























PERSONAL DATA




BORN 1987 in Berlin, Germany
ADDRESS Geibelstr. 20, 28215 Bremen, Germany
PHONE +49 151 152 199 63
EMAIL cdanek@awi.de

WORK EXPERIENCE












- SINCE 2020 | **PostDoc** in **PLOT** – PALEOLIMNOLOGICAL TRANSECT project at the 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 project at the Alfred Wegener Institute
Setup, performing, CMORization and maintenance of CMIP6 and PMIP4 experiments with the coupled climate model **AWI-ESM**
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**
Small-scale ocean dynamics and energy budgets of North Atlantic and Labrador Sea
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 
- SUMMER 2015 | **Teaching** master degree course “Climate Dynamics II” of the **Postgraduate Programme Environmental Physics**, Bremen University
Head: Prof. Dr. Gerrit Lohmann 

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*
- (*submitted*) 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, git , L^AT_EX, CDO, NCO, Bash, stackoverflow , Inkscape, GIMP, LibreOffice or MS Office, Octave or MATLAB, NCL, Python, 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

I prefer open source infrastructure and software if possible and speak German (first language), English (fluent) and French (basics)

UNIVERSITIES

- OCT 2012 – **Master of Science** in PHYSICS OF EARTH AND ATMOSPHERE at the [Department of Meteorology](#), Bonn University, Germany (GPA: 1.4)
- DEC 2014 | 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 – **Student assistant** at [HErZ](#) – Hans-Ertel-Centre for Weather Research, Bonn University
- DEC 2014 | [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 – **Student assistant** at [TR32](#) – Transregional Collaborative Research Centre 32, Bonn University
- JUL 2013

	<p>Work with MODIS remote sensing landuse and CLM model data</p> <p>Head: Dr. Prabhakar Shrestha  and Prof. Dr. Clemens Simmer </p>
OCT 2008 – SEP 2012	<p>Bachelor of Science in PHYSICAL GEOGRAPHY at the Department of Geography, Bonn University, Germany (GPA: 2.1)</p> <p>Majors in Meteorology & Geology</p> <p>Thesis: Multi-Modell-Analyse zur Klimaänderung der Nordatlantischen Oszillation im 21. Jahrhundert</p> <p>Grade: 2.0; Supervision: Prof. Dr. Roland Pape and Prof. Dr. Andreas Hense </p>
FEB – MAR 2011	<p>Internship at LANUV NRW – State Agency for Nature, Environment, and Consumer Protection, Essen, Germany</p> <p>Planning of low emission zones in German Ruhr area to reduce urban air pollution</p> <p>Head: Dr. Sabine Wurzler</p>
SEP 2010 – FEB 2011	<p>Student assistant in Climatology and Landscape Ecology, Department of Geography, Bonn University</p> <p>Field work in mountainous area of Norway, dendrochronological and biogeochemical analysis of dwarf shrubs</p> <p>Head: Prof. Dr. Roland Pape and Prof. Dr. Jörg Löffler</p>

Bremen, February 1, 2021