

Anna-Lena Deppenmeier

Postdoctoral Fellow
National Center for Atmospheric Science
Boulder, Colorado, USA

deppenme@ucar.edu
Work: +1 (303) 497-1329

ACADEMIC EXPERIENCE

Postdoctoral Fellow

June 2019 - Present

National Center for Atmospheric Science, Boulder, USA

- Part of the Pacific Upwelling and Mixing Physics project by investigating drivers of along-isothermal and cross-isothermal motion and their connection to large scale dynamics

Graduate Research Assistant

January 2014 - May 2019

Royal Netherlands Meteorological Institute, Netherlands

- Investigating the tropical Atlantic sea surface temperature bias with a model hierarchy, reanalysis data, and observations

ETH Zurich, Switzerland

June - August 2012

- Reassessment of B3LYP* by means of following two investigations from the literature

Helsinki University, Finland

February - May 2012

- Investigation of vacuum polarisation effects through the Uehlig Potential

Undergraduate Research Assistant

Massey University Auckland, New Zealand

March 2011 - August 2011

- Searching for large Parity Violations:
Theoretical Studies of Penta-atomic Uranium Compounds

EDUCATION

PhD Climate Science, Wageningen University, Netherlands

2019

Dissertation title: Air-Sea Interaction in the Tropical Atlantic

Co-advisors: Wilco Hazeger and Reindert J. Haarsma

M.S. Chemistry, ETH Zurich, Switzerland

2013

Thesis topic: Synthesis and Characterisation of Novel Nanocrystals for LED Application

Advisor: Vanessa Wood

B.S. Chemistry, Georg-August University Goettingen, Germany

2011

PEER REVIEWED PUBLICATIONS

1. **Deppenmeier, A. L.**, Haarsma, R. J., van Heerwaarden, C., & Hazeleger, W. (2020). The Southeastern Tropical Atlantic SST bias investigated with a coupled atmosphere-ocean single column model at a PIRATA mooring site. *Journal of Climate*.
2. **Deppenmeier, A. L.**, Haarsma, R. J., LeSager, P., & Hazeleger, W. (2020). The effect of vertical ocean mixing on the tropical Atlantic in a coupled global climate model. *Climate Dynamics*.
3. **Deppenmeier, A. L.**, Haarsma, R. J., & Hazeleger, W. (2016). The Bjerknes feedback in the tropical Atlantic in CMIP5 models. *Climate Dynamics*, 47(7-8), 2691-2707.
4. Lancker, K., **Deppenmeier, A. L.**, Demissie, T., & Schmidt, J. O. (2019). Climate change adaptation and the role of fuel subsidies: An empirical bio-economic modeling study for an artisanal open-access fishery. *PloS one*, 14(8).
5. Voldoire, A., Exarchou, E., Sanchez-Gomez, E., Demissie, T., **Deppenmeier, A. L.**, Goubanova, K., Hazeleger, W., Keenlyside, N., Koseki, S., Prodhomme, C., Shonk, J., Toniazzo, T., & Traoré, A. K. (2019). Role of wind stress in driving SST biases in the Tropical Atlantic. *Climate Dynamics*, 53(5-6), 3481-3504.
6. Prodhomme, C., Voldoire, A., Exarchou, E., **Deppenmeier, A. L.**, García-Serrano, J., & Guemas, V. (2019). How does the seasonal cycle control equatorial Atlantic interannual variability? *Geophysical Research Letters*, 46(2), 916-922.
7. Hartung, K., Svensson, G., Struthers, H., **Deppenmeier, A. L.**, & Hazeleger, W. (2018). An EC-Earth coupled atmosphere-ocean single-column model (AOSCM) for studying coupled marine and polar processes. *Geosci. Model Dev. Discuss.* <https://doi.org/10.5194/gmd-2018-66>.
8. Wormit, M., Olejniczak, M., **Deppenmeier, A. L.**, Borschevsky, A., Saue, T., & Schwerdtfeger, P. (2014). Strong enhancement of parity violation effects in chiral uranium compounds. *Physical Chemistry Chemical Physics*, 16(32), 17043-17051.

ACADEMIC TRAINING

1. "Ocean Hackweek", eScience Institute, Seattle 2019
2. "Fluid Dynamics of Sustainability and the Environment", Ecole Polytechnique & University of Cambridge, Summer school, Paris 2017
3. Polarstern cruise PS88.2, 2014/11/02-29, CTD measurements, Glider deployment
4. "Nansen Tutu summer school on the Agulhas Current, the Benguela upwelling system and the tropical Atlantic", University of Cape Town, 2014
5. "Second European Earth System and Climate Modeling School", Barcelona Supercomputing Center, Barcelona 2014

SELECTED PRESENTATIONS

1. "The Southeastern Tropical Atlantic SST bias investigated with a coupled atmosphere-ocean single column model at a PIRATA mooring site", triatlans virtual general assembly, May 2020
2. "Eastern Pacific Upwelling", CESM Ocean Working Group Meeting, April 2020
3. "Water mass transformation framework", NOAA/CVP TPOS Pre-Field Campaign PI Meeting, March 2020
4. "Cross-isothermal velocity modulation with ENSO", Ocean Sciences Meeting, February 2020
5. "Cross-isothermal velocity modulation with ENSO", CGD Research Report, February 2020

6. "Cross-isothermal velocities" TPOS/PUMP Investigators Workshop, October 2019
7. "Ocean Mixing – SST – Cloud Feedbacks in the Tropical Atlantic", Seminar, NCAR 2017
8. "Ocean Mixing – SST – Cloud Feedbacks in the Tropical Atlantic", Seminar, Lamont Doherty Earth Observatory, 2017
9. "The influence of ocean – SST – cloud feedback on the tropical Atlantic SST bias", Tropical Atlantic Variability CLIVAR conference, Paris 2017
10. "Sources of tropical Atlantic coupled model biases derived from initialised hindcasts and partially coupled sensitivity experiments", European Geosciences General Assembly, Vienna 2016
11. "Bjerknes Feedback in the Tropical Atlantic", PREFACE general assembly, Casablanca 2014

TEACHING AND MENTORING EXPERIENCE

Master Thesis advisor to Monique Gosseling Dissertation: "Analysis of EC-Earth SST bias development in the Tropical Atlantic"	2016
Guest Lecturer Atmospheric Dynamics M.S. course Wageningen University	2016
Academic Tutor Meteorology and Climate B.S. course Wageningen University	2015
Bachelor Thesis advisor to Pleun Bonekamp Dissertation: "Two model intercomparison of the West African Monsoon"	2014
Academic Tutor Introduction to Chemistry and Thermodynamics B.S. course ETH Zurich	2012 - 2013
Academic Tutor Theoretical Chemistry for Chemists and Physicists B.S. course Georg-August University Goettingen	2010 - 2011

PRIZES AND ACHIEVEMENTS

Chrysalis Award, Association for Women Geoscientists	2019
Outstanding Student Poster Award Ocean Sciences Division, European Geosciences Union	2015
Travel Scholarship for Research Project Abroad, ETH Zurich	2012
Scholarship for Research Project Abroad, DAAD (German Academic Exchange Service)	2010

PROFESSIONAL ACTIVITIES

Organizer of one-day milestone workshop for PREFACE 2016 "SST bias development in the tropical Atlantic", Barcelona, Spain	
Journal Reviewer , <i>Journal of Climate</i> , <i>Climate Dynamics</i>	2018 - present