Christopher Danek

Personal Data

Born	1987 in Berlin, Germany
Address	Geibelstr. 20, 28215 Bremen, Germany
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Work Experience

Since 2020 | **PostDoc** in PLOT (Paleolimnological Transect) at Alfred Wegener Institute
Transient Holocene simulations with coupled climate model COSMOS
High-resolution stable isotope records from Siberian lake diatoms
Head: Dr. Martin Werner

Aug 2019 – Dec 2019 | **PostDoc** in PalMod (Paleoclimate Modeling) at Alfred Wegener Institute
Setup, performing and CMORization of CMIP6 and PMIP4 experiments with the coupled climate model AWI-ESM
Contribution to earth system model framework esm-tools
Head: Prof. Dr. Gerrit Lohmann

Mar 2015 – Jul 2019 | **PhD** (Dr. rer. nat) at the Physics department of Bremen University and the Paleoclimate Dynamics section at the Alfred Wegener Institute
High-resolution hindcast simulations with global ocean model FESOM
Meso-scale Labrador Sea dynamics and energy budgets
Thesis: Modeling the North Atlantic and Labrador Sea dynamics with the global high-resolution ocean model FESOM
Supervision: Dr. Patrick Scholz and Prof. Dr. Gerrit Lohmann
Teaching master degree course "Climate Dynamics II" of the Postgraduate Programme Environmental Physics, Bremen University
Teaching assistance in environmental sciences course "Naturwissenschaftliche Perspektive der Klimawissenschaften I+II", University of Hagen

Peer-reviewed Publications

2021

(in prep) Semmler, T., Goessling, H., Sidorenko, D., Koldunov, N., **Danek, C.** and J. Jungclaus: Ocean model formulation influences climate sensitivity.

(in prep) **Danek, C.**, Werner, M., Meyer, H., et al.: Modelling hydrological changes along the PLOT transect during the Holocene. *Journal of Quaternary Science*

(in prep) **Danek, C.**, Scholz, P. and G. Lohmann: Decadal variability of turbulence and eddy temperature fluxes in the Labrador Sea. *Geophysical Research Letters*

(accepted) Keeble, J., **Danek, C.**, et al.: Evaluating stratospheric ozone and water vapor changes in CMIP6 models from 1850-2100. *Atmospheric Chemistry and Physics*

2020

Ackermann, L., **Danek, C.**, Gierz, P. and G. Lohmann: AMOC Recovery in a Multicentennial Scenario Using a Coupled Atmosphere-Ocean-Ice Sheet Model. *Geophysical Research Letters*, 47, https://doi.org/10.1029/2019GL086810

2019 | **Danek, C.**, Scholz, P. and G. Lohmann: Effects of High Resolution and Spinup Time on Modeled North Atlantic Circulation. *Journal of Physical Oceanography*, 49 (5), 1159–1181, https://doi.org/10.1175/JPO-D-18-0141.1

Peer-reviewed Datasets

2020 | Shi, X., Yang, H., **Danek, C.** and G. Lohmann: AWI AWI-ESM1.1LR model output prepared for CMIP6 PMIP. Earth System Grid Federation, https://doi.org/10.22033/ESGF/CMIP6.9302

Danek, C., Shi, X., Stepanek, C., Yang, H., Barbi, D., Hegewald, J. and G. Lohmann: AWI AWI-ESM1.1LR model output prepared for CMIP6 CMIP. Earth System Grid Federation, https://doi.org/10.22033/ESGF/CMIP6.9301

Methods

Geophysical data analysis and visualization in any Unix-like environment or Microsoft using R, Bash, Fortran, git, CDO, NCO, LaTeX, Inkscape, GIMP, LibreOffice or MS Office, Python, Octave or MATLAB, NCL, QGIS or ArcGIS

I worked with various observational/reanalysis data and geophysical models of different institutions:

AWI: FESOM – Finite Element Sea ice–Ocean Model

MPI: ECHAM, JSBACH, MPI-OM

NCAR: CLM – Community Land Model

Whenever possible, I prefer working with open source software. I try to help others via e.g. stackoverflow and to provide helpful workflow documentations, e.g. at https://chrisdane.github.io.

I speak German (first language), English (fluent) and French (basics).

Universities

Oct 2012 – Dec 2014 | **Master of Science** in Physics of Earth and Atmosphere at the Department of Meteorology, Bonn University (GPA: 1.4)
Thesis: Bayesian Formulation of Uncertainty in Paleoclimate Reconstructions - A Tree Ring Width Case Study
Grade: 1.0; Supervision: Dr. Christian Ohlwein and Prof. Dr. Andreas Hense
Tree ring data kindly provided by Dr. Burkhard Neuwirth

Mar 2014 – Dec 2014 | **Student assistant** at HErZ – Hans-Ertel-Centre for Weather Research, Bonn University
Validation of resolution effects on Numerical Weather Prediction reanalysis data COSMO-REA2
Head: Dr. Sabrina Wahl and Dr. Jan Keller

Fall 2013 | **Exchange Semester** in Meteorological Engineering at the Aeronautics and Astronautics department, İstanbul Teknik Üniversitesi (Istanbul Technical University), Turkey

Mar 2012 – Jul 2013	**Student assistant** at TR32 – Transregional Collaborative Research Centre 32, Bonn University Work with MODIS remote sensing landuse and CLM model data Head: Dr. Prabhakar Shrestha and Prof. Dr. Clemens Simmer
Oct 2008 – Sep 2012	**Bachelor of Science** in Physical Geography at the Department of Geography, Bonn University (GPA: 2.1) Majors in Meteorology and Geology Thesis: Multi-Modell-Analyse zur Klimaänderung der Nordatlantischen Oszillation im 21. Jahrhundert Grade: 2.0; Supervision: PD. Dr. Roland Pape and Prof. Dr. Andreas Hense
Feb – Mar 2011	**Internship** at LANUV NRW – State Agency for Nature, Environment, and Consumer Protection, Essen Planning low emission zones in German Ruhr area to reduce urban air pollution Head: Dr. Sabine Wurzler
Sep 2010 – Feb 2011	**Student assistant** in Climatology and Landscape Ecology section, Department of Geography, Bonn University Field work in mountainous area of Norway, dendrochronological and biogeochemical analysis of dwarf shrubs Head: PD. Dr. Roland Pape and Prof. Dr. Jörg Löffler

Bremen, February 10, 2021