

DR. KATHARINA METHNER – CURRICULUM VITAE

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Research Interests

Reconstructing Cenozoic paleoaltimetry and paleoclimate using isotope geochemical approaches (traditional stable and clumped isotope geochemistry).

Professional Experience

since 2020 Feodor Lynen Fellowship of the Humboldt Foundation for a Visiting PostDoc, Stanford University

2016-2019 Research Associate, Senckenberg Research Institute and Natural History Museum Frankfurt & Senckenberg Biodiversity and Climate Research Centre

2/2017-5/2017 Research Associate, Landes-Offensive zur Entwicklung Wissenschaftlich-ökonomischer Exzellenz (LOEWE) program at the Hessen State Ministry for Higher Education, Research and the Arts (delegated from Senckenberg)

Education

2016 Dr. rer. nat. (summa cum laude), Goethe Universität Frankfurt, Germany
Dissertation title: *Recovering Eocene paleotopography and paleoclimate of the North American Cordillera through integrated stable isotope and clumped isotope analyses*

9/2010-5/2016 PhD candidate at the Senckenberg Biodiversity and Climate Research Centre, Frankfurt, Germany

2010 Dipl. Geowiss. (overall grade: 1.2), Leibniz University Hannover, Germany
Diploma thesis: *Fluid flow and kinematics in a Cordilleran detachment zone* (1.1)

10/2004-4/2010 Study of Earth Sciences, Leibniz University Hannover (D) and University of Berne (CH)

Awards

2017 Nominee of the Leibniz Association for Leibniz dissertation award

2016 Wolfgang Strutz dissertation award

2016 „Award of Freunde und Förderer“ at Goethe University Frankfurt for the best dissertation in natural sciences

Lectures

2019 Invited seminar lecture at University of Bern, Switzerland

2017 Invited keynote talk at JpGU-AGU, Tokio, Japan

2017 Invited seminar lecture at Kyoto University, Japan

14 contributions on international conferences (AGU, EGU, Goldschmidt, JpGU-AGU, DGGV, EuroClay)

Public lectures and panel discussions as part of the Senckenberg outreach and communications programme

Teaching Experience and Student Supervision

Single lectures: “System Erde” (Bsc.), “Tektonik und Klima” (Msc.), Goethe University Frankfurt, DE
Tutorial associated to the master course “Tektonik und Klima”, Goethe University Frankfurt, DE
Advisor BSc. theses (C. Schreiber, R. Prinzen, L. Jork, A. Jork, Goethe University Frankfurt, DE)
Advisor (D. Guven, Middle East Technical University Ankara, TR)
Co-advisor PhD thesis (E. Krsnik, Goethe University Frankfurt, DE)
Hosting students (high school and middle school level during internships and “Girl’s Day”)

Professional Affiliations

AGU, GSA, EGU, DGGV

National and international collaborators

Prof. Dr. Andreas Mulch (PhD & PostDoc advisor; Senckenberg Biodiversity and Climate Research Centre and Goethe Universität Frankfurt), Prof. C. Page Chamberlain (PhD advisor; Stanford University)
Jens Fiebig (Goethe Universität Frankfurt), Fritz Schlunegger, (Universität Bern), Catherine Badgley (University of Michigan), Todd Ehlers (Universität Tübingen), Jeremy Caves Rügenstein (MPI Hamburg), Theresa Schwartz (Colorado School of Mines), Christian Teyssier (University of Minnesota), Oliver Kempf (swisstopo), Axel Gerdes (Goethe Universität Frankfurt), Micah Jessup (University of Tennessee), Horst Zwingmann (University Kyoto)

Funded Projects

2020 LOEWE priority program “VeWa” – Project B2 “Kontinentale Paläoklima- & Biodiversitätsentwicklung” (3.77 Mio€ as co-PI on VeWa; anticipated B1 project ~233.000€)
2017 DFG SPP AlpArray “Neogene Paleoelevation and Paleoclimate of the Central Alps – Linking Earth Surface Processes to Lithospheric Dynamics”, ME-4955/1-1 (24.375 € as PI; 185.000 € as co-PI on MU2845/6-1)
2016 Senckenberg Alumni Programme (research visit) (1.500,- €)
2011 LOEWE Centre BiK-F Outgoing (research visit) (1.500,- €)

Languages & Skills

German (native language), English (fluent), French & Spanish (high school level)
Excel (excellent), R (basics), Isodat (good)

Fieldwork experience

Paleocene and Eocene sedimentary sequences in the Cordilleran Rocky Mountains (Montana, Idaho) and Washington Cascades (several seasons; 11 weeks); Miocene sedimentary sequences in Cordilleran Rocky Mountains and its foreland (Montana, Idaho, Colorado, Nebraska, New Mexico) as well as in the Mojave Desert (California) (4 seasons; 7 weeks); Oligocene-Miocene terrestrial sediments of the Swiss Molasse, Switzerland (4 seasons, 4 weeks)

Laboratory Skills

Clumped isotope thermometry, stable isotope analyses; Thermo Finnigan MAT 253, MAT 253+, with peripherals: GasBench, TC/EA, Flash EA, self-constructed automated carbonate acid digestion and gas purification system (Hofmann’s Auto Line, HAL); sample preparation: hydrous silicates, carbonates, biapatite