

## EDUCATION

- 2013 Promotion (PhD) in Biology (Paleontology) at Humboldt-Universität, Berlin, Germany.
- 2007 Master (MSc) in Systematic, Evolution and Paleontology at Université Pierre et Marie Curie (UPMC) coaccredited with Museum National d'Histoire Naturelle and École Normale Supérieure, Paris, France.
- 2004 Licence (BSc) in Earth and Space Sciences at Université Paul Sabatier, Toulouse, France.
- 2003 DEUG in Earth and Universe Sciences at Université Paul Sabatier, Toulouse, France.
- 2001 Baccalauréat in Science (Mathematics) at Lycée Pré de Cordy, Sarlat-la-Canéda, France.

## RESEARCH EXPERIENCE

- 2018–22 PostDoc research project (DAAD MOPGA-GRI grant 57429681) at the Museum für Naturkunde (MfN) with G. Asatryan and D.B. Lazarus on 'Polar Paleogene Plankton and Productivity'.
- 2015–17 PostDoc research project (DFG grant RE3470/3-1) at MfN on 'Diatoms, Radiolarians and the Cenozoic Silicon and Carbon cycles'.
- 2014–15 PostDoc research project at MfN with D.B. Lazarus and H. Pälike on 'Earthtime-EU: Integrated deep-sea microfossil chronostratigraphic database, website and analytic tools'.
- 2008–12 PhD research project (DFG grant LA1191/8-1,2) at MfN with D.B. Lazarus and B. Mohr on a 'Synthesis on Antarctic Neogene radiolarians: taxonomy, macroevolution and biostratigraphy'.
- 2007 MSc research project at UPMC with T. Danelian and S. Saint-Martin on 'Siliceous plankton paleoecology in the tropical Atlantic in relation with Middle Eocene climatic changes'.
- 2006 MSc research project at UPMC with T. Danelian on 'Radiolarian diversity and taphonomy during the critical warming interval of the Paleocene-Eocene boundary'.

## FIELDWORK

- 2019 IODP Expedition 379 'Amundsen Sea West Antarctic ice-sheet history': Radiolarian specialist.

## PUBLICATIONS

### Peer-reviewed articles

- 2021 Fenton I., Woodhouse A., Aze T., Lazarus D., Renaudie J., Dunhill A., Young J., Saupe E. Triton: a new database of Cenozoic Planktonic Foraminifera. *Scientific Data*, 8:xxx.
- Buchwitz M., Jansen M.A., Renaudie J., Marchetti L., Voigt S. Evolutionary change in locomotion close to the origin of amniotes inferred in a phylogenetically informed analysis of trackway data. *Frontiers in Ecology and Evolution*, 9:674779.
- 2020 Trubovitz S., Lazarus D., Renaudie J., Noble P. Marine plankton show threshold extinction response to Neogene climate change. *Nature Communications*, 11:5069.
- Renaudie J., Lazarus D.B., Diver P. NSB (Neptune Sandbox Berlin): An expanded and improved database of marine planktonic microfossil data and deep-sea stratigraphy.. *Palaeontologia Electronica*, 23(2):a11.
- 2019 Piazza V., Duarte L.V., Renaudie J., Aberhan M. Reductions in body size of benthic macro-invertebrates as a precursor of the Early Toarcian (Early Jurassic) extinction event in the Lusitanian Basin, Portugal. *Paleobiology*, 45(2), 296–316.
- 2018 Renaudie J., Drews E.-L., Böhne S. The Paleocene record of marine diatoms in deep-sea sediments. *Fossil Record*, 21(2), 183–205.
- Lazarus D.B., Renaudie J., Lenz D., Diver P., Klump J. Raritas: a program for counting high diversity categorical data with highly unequal abundances. *PeerJ*, 6, e5453.
- 2016 Renaudie J. Quantifying the Cenozoic marine diatom deposition history: links to the C and Si cycles. *Biogeosciences*, 13(21), 6003–6014.
- Wiese R., Renaudie J., Lazarus, D.B. Testing the accuracy of genus-level data to predict species diversity in Cenozoic marine diatoms. *Geology*, 44(12), 1051–1054.
- Renaudie J., Lazarus D.B. New species of Neogene radiolarians from the Southern Ocean - Part IV. *Journal of Micropalaeontology*, 35(1), 26–53.
- 2015 Renaudie J., Lazarus D.B. New species of Neogene radiolarians from the Southern Ocean - Part III. *Journal of Micropalaeontology*, 34(2), 181–209.
- 2014 Lazarus D.B., Barron J., Renaudie J., Diver P., Türke A. Cenozoic diatom diversity and correlation to climate change. *PLoS ONE*, 9(1), e84857.

- 2013 Renaudie J., Lazarus D.B. New species of Neogene radiolarians from the Southern Ocean - Part II. *Journal of Micropalaeontology*, 32(1), 59–86.  
 Renaudie J., Lazarus D.B. On the accuracy of paleodiversity reconstructions: a case study in antarctic radiolarians. *Paleobiology*, 39(3), 491–509.
- 2012 Renaudie J., Lazarus D.B. New species of Neogene radiolarians from the Southern Ocean. *Journal of Micropalaeontology*, 31(1), 29–52.
- 2010 Renaudie J., Danelian T., Saint-Martin S., Le Callonec L., Tribovillard N. Siliceous phytoplankton response to a Middle Eocene warming event recorded in the tropical Atlantic (Demerara Rise, ODP Site 1260A). *Palaeogeography, Palaeoclimatology, Palaeoecology*, 286, 121–134.

## Other publications

- 2021 Gohl K., Wellner J., Klaus A. and the Expedition 379 Scientists<sup>1</sup>. Expedition 379 Summary. In Gohl K., Wellner J., Klaus A. and the Expedition 379 Scientists, *Amundsen Sea West Antarctic Ice Sheet History*. Proceedings of the International Ocean Discovery Program, 379: 1–21.  
 Gohl K., Wellner J., Klaus A. and the Expedition 379 Scientists<sup>1</sup>. Expedition 379 Methods. In Gohl K., Wellner J., Klaus A. and the Expedition 379 Scientists, *Amundsen Sea West Antarctic Ice Sheet History*. Proceedings of the International Ocean Discovery Program, 379: 1–42.  
 Wellner J., Gohl K., Klaus A. and the Expedition 379 Scientists<sup>1</sup>. Site U1532. In Gohl K., Wellner J., Klaus A. and the Expedition 379 Scientists, *Amundsen Sea West Antarctic Ice Sheet History*. Proceedings of the International Ocean Discovery Program, 379: 1–47.  
 Wellner J., Gohl K., Klaus A. and the Expedition 379 Scientists<sup>1</sup>. Site U1533. In Gohl K., Wellner J., Klaus A. and the Expedition 379 Scientists, *Amundsen Sea West Antarctic Ice Sheet History*. Proceedings of the International Ocean Discovery Program, 379: 1–46.
- 2019 Gohl K., Wellner J., Klaus A. and the Expedition 379 Scientists<sup>1</sup>. Expedition 379 Preliminary Report: Amundsen Sea West Antarctic Ice Sheet History. *International Ocean Discovery Program: Preliminary Reports*, 379:1–33.  
 Varela S., Sbrocco E.J., Tarroso P., Perez-Luque A.J., Renaudie J., Warnstädt N., Fandos G., Foster W.J., Tietje M. BioExtreme hackathon en el Museum für Naturkunde de Berlín, Alemania. *Ecosistemas*, 28(1):129.

## Submitted

- 2018 Renaudie J., Gray R., Lazarus D.B. Accuracy of a neural net classification of closely-related species of microfossils from a sparse dataset of unedited images. *Submitted to PeerJ*.

## SEMINAR TALKS

### Invited talks

- 2019 Museum für Naturkunde Magdeburg, Germany: Antarktisches Mikroplankton und vergangene Klimawandel. November, 6th.  
 GFZ-Potsdam, Germany: Cenozoic changes in the Si and C marine cycles from the point of view of diatoms. July, 23rd.
- 2016 University of Leeds, UK : Diatoms, climate and the marine Silicon cycle. November, 10th.

### In-house talks

- 2020 Automatic species counting for biodiversity and climate change research using AI and massive collection imaging. September, 21st.
- 2018 The Cenozoic evolution of the diatom-climate system. September, 27th.
- 2017 Micropaleontology, between taxonomic backbone databases and alpha taxonomy. May, 31st.

## CONGRESS PARTICIPATIONS

### Organization

- 2019 EGU general meeting in Vienna, Austria: ‘SSP4.6: Plankton in modern and past ecosystems’ (convener: Thibault N.; co-conveners: Bottini C., Luciani V., Renaudie J., Noble P.).

<sup>1</sup>Gohl K., Wellner J., Klaus A., Bauersachs T., Bohaty S.M., Courtillot M., Cowan E.A., Esteves M.S.R., De Lira Mota M.A., Fegyveresi J.M., Frederichs T.W., Gao L., Halberstadt A.R., Hillenbrand C.-D., Horikawa K., Iwai M., Kim J.-H., King T.M., Klages J.P., Passchier S., Penkrot M.L., Prebble J.G., Rahaman W., Reinardy B.T.I., Renaudie J., Robinson D.E., Scherer R.P., Siddoway C.S., Wu L., Yamane M.

## Displays

- 2020 EGU2020 Sharing Geoscience Online: [Renaudie J.](#), [Lazarus D.](#), [Trubovitz S.](#), [Özen V.](#), [Rodrigues de Faria G.](#), [Asatryan G.](#), [Noble P.](#), Cenozoic plankton diversity dynamics and the impact of macroevolution on the marine carbon cycle; [Rodrigues de Faria G.](#), [Lazarus D.](#), [Struck U.](#), [Asatryan G.](#), [Renaudie J.](#), [Özen V.](#), Paleogene Polar Plankton and export productivity changes between the Eocene and Oligocene.

## Talks (last as speaker only)

- 2019 3rd International Congress on Stratigraphy in Milan, Italy: [Renaudie J.](#), [Lazarus D.](#), [Diver P.](#), [NSB](#), a Big Data tool for chronostratigraphic syntheses of the deep-sea sediment record.
- 2007–now 25 talks (including 11 as speaker) at 20 international conferences.

## Posters (presenting; last year only)

- 2020 Ocean Sciences meeting in San Diego, USA: [Trubovitz S.](#), [Lazarus D.](#), [Renaudie J.](#), [Noble P.](#), Radiolarians exhibit a threshold response to climate change during the late Neogene.
- TMS General Meeting online: [Özen V.](#), [Rodrigues de Faria G.](#), [Renaudie J.](#), [Lazarus D.](#), Southern Ocean diatom diversity at the Eocene-Oligocene transition; [Rodrigues de Faria G.](#), [Renaudie J.](#), [Struck U.](#), [Lazarus D.](#), Southern Ocean productivity across the Eocene-Oligocene boundary.
- 2006–now 34 posters (including 17 as presenting author) at 27 international conferences.

## SCIENTIFIC PROGRAMMING

### Softwares

- 2017 [NSB\\_ADP\\_wx](#) – Age-Depth plot maker in Python (last update: [version 0.7](#); 2019).
- 2016 [Raritas](#) – Micropaleontological counting software in Python (last update: [version 0.7](#); 2018).

### Packages

- 2014 [NSBcompanion](#) – R package to work with the NSB database (last update: [version 2.1](#); 2019).
- 2013 [CONOP9companion](#) – R package to integrate software CONOP9 in a statistical workflow.
- [dendextend](#) – R package for dendrogram visualizations ([as contributor only](#)).

### Databases

- 2013–now Maintainer and developer of the [NSB database](#), successor of the legacy Neptune database.

## SERVICES TO PROFESSION

- 2021 External reviewer for proposals to the french national research agency (ANR) generic call.
- 2021–now Reviewer board member for [Biology](#).
- 2019 Outside reader for an MSc defense ([William Bugbee](#); University of Northern Illinois, USA).
- 2018 Remote reviewer for an ERC Advanced Grant proposal.
- 2015–18 Organizer of the [MfN 'Code Clinic' Scientific Programming Club](#) (on-the-job training for ECR).
- 2013–now Reviews for *Proceedings of the Royal Society B*; *Paleoceanography*; *Paleobiology*; *Palaeogeography*, *Palaeoclimatology*, *Palaeoecology*; *Global and Planetary Change*; *Marine Geology*; *Quaternary Science Reviews*; *Microorganisms*; *Biology*; *Diversity*; *Sustainability*; *Water*; *Journal of Plankton Research*; *Bulletin de la Société Géologique de France*; *Revue de Micropaléontologie* and *Acta Palaeontologica Romaniaae*.

## WORKSHOPS

- 2021–22 'BioDeepTIME: rhythms, aberrations, and drivers of ecological turnover from daily to million-year timescales' PaleoSynthesis Workshop at Friedrich-Alexander-Universität, Erlangen, Germany.
- 2018 BioExtreme hackathon at MfN.
- 2017 'Access to Geosciences: sharing and publishing data related to paleontological, mineralogical, and petrological objects using a common data standard' workshop at MfN.
- 2010 'Paleobiology Database Intensive Workshop' at Macquarie University, Sydney, Australia.

## PUBLIC OUTREACH

- 2021 Interactive display for the "Biomminerale – das Geheimnis der Schale" exhibition at the Museum für Naturkunde Magdeburg, Germany.
- 2019 Guest of the [Museum Salon](#) in the context of the "Fourth Global Day of Climate Action" event for 'Fridays For Future' at the MfN.
- Public talk on 'Antarktisches Mikroplankton und vergangene Klimawandel' for the Fachgruppe Paläontologie at the Museum für Naturkunde Magdeburg, Germany.

- 2014 'The ocean's plankton and climate change; how to see the future from the bottom of the ocean' booth at the MfN during the [Lange Nacht der Wissenschaften](#) and the [Lange Nacht der Museen](#).
- 2014 'Tiefenzeit Geschichten der Zukunft: von Plankton, Muscheln und Klimawandel' booth at the MfN during the [Lange Nacht der Wissenschaften](#).
- 2011 Guided tour of the MfN Micropaleontology Collection during the [Lange Nacht der Museen](#).

## GRANTS & AWARDS

### Grants

- 2018 DAAD 'Make Our Planet Great Again–German Research Initiative' grant 57429681 (PI:Asatryan).
- 2015 DFG Grant RE3470/3–1: 'Eigene Stelle' grant in the Priority Program 527 (IODP).

### Awards

- 2012 TMS Student Prize for best Poster at InterRad 13th meeting in Cadiz, Spain.

## MEDIA COVERAGE of projects I'm involved with (selection)

- 2020 *NevadaToday*: [Marine Plankton face threat of extinction as planet warms.](#)
- 2020 *IEEE Spectrum*: [Ambitious data project aims to organize the world's geoscientific records.](#)
- 2019 *BBC*: [The 'time machines' unlocking Antarctica's past.](#)
- 2019 *Science*: [Newly drilled sediment cores could reveal how fast the Antarctic ice sheet will melt.](#)
- 2018 *DAAD Aktuell*: ["Make Our Planet Great Again – German Research Initiative": Forschung für die Zukunft der Erde.](#)

## WORK EXPERIENCE

- 09/2018–06/2022 Postdoctoral researcher (DAAD MOPGA-GRI) at the MfN.
- 11/2015–05/2017 Postdoctoral researcher (DFG) at the MfN.
- 03/2014–06/2015 Postdoctoral researcher (Earthtime-EU) at the MfN.
- 05–07/2013 Programmer at the MfN for the Neptune Database web interface.
- 11/2008–09/2012 Scientific assistant at the MfN.
- 07–08/2008 Bartender at the brasserie 'Le Jardin Gourmand', Castelnaud-la-Chapelle.
- 10/2007–07/2008 Library assistant at the Bibliothèque Centrale of Université Paris VII.
- 07–08/2003–2007 Bartender at the restaurant 'Le Bouffon', Sarlat-la-Canéda.

## OTHER

Fluent in French (native) and English, intermediate level in Latin and German.  
 Advanced programming skills in R, python (including Django and wxPython), postgresSQL (and other SQL derivatives) and  $\LaTeX$ . Familiar with Unix shell and Apache Webserver.