

Work address:

Senckenberg Biodiversität und Klima Forschungszentrum

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Website

RESEARCH INTERESTS

I am interested in reconstructing terrestrial paleo-environments and sedimentary processes, especially during warm greenhouse periods such as the Eocene. These terrestrial records are key in providing constraints on dust fluxes and precipitation in the past, especially when accurately dated by using magneto- and cyclostratigraphy. I employ a variety of sedimentological tools such as grain-size distributions and surface textures to track mineral dust and aridification in the geological record. Furthermore, I am using stable and clumped isotopes to reconstruct temperature as well as precipitation and study their role in driving biotic changes.

EDUCATION

Ph.D. Paleoclimate, University of Potsdam, Germany **2015-2020**

Supervisor: Dr. Guillaume Dupont-Nivet

Dissertation: *“Asian dust, monsoons and westerlies during the Eocene”*

M.Sc. Earth, Life and Climate, Utrecht University, the Netherlands **2013-2015**

Supervisor: Dr. Hemmo A. Abels

Thesis: *“Onset of the Paleocene-Eocene Thermal Maximum (PETM) in the Bighorn Basin, Wyoming”*

B.Sc. Earth Sciences, Utrecht University, the Netherlands **2010-2013**

Supervisor: Dr. Joris Eggenhuisen

Thesis: *“The effects of basin depth on gravel front progradation”*

POST-DOCTORAL EMPLOYMENT

Post-Doctoral Researcher, Senckenberg BiK-F **2021-present**

PI's: Prof. Dr. Andreas Mulch, Prof. Dr. Susanne Fritz, Prof. Dr. Jens Fiebig

I am currently in the second year of my postdoc as part of the 3-year VeWA project, which involves 6 PhD's students and 5 postdocs reconstructing past greenhouse climates to be used as possible analogues for future global warming. My subproject involves paleo-environmental reconstructions from Eocene sedimentary basins in the northwestern US. These continental basins provide a rich fossil mammal record marked by multiple shifts in biodiversity during the Eocene and Oligocene periods. I aim to reconstruct the paleoenvironmental evolution in this region by using stable and clumped isotopes to better understand the links between climate and mammal biodiversity.

TEACHING

Goethe University Frankfurt

2021-present

Lectured the M.Sc. course “*Paleoenvironmental reconstructions in continental settings*”.

University of Potsdam

2018-2019

Lectured the B.Sc. course “*Sedimentary Systems*” as part of the International Teaching Professionals (ITP) certified program. Co-lectured the M.Sc. course “*Geodynamics, Climate and Biodiversity*”.

Junior College Utrecht

2015

Developed the course “*Regelmaat in het Paleoklimaat*” for high school students. The course teaches mathematical concepts by applying them to stratigraphic timeseries.

Utrecht University

2014-2015

Assisted in teaching the B.Sc. course “*Sedimentology and Stratigraphy*” and “*Pyrenees – Sedimentary Geology Workshop*”.

ANALYTICAL SKILLS

Sedimentology

Stratigraphic logging and facies analysis, grain-size analysis and end-member modelling, timeseries analysis, sedimentary petrology, SEM, XRF, XRD, analogue flume experiments.

Isotope geochemistry

Carbonate clumped isotopes, $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$, TOC and bulk organic $\delta^{13}\text{C}$, organic compound extraction and leaf wax n-alkane δD and $\delta^{13}\text{C}$.

Rock magnetism

Thermal demagnetization and Natural Remanent Magnetization, magnetic hysteresis loops, (anisotropy of) magnetic susceptibility, Isothermal Remanent Magnetization.

Computing

MATLAB, R, GIS.

Field experience

Bighorn Basin, Wyoming, southwestern Montana (US); Ebro Basin, Madrid Basin (Spain); Luberon (France); Tarim Basin, Xining Basin (China), Pamir (Tadjikistan).

PROFESSIONAL DEVELOPMENT

2021	FIERCE Isotope Short Course	Univ. Frankfurt
2019	Software Carpentry: Introducing Unix Shell and R	GFZ Potsdam
2019	Statistics in Big Data: Introduction Workshop	FU Berlin
2018-2019	International Teaching Professionals program	Univ. of Potsdam
2018	Data Visualization Workshop: Introducing Javascript	GFZ Potsdam
2017	Short Course on MATLAB Recipes for Earth Sciences	Univ. Potsdam

COMMUNITY CONTRIBUTIONS

- Reviewer for *Geology*, *Nature Communications*, *Earth and Planetary Science Letters*, *Geological Society of America Bulletin*, *Sedimentary Geology*, *Gondwana Research*, *Geochemistry Geophysics Geosystems*, *Progress in Earth and Planetary Science*.
- Co-convened a session at EGU in 2020 entitled *Asian Climate and Tectonics*.

OUTREACH

- Contributing to an exhibition at the Senckenberg museum planned for 2022 titled: CLIMATE - Now – Then – Soon.
- Co-performed and represented European scientists in a movie from RBB titled *Europa in Potsdam, Eine Entdeckungstour*.

LANGUAGES

Dutch (native), **English** (fluent), **German** (fluent)