

# Kristin Burmeister

## Doctoral Researcher

- 📍 Born on February 20, 1989 in Gießen, Germany
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## About Me

I am one of those people who were caught by the fascination of the ocean since they were a child. As soon as it was possible, I learned scuba diving to explore the ocean by my own. In my professional life I am interested in the variability of the oceans on seasonal and longer time scales, the large scale ocean circulation and how mesoscale features can impact them. My current research focuses on the tropical Atlantic, in particular, on the variability of the oxygen minimum zone (OMZ) in the eastern tropical North Atlantic (ETNA) and how oxygen variability and trends in the ETNA OZM are related to the large-scale ocean circulation and climate modes. I like to share my research and knowledge about the ocean not only within the scientific community, but also with everybody else who is interested by giving talks during public events or moderating them. I love turning thoughts into reality. It is important for me to actively contribute to a sustainable lifestyle in both professional and private life.

## Education

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- 2015 – exp. June 2019    🎓 **Ph.D. Candidate in Physical Oceanography**  
GEOMAR Helmholtz Centre for Ocean Research Kiel, Germany.  
Preliminary thesis title: *Seasonal to multidecadal variability of the Atlantic North Equatorial Undercurrent and its impact on oxygen.*
- 2012 – 2015    🎓 **M.Sc. Climate Physics**  
Christian-Albrechts-Universität zu Kiel, Germany.  
Graduate thesis: *Tropical Atlantic SST variability with focus on the extreme event in 2009.*
- 2009 – 2012    🎓 **B.Sc. Physics of the Earth System**  
Christian-Albrechts-Universität zu Kiel, Germany.  
Undergraduate thesis: *Observational evidence for estuarine circulation in the Wadden Sea—current velocity, salinity and turbulence.*

## Research Publications

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### Peer Reviewed Publications

**Burmeister, K., Brandt, P., & Lübbecke, J. F.** (2016). Revisiting the cause of the eastern equatorial Atlantic cold event in 2009. *Journal of Geophysical Research: Oceans*, 121. <https://doi.org/10.1002/2016JC011719>.

**Burmeister, K., Lübbecke, J. F., Brandt, P., & Duteil, O.** (2019). Interannual variability of the Atlantic North Equatorial Undercurrent and its impact on oxygen. *Journal of Geophysical Research: Oceans*, 124. <https://doi.org/10.1029/2018JC014760>

### Conference Proceedings

**Burmeister, K., Lübbecke, J. F., Brandt, P., & Duteil, O.** (2018). Oxygen response to changes in the North Equatorial Undercurrent. *Key lecture in: PIRATA 23 Meeting*, 22.-26.10.2018, Marseille, France.

**Burmeister, K.,** Lübbecke, J. F., Brandt, P., & Duteil, O. (2018). Variability of the Atlantic North Equatorial Undercurrent and its impact on oceanic oxygen distribution. *Talk in:* Ocean Deoxygenation Conference 2018, 03.-07.09.2018, Kiel, Germany.

Schütte, F., Thomsen, S., Hummels, R., Fischer, T., **Burmeister, K.,** Dengler, M., & Greatbatch, R. (2018). Near-inertial wave interaction with coherent anticyclonic eddies - a ventilation source for oxygen minimum zones? *Talk in:* Ocean Deoxygenation Conference 2018, 03.-07.09.2018, Kiel, Germany.

**Burmeister, K.,** Lübbecke, J. F., & Brandt, P. (2018). Variability of the Atlantic North Equatorial Undercurrent and its impact on oxygen. *Talk in:* EGU General Assembly 2018, 08.-13.04.2018, Vienna, Austria.

**Burmeister, K. &** Lübbecke, J. F. (2017) Variability of the North Equatorial Undercurrent and its impact on the oxygen minimum zone of the eastern tropical North Atlantic. *Key lecture in:* PIRATA Research Project 20 Years Conference, 05.-10.11.2017, Fortaleza, Brasil.

**Burmeister, K. &** Lübbecke, J. F. (2017) Do the Atlantic climate modes impact the ventilation of the eastern tropical North Atlantic oxygen minimum zone? *Poster in:* EGU General Assembly 2017, 23.-28.04.2017, Vienna, Austria

**Burmeister, K. &** Lübbecke, J. F. (2016) Potential impact of Atlantic climate modes on the ventilation of the oxygen minimum zone in the eastern tropical North Atlantic. *Talk in:* PREFACE-PIRATA-CLIVAR-TAV Conference, 28.11.-02.12.2016, Paris, France.

**Burmeister, K.,** Brandt, P., & Lübbecke, J. F. (2016) What caused the 2009 cold event in the Atlantic cold tongue region?. *Poster In:* EGU General Assembly 2016, 17.-22.04.2016, Vienna, Austria.

## Skills

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Languages    **■** German (native speaker), English (fluent), French (beginner).  
Coding        **■** MATLAB, ~~TEX~~TEX, NCO, PYTHON  
Environments **■** Linux, Unix, Windows, Mac

## Miscellaneous Experience

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### Awards

2016    **■** **EGU Outstanding Student Poster and PICO Award:** "What caused the 2009 cold event in the Atlantic cold tongue region?"

### Expeditions

2018    **■** **RV Meteor (M148)**, Tropical Atlantic  
*Tasks:* Watch leader, ADCP, CTD and microstructure measurements, mooring recovery/deployment, glider recovery

2017    **■** **RV Meteor (M138)**, Tropical Pacific  
*Tasks:* Watch leader, ADCP, CTD and microstructure measurements, mooring recovery/deployment, glider recovery

2016    **■** **RV Meteor (M130)**, Tropical Atlantic  
*Tasks:* Watch leader, ADCP, CTD and microstructure measurements, mooring recovery/deployment

2014    **■** **RV Thalassa (MAM40)**, Subpolar North Atlantic  
*Tasks:* ADCP, CTD and UCTD measurements, mooring recovery/deployment

## Miscellaneous Experience (continued)

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### Teaching

- since 2015    **■ Mentoring**  
Supervision of different students attending in M.Sc. and B.Sc. seminars or internships

### Ph.D. representation

- 2017    **■ Helmholtz Juniors**  
*Tasks:* Speaker of Events Group. Overall coordination of the nation-wide working group that participated in the organization of two nation-wide events in 2017: the NEXTGEN@HELMHOLTZ conference 2017 in Kiel and the N<sup>2</sup> Science Communication Conference 2017 in Berlin.
- 2016–2017    **■ DokTeam**  
*Tasks:* Event organization, maintenance of web page

### Public Outreach

- since 2017    **■ Freitagsforscherclub**  
Supervision of pupils and coordination of mooring experiments in a tank and in the Kiel Fjord
- since 2016    **■ Science Show**  
Presentation of my research to a broad, non-scientific audience and moderation of public events

### Certification

- 2017    **■ Ocean/Atmosphere Time Series Analysis: Theory and Practice II**  
Awarded by Dr. Jonathan Lilly and Prof. Joseph LaCasce, summer school in Oslo, Norway
- Presentation: Open Practice**  
Awarded by Graduate Center, Christian-Albrechts-Universität zu Kiel, Germany
- 2016    **■ Same same but different? Gender and Diversity in Academia**  
Awarded by Henriette Ullmann, interdisciplinary SFB 754 workshop in Göttingen, Germany
- Show your Science**  
Awarded by Graduate Center, Christian-Albrechts-Universität zu Kiel, Germany

## References

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### Prof Joke F. Lübbecke

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### Prof Peter Brandt

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