deep Water. *PhD dissertation, University of California, San Diego*. <https://escholarship.org/uc/item/30h7h4bk>
- Koelling, J.**, Wallace, D. W. R., Send, U., and Karstensen, J. (2017). Intense oceanic uptake of oxygen during 2014–2015 winter convection in the Labrador Sea, *Geophysical Research Letters*. DOI: 10.1002/2017GL073933

Teaching & Outreach

- Lecture on budget calculations for Advanced Chemical Oceanography course **2023**
- Radio interview with German station "Deutschlandfunk" on Koelling et al. (2022) paper **2022**
- Interview for AGU EOS magazine on Koelling et al. (2022) paper **2022**
- Teaching Assistant at Jacobs University **2012 – 2013**
- Demonstration of underwater crawler to middle school students **2012**

Service

- Reviewer for *Geophysical Research Letters*, *J. Physical Oceanography*, *Nature Communications*, *Nature Climate Change*, *JGR: Oceans* **2018-2023**

Conferences and Seminars

- Dalhousie University Oceanography seminar **2023**
- EGU General Assembly (Vienna) - solicited speaker **2022**
- Ocean Sciences Meeting (virtual) **2022**
- EGU General Assembly (virtual) **2021**
- Dalhousie University Oceanography seminar (virtual) **2021**
- WHOI Physical Oceanography seminar (virtual) **2020**
- Ocean Sciences Meeting (San Diego) **2020**
- US AMOC meeting (Miami) **2018**
- Ocean Sciences Meeting (Portland) **2018**
- US AMOC meeting (Santa Fe) **2017**
- Ocean Sciences Meeting (New Orleans) **2016**
- Ocean Sciences Meeting (Honolulu) **2014**

Skills

- Programming Languages:** MATLAB (proficient), Python, Github, Keras, Tensorflow (working knowledge)
- Languages:** German (mother tongue), English (fluent)