MORITZ F. ADAM

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PROFILE

Young environmental physicist launching his career in climate science and planning a PhD project in the field of climate modelling. Highly driven to study global to regional climate evolution, gain experience in climate modelling and to open up own future research perspectives.

Professional skills in environmental physics, climate data analysis and visualisation, climate model development, and scientific programming.

EDUCATION

Master Studies July 2019 - present
Heidelberg University, IUP Heidelberg

Master Studies in Physics.

Focusses on the dynamics and variability of climate, on bridging the gap between paleoclimate proxies and climate models, and on modelling complex physical, social and economic systems. Supervised by Kira Rehfeld, IUP.

Research Stay October 2019 - February 2020
Memorial University of Newfoundland, Canada

Current research project in climate model development.

Integrated a component for dynamic sea ice into the fast simplified general circulation model PlaSim [2] based on the dynamic sea ice component of MITgcm [3, 1]. Ongoing collaboration with Heather J. Andres, Lev Tarasov (both Memorial University), and Kira Rehfeld (IUP Heidelberg) on testing and calibrating the extended model, and employing it in studies of paleoclimate variability in the Last Glacial Cycle. Currently seeking to speed PlaSim up and adapt the model to efficiently run on the Heidelberg bwHPC infrastructure.

Bachelor Studies September 2016 - July 2019
Heidelberg University, IUP Heidelberg

Bachelor Studies in Physics.

Primarily focussed on physics of climate and environment, and computational physics. Professional interest in complex and non-linear systems. Attended courses in different fields of environmental physics (fluid dynamics, atmosphere, porous media, glaciers), in computational physics, statistics and computer science.

Bachelor thesis on the similarity of pollen paleoclimate archives supervised by Kira Rehfeld, IUP. Very good graduation (1.7).

Ongoing research on the global similarity of pollen proxies and climate model data during the last deglaciation based on analysing irregular time series and quantifying heterogeneous networks.

School education graduated June 2015
Gymnasium Nottuln, Germany; German School of Prague (DSP), Czech Republic

Graduated from high school with excellence (1.0). Awarded high school graduation prices from the German Mathematicians Association (DMV) and the Society of German Chemists (GDCh).

Other

Worked on natural language processing and opinion recognition in newspaper articles using machine learning techniques in a summer school at the University of Greifswald, Germany. The school was lead by Matthias Hagen / Halle, Germany and Matthias Potthast / Leipzig, Germany. (August 2018)

Was granted a fellowship for his studies by the German National Academic Scholarship Foundation (Studienstiftung). (July 2017 - present)

WORK EXPERIENCE

Emmy Noether junior research group on Paleoclimate dynamics and variability
IUP Heidelberg August - October 2019, March 2020 - present

Student assistant in the group of Kira Rehfeld.

Naturschutzgesellschaft Schutzstation Wattenmeer e.V. June 2015 - July 2016
Westerheversand, Germany

Accomplished a voluntary service in Wadden Sea National Park of Schleswig-Holstein, Germany, for a nature conservation association contributing to field research and monitoring.

SKILLS & INTERESTS

Programming & Software	R, Python, Fortran, C/C++, Linux, CDO, Adobe CC
Languages	German, English, French
Interests	Photography, Running, Ornithology

REFERENCES

[1] Martin Losch et al. "On the formulation of sea-ice models. Part 1: Effects of different solver implementations and parameterizations". In: *Ocean Modelling* 33.1-2 (2010), pp. 129–144.

[2] Frank Lunkeit et al. *Planet Simulator User's Guide Version 16.0*. 2012.

[3] Jinlun Zhang and W. D. Hibler III. "On an efficient numerical method for modeling". In: *Journal of Geophysical Research* 102.4 (1997), pp. 412–415.