

Dr. Maud JM Meijers – Short CV

Dr. Maud J.M. Meijers (f)

Work address: Senckenberg Biodiversity and Climate Research Centre (SBIK-F)
Senckenberganlage 25, 60325 Frankfurt, Germany

Email: maud.meijers@senckenberg.de

Google Scholar: <https://scholar.google.com/citations?user=zW2DS9kAAAAJ&hl=en>

ORCID: <http://orcid.org/0000-0003-2724-4980>

RESEARCH PROFILE

As a geologist with an interdisciplinary background, I use stable isotope geochemistry to quantify Earth surface processes by reconstructing paleotopography and continental paleoenvironments (vegetation, hydrology, climate, seasonality) from the sedimentary rock record. I combine magnetostratigraphy and $^{40}\text{Ar}/^{39}\text{Ar}$ dating to establish a chronological framework; one of the prerequisites for understanding the timing and rates of geological events and processes. Ultimately, I strive to comprehend the drivers, interactions and feedbacks between Earth surface and tectonic processes, all the way to their effects on regional biodiversity.

APPOINTMENTS

- Since 2016** *Research Scientist*
Senckenberg Biodiversity and Climate Research Centre, Frankfurt, Germany
Earth Surface Processes and Paleoclimate Research Group
- 2012 – 2015** *Postdoctoral Researcher*
University of Minnesota, USA
Structure, Tectonics and Metamorphic Petrology (STAMP) Group
and Institute for Rock Magnetism (IRM)
- 2010 – 2012** *Henri Poincaré Postdoctoral Fellow*
Géoazur, Observatoire de la Côte d'Azur,
Université de Nice - Sophia Antipolis, France
Orogen Dynamics: Transfer and Coupling Group

EDUCATION

- 2006 – 2010** *PhD, Utrecht University, Netherlands*
Paleomagnetic Laboratory 'Fort Hoofddijk'
and Tectonics and Structural Geology Group (VU Amsterdam)
Title: Tethyan evolution of the Black Sea region since the Paleozoic: a paleomagnetic approach
- 2002 – 2005** *MSc, Utrecht University, Netherlands*
Paleomagnetic Laboratory 'Fort Hoofddijk'
- 1999 – 2002** *BSc, Utrecht University, Netherlands*
High Pressure and Temperature Laboratory

RESEARCH EXPERIENCE

- Since 2016 Research scientist 'Geology/Earth Surface Processes' with a focus on the reconstruction of Miocene-Pliocene central Anatolian paleoenvironment through sedimentological observations and stable isotope geochemistry on fluvio-lacustrine sedimentary rocks, soil carbonates and mammal tooth enamel, as well as linking surface uplift and biodiversity dynamics by integrating geology and paleobiology. With Prof. Dr. Andreas Mulch (Senckenberg Biodiversity and Climate Research Centre Frankfurt, SBIK-F).
- 2012-2015 Postdoctoral researcher 'Timing and quantifying the uplift of the southern Central Anatolian Plateau margin and reconstructing the paleoenvironment of the central Anatolian Neogene lake system by integrating magnetostratigraphy, $^{40}\text{Ar}/^{39}\text{Ar}$ dating and carbon and oxygen stable isotope geochemistry,' within the framework of the NSF CD-CAT (Continental Dynamics-Central Anatolian Tectonics) project. With Prof. Donna Whitney, PhD (University of Minnesota).
- 2010-2012 Henri Poincaré Postdoctoral Fellow 'Paleomagnetism of the South Armenian Block and its foreland: constraints on Tethyan plate reconstructions and oroclinal bending during the Phanerozoic.' With Dr. Marc Sosson and Dr. Yann Rolland (Géoazur, Observatoire de la Côte d'Azur, University of Nice - Sophia Antipolis).
- 2006-2010 PhD thesis 'Tethyan evolution of the Black Sea region since the Paleozoic: a paleomagnetic approach.' With Prof. Dr. Cor Langereis, Prof. Dr. Douwe van Hinsbergen (Utrecht University) and Dr. Randell Stephenson, Prof. Dr. Sierd Cloetingh (VU Amsterdam).
- 2004-2005 MSc thesis 'Mesozoic paleomagnetic data from North Dobrogea (Romania) and Crimea (Ukraine): Cimmerian deformation phases along the southern margin of the East European Platform.' With Prof. Dr. Cor Langereis (Utrecht University).
- 2002 BSc thesis 'Fault healing and sealing in sedimentary rocks: one-dimensional compaction experiments on calcite under room temperature and low stress conditions.' With Prof. Dr. Chris Spiers (Utrecht University).

TEACHING EXPERIENCE

- 2018-2019 Designing and teaching MSc course 'Paleoenvironmental reconstructions in continental settings' with Dr. I. Vasiliev and Dr. T. Lüdecke; Goethe-University Frankfurt
- 2018-2019 Substituting class 'Effects of tectonics and climate on the morphological evolution of orogens' for Prof. Dr. Andreas Mulch; Goethe-University Frankfurt
- 2014 Seminar for undergraduate students: Paleomagnetism as a tool to reconstruct the large-scale geometry of Turkish orogens; Carleton College (USA)
- 2011 'Presenting in English' for French 3rd year BSc students; Université de Nice-Sophia Antipolis
- 2008 Field training of first year BSc students in Spain, four weeks; Utrecht University
- 2006-2007 Field training of first year BSc students in Spain, four weeks per year; VU Amsterdam
- 2002-2005 Teaching assistant for geology students: 1st year BSc Mathematics course, 2nd year BSc Structural Geology & Petrology course, 1st year BSc Introduction to Geophysics course, 1st year excursion to the Belgian Ardennes, Preparatory course for 1st year BSc field work in Spain; Utrecht University

STUDENT SUPERVISION

- 2013 Supervision of Noah Keller, undergraduate student, CD-CAT project, University of Minnesota
- 2012 Renzo Degenaar, MSc student co-supervised with Prof. Dr. Cor Langereis, project entitled: 'Oroclinal bending in the Lesser Caucasus', Utrecht University
- 2011 Marily Mensink, BSc student co-supervised with Prof. Dr. Cor Langereis, thesis entitled: 'A paleomagnetic study on the South Armenian Block: The rotation since and the paleolatitude in Santonian time', Utrecht University
- 2007 Maartje H.F. Hamers, MSc student co-supervised with Prof. Dr. Cor Langereis, thesis entitled: 'A new late Paleozoic Apparent Polar Wander Path for Baltica', Utrecht University

GRANTS

- 2012 Institute for Rock Magnetism, University of Minnesota, 'Visiting research fellowship': 3 k€
- 2012 'Darius programme' (oil company consortium), for field work and analyses: 9 k€
- 2011 'Darius programme', for field work and analyses: 9 k€
- 2011 Géoazur/Observatoire de la Côte d'Azur, for field work and analyses: 2.5 k€
- 2010 Observatoire de la Côte d'Azur 'Henri Poincaré Postdoctoral Fellowship': 60 k€ (PI)
- 2004 'Molengraaff fonds' for field work in Ukraine and Romania (MSc): 1 k€

FIELD EXPERIENCE (TOTAL >80 WEEKS)

I led, participated in and supervised field trips in **Armenia** (6 weeks), **Azerbaijan** (1.5 weeks), **Belgium** (1.5 weeks), **Georgia** (3.5 weeks), **Greece** (0.3 weeks), **Romania** (2 weeks), **Russia** (3 weeks), **Spain** (28 weeks), **Turkey** (32 weeks), **Ukraine** (6 weeks)

LABORATORY EXPERIENCE

Inorganic stable isotope geochemistry

Joint Goethe University – Senckenberg BiK-F Stable Isotope Facility, Frankfurt

$\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ on (soil) carbonate and mammal tooth enamel

δD on clays and micas, δD and $\delta^{18}\text{O}$ on water

Paleomagnetism and rock magnetism

Paleomagnetic laboratory 'Fort Hoofddijk', Utrecht University

Institute for Rock Magnetism (IRM), University of Minnesota

Thermal and AF demagnetization, IRM and ARM acquisition and demagnetization, MPMS, kappa bridges, Curie balance, Magnon, VSM

Argon geochronology

Argon Geochronology Laboratory, VU Amsterdam

Mineral separation and $^{40}\text{Ar}/^{39}\text{Ar}$ analysis

SELECTED ACADEMIC ACTIVITIES

PhD Committees

October 2018, Member of the reading committee and opposition for the PhD thesis of Derya Gürer, Utrecht University, Netherlands

Reviewer for Scientific Journals

Geology, Geophysical Journal International, GSA Bulletin, Geochemistry Geophysics Geosystems, International Journal of Earth Sciences, Journal of Geodynamics, Tectonics, Tectonophysics

LANGUAGES

English fluent, German very good, Dutch native, French very good

SELECTED INVITED ORAL PRESENTATIONS

7. **Meijers, M.J.M.**, 2019. Continental central Anatolian ecosystem and drainage evolution during Mio-Pliocene surface uplift, International Earth Science Colloquium On the Aegean Region (IESCA) 2019, Izmir, Turkey, *invited keynote speaker*
6. **Meijers, M.J.M.**, 2017. Late Miocene to Pliocene paleoenvironment and surface uplift of the Central Anatolian Plateau and its southern margin (Turkey), Utrecht University, Netherlands, *invited speaker*
5. **Meijers, M.J.M.**, 2017. Rapid Late Miocene Surface Uplift of the Central Anatolian Plateau Margin (Turkey), Colloquium Göttingen University, Germany, *invited seminar speaker*
4. **Meijers, M.J.M.**, 2014. Paleomagnetism as a tool to reconstruct the large-scale geometry of Turkish orogens, Carleton College, Northfield, USA, *invited seminar speaker*
3. **Meijers, M.J.M.**, Lefebvre, C.J.C, Kaymakçı, N., van Hinsbergen, D.J.J., Langereis, C.G., Peynircioğlu, A., Stephenson, R.A. and Hippolyte, J.-C., 2013. Paleomagnetism as a tool to reconstruct the large-scale geometry of Turkish orogens, 50th Anniversary of Earth Sciences at the Middle East Technical University, Ankara, Turkey, *invited speaker*
2. **Meijers, M.J.M.**, Langereis, C.G., Kaymakçı, N., van Hinsbergen, D.J.J., Saintot, A., Wijbrans, J., Stephenson, R.A., Vrouwe, B., Davies, G. and Matenco, L., 2010. Jurassic-Cretaceous evolution of the circum-Black Sea region: Paleomagnetic studies in the Pontides/Taurides (Turkey) and Crimea (Ukraine), Université de Nice – Sophia Antipolis, Nice, France, *invited speaker*
1. **Meijers, M.J.M.**, Kaymakçı, N., van Hinsbergen, D.J.J., Saintot, A., Wijbrans, J., Stephenson, R.A. and Langereis, C.G., 2009. Jurassic-Cretaceous Evolution of the Circum-Black Sea Region: Paleomagnetic Studies in the Pontides (Turkey) and Crimea (Ukraine) Combined with New Radiometric Ages from Crimea, 2nd International Symposium on the Geology of the Black Sea Region, Ankara, Turkey, *keynote speaker*

PUBLICATIONS

Google Scholar: <https://scholar.google.com/citations?user=zW2DS9kAAAAJ&hl=en>