



# Dr. Kira Rehfeld

Earth System Scientist,  
Physicist,  
Professor of Climatology and  
the Biosphere

- October 28, 1982
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## About Me

The central focus of my research is to explain the state- and timescale-dependency of **climate variability** from a past-to-future perspective. In particular, my research explores the dynamical regional changes within the Earth system under global warming or cooling. I am also interested in understanding how complex Earth system models have to be to capture features of climate correctly, and in developing **climate change mitigation** options.

## Publication Lists

- [scholar.google.de/PgC-JDQAAAAJ](https://scholar.google.de/PgC-JDQAAAAJ)
- [orcid.org/0000-0002-9442-5362](https://orcid.org/0000-0002-9442-5362)
- Web of Science ResearcherID:O-1781-2019

## Software

- [tocsy.pik-potsdam.de/nest.php](https://tocsy.pik-potsdam.de/nest.php)
- <https://github.com/krehfeld>
- <https://github.com/paleovar>

## Education

### Postgraduate Training

- 2009 – 2013 **Ph.D Physics** Humboldt-Universität zu Berlin  
Thesis: Embracing nature's inhomogeneity – the challenge to infer spatio-temporal dependence from palaeoclimate data.  
Advisor: Jürgen Kurths
- 2003 – 2009 **Diploma Physics** Heidelberg University  
Thesis: Investigation into Mont Blanc summit ice cores at seasonal resolution.  
Advisor: Dietmar Wagenbach
- 2007 – 2008 **M.Sc. Medical Physics** Heidelberg University/Harvard Medical School  
Specialization: Biomedical Optics and Radiotherapy.  
Advisor: Yulia Lyatskaya

## Professional Experience

- since 2021 **Tübingen University, Tübingen, Germany** Professor  
Professor of Climatology & Biosphere in the Department of Geosciences and the Department of Physics.
- 2018 – 2021 **Heidelberg University, Heidelberg, Germany** Group Leader  
Emmy Noether Independent Junior Research Group at the Institute of Environmental Physics.
- 2016 – 2018 **British Antarctic Survey, Cambridge, UK** Postdoc  
DFG fellowship on climate and isotope tracer modelling.
- 2013 – 2016 **Alfred-Wegener-Institute for Polar and Marine Research** Postdoc  
Analysing palaeoclimate and -environmental proxies.
- 2009 – 2013 **Potsdam-Institute for Climate Impact Research** Researcher  
Development of methods for climate data analysis.

## Major funding and Awards

- 2024 Award for Courageous Science, State of Baden-Württemberg
- 2021 Manfred-Fuchs Prize, Heidelberg Academy of Sciences
- 2019 Hengstberger Award for Young Scientists
- 2018 DFG Emmy Noether fellowship

## Key Publications

- 2020 **Variability of surface climate in simulations of past and future**  
*Rehfeld, K. et al. K Rehfeld, Hébert, R., Lora, J.M., Lofverstrom, M., Brierley, C.M., Earth Syst. Dynam.*  
DOI:10.5194/esd-11-447-2020
- 2018 **Global patterns of declining temperature variability from the Last Glacial Maximum to the Holocene**  
*K. Rehfeld, T. Münch, S.L. Ho and T. Laepple. Nature*  
DOI:10.1038/nature25454
- 2011 **Comparison of correlation analysis techniques for irregularly sampled time series**  
*K. Rehfeld, N. Marwan, J. Heitzig, and J. Kurths, Nonlin. Proc. Geophys.*  
DOI:10.5194/npg-18-389-2011

63 published peer-reviewed articles. H-index 24/28 (Web of Sci./G\*Scholar).

## Community Service

- since 2022 Editor, Earth System Dynamics and Nonlinear Processes in Geosciences; Steering group: [nat-esm.de](http://nat-esm.de) and HLRS Stuttgart
- 2018-2023 Session convener, European Geoscience Union General Assembly
- since 2019 Steering group member of the PAGES working groups Climate Variability Across Scales (CVAS) and Speleothem Synthesis and Analysis (SISAL), the PalMod project (since 2018) and the Past2Future working group of the Palaeoclimate Modeling Intercomparison Project.