

# Melina R. Mehlmann, PhD Student

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## Personal Summary

I am a resourceful and motivated PhD student at the Marine Environmental Modelling Group at Dalhousie, Canada. My research focusses on the evaluation of biogeochemistry in Earth System Models. Before starting my PhD I completed my MSc in *Climate Physics* at GEOMAR, Germany, which shaped my multidisciplinary academic background in physical and chemical oceanography. Multiple research vessel cruises have shaped my practical background in oceanographic instrument operation, as well as experience working in a chemical laboratory.



## University

- **PhD in Oceanography:** Marine Environmental Modelling Group, Dalhousie, CAN (Start: 09/2020)  
Supervisor: Prof. Dr. K. Fennel
- **M.Sc. in Climate Physics:** Christian-Albrechts University and GEOMAR, Kiel, GER (10/2017–12/2019)  
*Thesis: The Influence of Islands on Biogeochemical Cycles of Halocarbons in the Subtropical North East Atlantic*
- **B.Sc. in Physics of the Earth System:** Christian-Albrechts University and GEOMAR, Kiel, GER (10/2014–10/2017)  
*Thesis: Surface methane measurements across the North Atlantic Ocean from voluntary observing ships*

## Scholarships/Grants

- 2020-2024: **Cusanuswerk PhD Scholarship**  
~C\$170,000 (tuition, stipend)
- 2019: **IAESTE Travel Stipend**  
~C\$2,000 (flights, stipend)
- 2018: **IAESTE Travel Stipend**  
~C\$1,000 (flights, stipend)

## Publications

- Mehlmann, M., B. Quack, E. Atlas, H. Hepach, and S. Tegtmeier (2020). **Natural and anthropogenic sources of bromoform and dibromomethane in the oceanographic and biogeochemical regime of the subtropical North East Atlantic.** *Environ Sci Process Impacts*. 2020 Mar., 1;22(3), 679-707, doi: 10.1016/j.csr.2016.06.005.
- Karstensen, J., G. Lavik, C. Acquistapace, G. Bagheri, C. Begler, A. Bendinger, E. Bodenschatz, T. Böck, J. Güttler, K. Hall, M. Körner, A. Kopp, D. Lange, M. Mehlmann, F. Nordsiek, K. Reus, J. Ribbe, M. Philippi, S. Piosek, M. Ritschel, B. Tschitschko, and J. Wiskandt (2020). **EUREC4A Campaign, Cruise No. MSM89, 17. January - 20. February 2020, Bridgetown (Barbados) - Bridgetown (Barbados), The ocean mesoscale component in the EUREC4A++ field study.** *MARIA S. MERIAN-Berichte ; MSM89, 1-70, ISSN: 2195-8483, doi: 10.1016/j.csr.2016.06.005.*

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## Academic Employment

- 01/2020 - 02/2020: **Student Assistant**, GEOMAR, Germany (*MSM89*) *research cruise*: Research and laboratory assistant in physical oceanography
- 07/2019 - 09/2019 **Student Assistant**, GEOMAR, Germany: Laboratory assistant in chemical oceanography
- 02/2019 - 03/2019 **Student Assistant**, GEOMAR, Germany (*POS533*) *research cruise*: Research and laboratory assistant in chemical oceanography
- 04/2017 - 08/2018 **Student Assistant**, GEOMAR, Germany: Grading of Bachelor student's homework in 'Dynamics of the Atmosphere and Ocean'
- 09/2015 - 10/2015 **Student Assistant**, CAU Kiel, Germany: Teaching the mathematics preparatory course for Bachelor students.

## Internships

- 11/2019 - 12/2019: **University of Chemical Technology of Russia**, Moscow, Russia  
Wastewater analysis with dies and active carbon.
- 09/2018 - 11/2018: **FCPC San Jose del Monte**, Philippines  
Teaching mathematics and physics, giving talks about climate change.
- 02/2017 - 03/2017: **ICBM**, Germany  
Simulation of Ekman theory & eddy formation (Atlantic) with ROMS.

## Certifications / Competencies

- Matlab and unix advanced computational skills
- Physical oceanography instrument set up, calibration, operation, and data validation for CTD (including OPUS, ADCP, fluorescence sensor, UVP, etc.), MVPs, microstructures, glider, drifter, and salinometer (Optimare)
- Chemical oceanography laboratory safety instruction for working with liquid nitrogen and gaseous helium, nitrogen and oxygen on ship and on land
- GC-MS operation for halocarbon measurements
- CDOM/FDOM filtration
- Simulation of Ekman theory and eddy formation in the Atlantic with ROMS
- Geophysical field internship including seismic, geoelectric, gravity, magnetics and EMI radar measurements
- Certificates for working with children with disabilities and ADHD, group-strengthening workshops, instruction of outdoor activities for families
- Advanced Open Water Scuba Diver

## Languages

- German: native
- English: business fluent
- French: elementary