

Andreas Brotzer

Résumé

Hochrainerstrasse 9,
D-82256 Fuerstenfeldbruck
☎ +49 (0) 1578 0475869
✉ andbro@tutanota.com
🌐 ORCID: 0000-0003-2422-7907
🌐 [linked.in/andreasbrotzer](https://www.linkedin.com/in/andreasbrotzer)

Education

- 06/20–02/25 **Doctoral Degree (Dr.rer.nat.)**, Ludwig-Maximilians-Universität München, Germany
- PhD Thesis: 'The ROMY ring laser array for seismology: Instrumental characterization, low noise limits for rotations and seismological applications,' supervised by Prof. H. Igel (LMU) & Prof. K.U. Schreiber (TUM)
- 10/17–02/20 **M.Sc. in Geophysics, 1.0 (A+)**, Karlsruhe Institute of Technology, Germany
- M.Sc. Thesis: 'The sedimentary and crustal structure of Greenland's northern continental margin towards the Morris Jesup Rise', supervised by Prof. A. Rietbrock (KIT), Dr. W. Geissler (AWI) & Dr. T. Funck (GEUS)
- 10/13–09/17 **B.Sc. in Geophysics, 1.7 (B+)**, Karlsruhe Institute of Technology, Germany
- B.Sc. Thesis: 'Investigation of infrasound records of volcano Colima, Mexico', supervised by apl. Prof. J.R.R. Ritter (KIT)

Teaching Experience

- 2020 – 2024 **Tutor**, Introduction to Geophysics - Tutorial, undergraduate level, Ludwig-Maximilians University, Munich, Germany
- 2022 **Instructor**, SPIN Short Course 2 - "Seismic Instrumentation" (17-22 May 2022)
- 2015 – 2019 **Tutor**, Supervising multiple geophysical and geodetic field exercises, undergraduate level, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

Research & Work Experience

- 2022 **Research Stay**, at the Institute of Geophysics and Planetary Physics of the Scripps Institution of Oceanography, San Diego, USA as part of an AGU Jerome M. Paros Scholarship for Geophysical Instrumentation.
- 2016 – 2020 **Research Assistant**, on international geoscientific expeditions
- RV L'Atalante, project HIPER, Karlsruhe Institute of Technology
 - RV Polarstern, project GREEMATE (PS115/1), Alfred Wegener Institute
 - RV Maria S. Merian, project LOBSTER (MSM71), GEOMAR
 - RV Sonne, project INCON (SO258/2), Alfred Wegener Institute
 - RV Sonne, project Chatham Rise (SO246), Alfred Wegener Institute
- 2016 – 2017 **Research Assistant**, Centre of Exchange and Research for Volcanology, University of Colima, Mexico, under supervision of Nick Varley
- *Field campaigns and data analysis to monitor volcano Colima*

Scholarships & Awards

- AGU Jerome M. Paros Scholarship Scholarship (2022)
- Best Student Poster Award, GRM Conference in Pisa (2023)
- DAAD RISE Worldwide Scholarship (2016)
- DAAD PROMOS Scholarship (2016)

Research Interests

- Optical geophysical instrumentation towards seismic ground motion sensing
- Marine & Rotational Seismology and 6 Degrees-of-Freedom Observations
- Science Communication and Outreach

Peer-Reviewed Publications

- Brotzer et al., "Characterizing the Background Noise Level of Rotational Ground Motions on Earth", *Seismological Research Letters*, 2024, 95 (3): 1858–1869, 10.1785/0220230202
- Brotzer et al., "Geophysical insights on the crustal structure of Greenland's northern continental margin towards the Morris Jesup Spur", *Tectonophysics*, 2022, Volume 843, 10.1016/j.tecto.2022.229588
- Brotzer et al., "Automated Quality Assessment of Interferometric Ring Laser Data", *Sensors*, 2021, 21(10), 3425; 10.3390/s21103425
- Igel et al., "ROMY: a multicomponent ring laser for geodesy and geophysics," in *Geophysical Journal International*, 255.1, pp. 684-698, 2021.

Conference Publication

- Brotzer et al. (2024), "On the influence of ambient atmospheric pressure on multi-component, direct observations of rotational ground motion" (Presentation), *EGU Galileo Conference - Fibre Optic Sensing in Geosciences*
- Brotzer et al. (2024), "On the influence of ambient atmospheric pressure on multi-component, direct observations of rotational ground motion" (Poster), *EGU General Assembly*
- Brotzer et al. (2023), "On the operation and monitoring of a heterolithic large ring laser: ROMY" (Poster), *IUGG General Assembly*
- Brotzer et al. (2023), "Observing and analysing seismicity with a permanent 6C station" (Poster), *EGU General Assembly*
- Brotzer et al. (2020), "ROMY: Performance & Data Analysis" (Poster), *AGU Fall meeting online*

Skills

- Management** Co-organizer of the online annual conference of the German Geophysical Society 2022 and the PhD workshop AMÜSE 2022
- Software** Python, ObsPy, Salvus, Linux, Git, Wordpress, Promax, GMT, HTML, Rayinvr, Salvus, Paradigm Echos, C++, MATLAB
- General** Driving license (European B & BE)

Languages

- German** Native speaker
- English** Advanced (C1): fluent speaking & writing
- Spanish** Intermediate (B2): solid reading, writing & speaking

Certified Courses

- "Basics of Scientific Communication and Outreach"**, LMU, Munich (12 December 2023)
- "Presentation Skills"**, LMU Graduate Center (22–23 March 2023)
- "Environmental Seismology"**, Munich Earth Science School (16 February – 3 March 2023)
- "Time-dependent behaviour of Earth's materials"**, SPIN Workshop 2 (22–28 May 2022)
- "New realms of seismic instrumentation"**, SPIN Workshop 1 (23–24 November 2021, online)
- ROSES**, Remote Online Sessions for Emerging Seismologists (Summer Term 2021, online)
- "Self and time management"**, LMU Graduate Center (26–27 May 2021, online)
- "Argue with skill and fairness"**, LMU Graduate Center (10–11 December 2020, online)

Stays Abroad

- 2014 & 2018 **Peru**, *cultural collaboration & exchange of students*
- 2012 & 2013 **Australia**, *8 months of work & travel*

Activities & Interests

- Honorary** Lead of the Public Relations & Outreach Team, Lead and Homepage-Webmaster (German Geophysical Society)
- Early Career Scientists Blog Editor Team (European Geoscience Union)
- Technical Lead for the Organization of the online conference of the German Geophysical Society in 2022
- Personal** Hiking, Sailing, Cycling, Table Tennis, Ultimate Frisbee, Photography



References

- **Prof. Heiner Igel** (igel@geophysik.uni-muenchen.de)
Department of Geophysics, Ludwig-Maximilians University Munich, Germany
- **Prof. Karl Ulrich Schreiber** (ulrich.schreiber@tum.de)
Technical University of Munich, Germany
- **Dr. Joachim Wassermann** (j.wassermann@lmu.de)
Department of Geophysics, Ludwig-Maximilians University Munich, Germany
- **Dr. Thomas Funck** (tf@geus.dk)
Geological Survey of Denmark and Greenland, Denmark

