
Education

- 2023–today **PhD student**, *Geophysics*, Institute of Geophysics and Planetary Physics, Scripps Institution of Oceanography, UC San Diego, United States
- 2020–2023 **Master of Science**, *Geophysics*, Ludwig-Maximilians-University & Technical University Munich, Germany
Final grade: 1.50 (very good; GPA graduate equivalent 3.90)
- 2016–2020 **Bachelor of Science**, *Earth Sciences*, Ludwig-Maximilians-University & Technical University Munich, Germany
Final grade: 1.90 (good; GPA undergraduate equivalent 3.65)

Scholarships

- 2023–2024 **Regents Fellowship**, Scripps Institution of Oceanography, University of California San Diego (UCSD), United States
- 2019–2023 **German National Scholarship**, Technical University of Munich & Federal Ministry of Education and Research, Germany
- 2018 **Erasmus+ student exchange program**, University of Bergen, Norway

Publications

- 2024 **Kutschera, F.**, Jia, Z., Oryan, B., Wong, J. W. C., Fan, W., and Gabriel, A.-A. (2024). The Multi-Segment Complexity of the 2024 Mw 7.5 Noto Peninsula Earthquake Governs Tsunami Generation. *Geophysical Research Letters*, 51, e2024GL109790. <https://doi.org/10.1029/2024GL109790>.
- 2024 **Kutschera, F.**, Gabriel, A.-A., Wirp, S. A., Li, B., Ulrich, T., Abril, C., and Halldórsson, B. (2024). Linked and fully coupled 3D earthquake dynamic rupture and tsunami modeling for the Húsavík–Flatey Fault Zone in North Iceland. *Solid Earth*, 15(2), 251–280. <https://doi.org/10.5194/se-15-251-2024>.

Preprints

- 2024 Becerril, C., Sladen, A., Ampuero, J.-P., Vidal-Moreno, P. J., Gonzalez-Herraez, M., **Kutschera, F.**, Gabriel, A.-A., and Bouchette, F. (2024). Towards tsunami early-warning with Distributed Acoustic Sensing: Expected seafloor strains induced by tsunamis [Preprint]. <https://doi.org/10.22541/essoar.171052484.46251426/v1>.

Conference contributions

- 2025 **Kutschera, F.**, Jia, Z., Oryan, B., Wong, J.W.C, Fan, W., and Gabriel, A.-A.: The Multi-segment Complexity of the 2024 Mw 7.5 Noto Peninsula Earthquake Governs Tsunami Generation. SSA Annual Meeting, Baltimore, Maryland, April 14-18, 2025.
- 2024 **Kutschera, F.**, Jia, Z., Oryan, B., Wong, J.W.C, Fan, W., and Gabriel, A.-A.: The Multi-Segment Complexity of the 2024 Mw 7.5 Noto Peninsula Earthquake governs its Tsunami Generation. AGU Annual Meeting, Washington, D.C., December 9-13, 2024.
- 2024 **Kutschera, F.** and Gabriel, A.-A.: Does source complexity govern tsunami generation?. CRESCENT Topical Workshop – From hazard to risk: The science of planning for future tsunamis, University of Oregon, Eugene, November 7-8, 2024.
- 2024 **Kutschera, F.**, Gabriel, A.-A., and Ulrich, T.: Kinematically constrained, linked and fully coupled dynamic rupture and tsunami modeling of the 2020, Mw 7.0 Samos earthquake. Proceedings of the Workshop Numerical Modeling of Earthquake Motions: Waves and Ruptures – NMEM 2024 (Ed. P. Moczo et al.), Smolenice Castle, Slovakia, 46–47, ISBN 978-80-8147-140-7.
- 2024 Invited poster presentation at the Japan Geosciences Union (JpGU) 2024 in a late-breaking session about the Noto Peninsula Earthquake.
- 2024 Becerril, C., Sladen, A., Ampuero, J. P., Vidal-Moreno, P., Gonzalez-Herraez, M., **Kutschera, F.**, Gabriel, A.-A., and Bouchette, F.: Towards tsunami early-warning with Distributed Acoustic Sensing: Expected seafloor strains induced by tsunamis, Galileo conference: Fibre Optic Sensing in Geosciences, Catania, Italy, 16–20 Jun 2024, GC12-FibreOptic-12, <https://doi.org/10.5194/egusphere-gc12-fibreoptic-12>, 2024.
- 2024 Ulrich, T., Gabriel, A.-A., and **Kutschera, F.**: Towards automated rapid earthquake dynamics characterization: a proof of concept based on the 2024 Mw7.4 Noto Peninsula, Japan, earthquake, EGU General Assembly 2024, Vienna, Austria, 14–19 Apr 2024, EGU24-19510, <https://doi.org/10.5194/egusphere-egu24-19510>, 2024.
- 2023 **Kutschera, F.**, Gabriel, A., Wirp, S., Li, B., Ulrich, T., Abril, C., and Halldórsson, B.: Linked and fully-coupled 3D earthquake dynamic rupture and tsunami modeling for the Húsavík-Flatey Fault Zone in North Iceland. Poster Presentation at 2023 SCEC Annual Meeting.
- 2023 Wirp, S. A., Gabriel, A.-A., Li, B., **Kutschera, F.**, Ulrich, T.: Towards Fully Physics-Based Seismic and Tsunami Hazard Assessment, 2023 SIAM Conference on Mathematical & Computational Issues in the Geosciences, Bergen, Norway, 19-22 June 2022.

- 2022 **Kutschera, F.**, Gabriel, A.-A., Wirp, S. A., Li, B., Ulrich, T., Abril, C., and Halldórsson, B.: Modeling potential earthquake-tsunami scenarios from earthquake rupture simulations on the Húsavík-Flatey Fault Zone, North Iceland. Proceedings of the NorthQuake 2022 Workshop (Ed. S. Jónsson et al.), Húsavík Academic Centre, 45–49, ISBN 978-9935-405-70-8.
- 2022 **Kutschera, F.**, Wirp, S. A., Li, B., Gabriel, A.-A., Halldórsson, B., and Abril, C.: Physics-based earthquake-tsunami modelling of the Húsavík-Flatey transform fault zone in North Iceland, EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, DOI:10.5194/egusphere-egu22-13387.
- 2021 **Kutschera, F.**, Wirp, S. A., Li, B., Gabriel, A.-A., Halldórsson, B., Abril, C., and Rannabauer, L.: Linking dynamic earthquake rupture to tsunami modeling for the Húsavík-Flatey transform fault system in North Iceland, EGU GA 2021, 19–30 Apr 2021, DOI:10.5194/egusphere-egu21-15891.

Selected additional funding and grants

- 2025 Shepard Research Award, Shepard Foundation, June 23, 2025.
- 2025 Student Travel Grant from the Seismological Society of America (SSA) to attend the SSA Annual Meeting in Baltimore, Maryland, April 14-18, 2025.

Selected past employments

- 05/2023 – 08/2023 **EarthScope Consortium**,
Online
Teaching assistant
- 11/2021 – 05/2023 **Ludwig-Maximilians-University (LMU - Geophysics)**,
and Munich, Germany
10/2020 – 03/2021 Student assistant
- 02/2021 – 10/2021 **Allianz SE Reinsurance**,
Munich, Germany
Working student
- 07/2019 – 10/2019 **Karlsruhe Institute of Technology, Campus Alpin (IMK-IFU)**,
Garmisch-Partenkirchen, Germany
Student assistant