

Pınar Büyükakpınar, Ph.D.

Internationally experienced seismologist and Principal Investigator

International postdoctoral research in Germany and Italy; university teaching in Germany and Türkiye

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Employment History

- 2023 - Present **Principal Investigator - full time** Characterizing source properties of NW Bohemia/Vogtland earthquake swarms exploiting novel network and waveform processing tools (CHASING) – **third-party funded project** (DFG – SPP 1006: International Continental Scientific Drilling Program, ICDP), GFZ Helmholtz Centre for Geosciences, Potsdam, Germany, <https://gepris.dfg.de/gepris/projekt/517982028> Own position; total budget = €332.634,00 for 3 years (includes HIWI support)
- 2022 – 2023 **Postdoctoral Researcher - full time** INsights into rupture DIrectivity patterns from microseismicity to weak events (INDI), University of Potsdam in collaboration with GFZ Helmholtz Centre for Geosciences, Potsdam, Germany
- 2022 **Postdoctoral Researcher - full time** EWRICA: Early-Warning and Rapid Impact Assessment with real-time GNSS in the Mediterranean; funded by the Federal Ministry of Education and Research, Germany, GFZ Helmholtz Centre for Geosciences, Potsdam, Germany
- 2021 **Postdoctoral Researcher - full time** eTna eRUption assiSTant (TRUST Project), National Institute of Geophysics and Volcanology (INGV), Catania, Italy
- 2019 – 2021 **Postdoctoral Researcher - full time** Bogazici University, Kandilli Observatory and Earthquake Research Institute, Regional Earthquake–Tsunami Monitoring Center, Istanbul, Turkey
- 2013 – 2019 **Research Assistant - full time** Bogazici University, Kandilli Observatory and Earthquake Research Institute, Department of Geophysics, Istanbul, Turkey
- 2012 – 2013 **Researcher - part time** Tracing reinjected water by seismic monitoring at the Salavatli–Kosk–Aydin geothermal area, Bogazici University, Kandilli Observatory and Earthquake Research Institute, Department of Geophysics, Istanbul, Turkey

Scientific Leadership and Coordination

- 2023 – Present **Principal Investigator and Project Leader, CHASING** – directing the scientific strategy, supervising student research and data analysis, coordinating international collaborators, and leading the project's publication program across a multidisciplinary research network
- 2026 – Present **Invited Member of the Coordinating Committee, TopoAsia Initiative** www.topoasia.org – contributing to the development of the initiative's scientific strategy, the expansion of its international network, and the implementation of its long-term research vision
- 2025 – Present **Scientific Coordinator and initiator of the ELISE Large-N Experiment in the Eger Rift** [ELISE project page](#) – a passive seismic deployment of 300 sensors started in August 2025

Education

- 2013 – 2019 **Ph.D., Kandilli Observatory and Earthquake Research Institute, Boğaziçi University, Istanbul, Turkey** in Geophysics
Thesis title: *"The Crustal Structure of the Eastern Marmara Region Using Receiver Function Analysis"*
- 2009 – 2013 **M.Sc., Kandilli Observatory and Earthquake Research Institute, Boğaziçi University, Istanbul, Turkey** in Geophysics
Thesis title: *"Crustal Structure of the Marmara Region by Using Receiver Function Analysis"*.
- 2005 – 2009 **B.Sc., Suleyman Demirel University, Isparta, Turkey** in Geophysical Engineering
Thesis title: *Earthquake Focal Mechanisms in Western Anatolia.*

Research Publications

Peer-Reviewed Journal Publications

- 1 **P. Buyukakpinar**, T. Dahm, M. Isken, J. Doubravová, D. Křížová, M. van Laaten, J. Vlček, C. Alexandrakis-Zieger, S.-K. Kufner, J. Klicpera, H. Woith, J. Mrlina, S. Hainzl, P. Hrubcová, T. Fischer, M. Ohrnberger, R. Bauz, S. Mikulla, J. Wassermann, C. Sens-Schönfelder, and J. Burjánek, "New research perspectives in light of dense cross-border experiments in west bohemia and vogtland regions," *Studia Geophysica et Geodaetica*, vol. 70, no. 1, p. 23, Jun. 2026, ISSN: 1573-1626. [DOI: 10.1007/s11200-026-00025-6](https://doi.org/10.1007/s11200-026-00025-6).
- 2 P. Laumann, T. Dahm, G. Petersen, P. Büyükakpinar, H. Zhang, M. Isken, and B. Schmidt, "Microseismicity reveals fault activation and fluid processes beneath the newwied basin and laacher see volcano, east eifel, germany," *Geophysical Journal International*, vol. 244, no. 2, ggaf475, Feb. 2026, ISSN: 1365-246X. [DOI: 10.1093/gji/ggaf475](https://doi.org/10.1093/gji/ggaf475). eprint: <https://academic.oup.com/gji/article-pdf/244/2/ggaf475/65477670/ggaf475.pdf>.
- 3 C. Pagli, A. La Rosa, S. Cesca, T. Dahm, H. Wang, M. Bonano, P. Striano, P. Büyükakpinar, E. Rivalta, D. Keir, F. Casu, A. Ayele, and E. Lewi, "Deep magma underpressure and connectivity drive large dike intrusions," *Science Advances*, vol. 12, no. 28, eaed6073, 2026. [DOI: 10.1126/sciadv.aed6073](https://doi.org/10.1126/sciadv.aed6073). eprint: <https://www.science.org/doi/pdf/10.1126/sciadv.aed6073>.
- 4 M. Ponte, S. Cesca, **P. Buyukakpinar**, G. Calderoni, and M. La Rocca, "Positive isotropic components from full moment tensor inversion and fluid involvement in the pollino (italy) seismic swarm," *Terra Nova*, vol. 38, no. 3, pp. 185–194, 2026. [DOI: https://doi.org/10.1111/ter.70029](https://doi.org/10.1111/ter.70029).
- 5 H. Zhang, T. Dahm, P. Büyükakpinar, S. Cesca, M. P. Isken, P. Laumann, and W. H. Geißler, "Seismological evidence for fluid accumulation beneath the dormant East Eifel volcanic region, Germany," *Communications Earth & Environment*, vol. 7, no. 1, p. 571, Jul. 2026, ISSN: 2662-4435. [DOI: 10.1038/s43247-026-03778-4](https://doi.org/10.1038/s43247-026-03778-4).
- 6 **P. Buyukakpinar**, A. Carrillo-Ponce, M. B. Munir, E. Karasözen, H. Tanyas, D. Ertuncay, A. Palliath, and T. Gorum, "Seismic, Field, and Remote Sensing Analysis of the 13 February 2024 Çöpler Gold Mine Landslide, Erzincan, Türkiye," *The Seismic Record*, vol. 5, no. 2, pp. 165–174, 2025. [DOI: 10.1785/0320250007](https://doi.org/10.1785/0320250007).
- 7 **P. Buyukakpinar**, T. Dahm, S. Hainzl, M. Isken, M. Ohrnberger, J. Doubravová, S. Wendt, and S. Funke, "Modelling of earthquake swarms suggests magmatic fluids in the upper crust beneath the Eger Rift," *Communications Earth & Environment*, 2025. [DOI: 10.1038/s43247-025-03019-0](https://doi.org/10.1038/s43247-025-03019-0).
- 8 **P. Buyukakpinar**, M. P. Isken, S. Heimann, T. Dahm, D. Kühn, J. Starke, J. Á. López Comino, S. Cesca, J. Doubravová, E. Á. Gudnason, and T. Ágústssdóttir, "Understanding the Seismic Signature of Transtensional Opening in the Reykjanes Peninsula Rift Zone, SW Iceland," *Journal of Geophysical Research: Solid Earth*, vol. 130, no. 1, e2024JB029566, 2025. [DOI: 10.1029/2024JB029566](https://doi.org/10.1029/2024JB029566).
- 9 T. Dahm, M. Isken, C. Milkereit, C. Sens-Schönfelder, F. Eckel, X. Yuan, M. Reiss, A. Oth, G. Rumpker, L. D. Siena, **P. Buyukakpinar**, P. Laumann, H. Zhang, B. Knapmeyer-Endrun, S. Mikulla, R. Bauz, S. Busch, M. Hensch, B. Schmidt, G. Petersen, and S. Cesca, "A seismological large-N multisensor experiment to study the magma transfer of intracontinental volcanic fields: The example of the Eifel, Germany," *Seismica*, vol. 4, no. 2, Oct. 2025. [DOI: 10.26443/seismica.v4i2.1492](https://doi.org/10.26443/seismica.v4i2.1492).
- 10 D. Ertuncay, **P. Buyukakpinar**, S. F. Fornasari, and O. Tan, "23 April 2025 Marmara Sea (Mw 6.3), Türkiye earthquake: mainshock, aftershock, and ground observations," *Seismica*, vol. 4, no. 2, 2025. [DOI: 10.26443/seismica.v4i2.1773](https://doi.org/10.26443/seismica.v4i2.1773).
- 11 M. Isken, P. Niemz, J. Münchmeyer, **P. Buyukakpinar**, S. Heimann, S. Cesca, H. Vasyura-Bathke, and T. Dahm, "Qseek: A data-driven Framework for Automated Earthquake Detection, Localization and Characterization," *Seismica*, vol. 4, no. 1, 2025. [DOI: 10.26443/seismica.v4i1.1283](https://doi.org/10.26443/seismica.v4i1.1283).
- 12 D. Stich, **P. Buyukakpinar**, and S. Cesca, "Modelling array beams for the 1979, 1984 and 2021 Granada earthquakes (southern Spain)," *Physics of the Earth and Planetary Interiors*, vol. 365, p. 107 379, 2025, ISSN: 0031-9201. [DOI: https://doi.org/10.1016/j.pepi.2025.107379](https://doi.org/10.1016/j.pepi.2025.107379).
- 13 H. Zhang, T. Dahm, C. Haberland, M. P. Isken, P. Laumann, and **P. Buyukakpinar**, "The Upper Crustal Structure of the Eifel Volcanic Region (Southwest Germany) From Local Earthquake Tomography Using Large-N Seismic Network Data," *Journal of Geophysical Research: Solid Earth*, vol. 130, no. 11, e2025JB031338, 2025. [DOI: 10.1029/2025JB031338](https://doi.org/10.1029/2025JB031338).
- 14 N. Bora, **P. Buyukakpinar**, and S. Das, "3D structural modelling of the Kopili fault zone in North-East India: Seismotectonic analysis utilising focal mechanism solutions of small-to-moderate earthquakes," *Journal of Asian Earth Sciences*, vol. 276, p. 106 348, 2024, ISSN: 1367-9129. [DOI: https://doi.org/10.1016/j.jseaes.2024.106348](https://doi.org/10.1016/j.jseaes.2024.106348).

- 15 M. Jamalreyhani, A. Hatami, M. Hassanzadeh, **P. Buyukakpinar**, and R. Movaghari, "Insights from the 2017 and 2020 Mw 5 earthquakes around Tehran: Assessing seismicity and physical and social vulnerability," *Iranian Journal of Geophysics*, 2024, Research Article. [DOI: 10.30499/ijg.2024.445644.1579](https://doi.org/10.30499/ijg.2024.445644.1579).
- 16 K. Akbayram, K. Kıranşan, S. Varolgüneş, **P. Buyukakpinar**, E. Karasözen, and C. Bayık, "Multidisciplinary analyses of the rupture characteristic of the June 14, 2020, M_w 5.9 Kaynarpinar (Karlıova, Bingöl) earthquake reveal N70E-striking active faults along the Yedisu Seismic Gap of the North Anatolian Fault Zone," *International Journal of Earth Sciences*, vol. 112, no. 2, pp. 489–509, 2023. [DOI: 10.1007/s00531-022-02256-4](https://doi.org/10.1007/s00531-022-02256-4).
- 17 S. Cesca, M. Metz, **P. Buyukakpinar**, and T. Dahm, "The Energetic 2022 Seismic Unrest Related to Magma Intrusion at the North Mid-Atlantic Ridge," *Geophysical Research Letters*, vol. 50, no. 13, e2023GL102782, 2023. [DOI: https://doi.org/10.1029/2023GL102782](https://doi.org/10.1029/2023GL102782).
- 18 E. Karasözen, **P. Buyukakpinar**, D. Ertuncay, E. Havazli, and E. Oral, "A call from early career turkish scientists: Seismic resilience is only feasible with "earthquake culture"," *Seismica*, vol. 2, no. 3, Sep. 2023. [DOI: 10.26443/seismica.v2i3.1012](https://doi.org/10.26443/seismica.v2i3.1012).
- 19 M. Metz, B. Maleki Asayesh, M. Mohseni Aref, M. Jamalreyhani, **P. Buyukakpinar**, and T. Dahm, "The July-December 2022 earthquake sequence in the southeastern Fars arc of Zagros mountains, Iran," *Seismica*, vol. 2, no. 2, 2023. [DOI: 10.26443/seismica.v2i2.953](https://doi.org/10.26443/seismica.v2i2.953).
- 20 G. M. Petersen, **P. Buyukakpinar**, F. O. Vera Sanhueza, M. Metz, S. Cesca, K. Akbayram, J. Saul, and T. Dahm, "The 2023 Southeast Türkiye Seismic Sequence: Rupture of a Complex Fault Network," *The Seismic Record*, vol. 3, no. 2, pp. 134–143, 2023. [DOI: 10.1785/0320230008](https://doi.org/10.1785/0320230008).
- 21 **P. Buyukakpinar**, A. Cannata, F. Cannavò, D. Carbone, R. S. M. De Plaen, G. Di Grazia, T. King, T. Lecocq, M. Liuzzo, and G. Salerno, "Chronicle of Processes Leading to the 2018 Eruption at Mt. Etna As Inferred by Seismic Ambient Noise Along With Geophysical and Geochemical Observables," *Journal of Geophysical Research: Solid Earth*, vol. 127, no. 10, e2022JB025024, 2022. [DOI: https://doi.org/10.1029/2022JB025024](https://doi.org/10.1029/2022JB025024).
- 22 **P. Buyukakpinar**, M. Aktar, G. Maria Petersen, and A. Köseoglu, "Orientations of Broadband Stations of the KOERI Seismic Network (Turkey) from Two Independent Methods: P- and Rayleigh-Wave Polarization," *Seismological Research Letters*, vol. 92, no. 3, pp. 1512–1521, 2021. [DOI: 10.1785/0220200362](https://doi.org/10.1785/0220200362).
- 23 **P. Buyukakpinar**, S. Cesca, S. Hainzl, M. Jamalreyhani, S. Heimann, and T. Dahm, "Reservoir-Triggered Earthquakes Around the Atatürk Dam (Southeastern Turkey)," *Frontiers in Earth Science*, vol. 9, 2021. [DOI: 10.3389/feart.2021.663385](https://doi.org/10.3389/feart.2021.663385).
- 24 M. Jamalreyhani, L. Pousse-Beltran, **P. Buyukakpinar**, S. Cesca, E. Nissen, A. Ghods, J. Á. López-Comino, M. Rezapour, and M. Najafi, "The 2019–2020 Khalili (Iran) Earthquake Sequence—Anthropogenic Seismicity in the Zagros Simply Folded Belt?" *Journal of Geophysical Research: Solid Earth*, vol. 126, no. 12, e2021JB022797, 2021. [DOI: https://doi.org/10.1029/2021JB022797](https://doi.org/10.1029/2021JB022797).
- 25 T. Lecocq, S. P. Hicks, K. V. Noten, K. van Wijk, P. Koelemeijer, R. S. M. D. Plaen, F. Massin, G. Hillers, R. E. Anthony, M.-T. Apoloner, M. Arroyo-Solórzano, J. D. Assink, **P. Buyukakpinar**, A. Cannata, F. Cannavo, S. Carrasco, C. Caudron, E. J. Chaves, D. G. Cornwell, D. Craig, O. F. C. den Ouden, J. Diaz, S. Donner, C. P. Evangelidis, L. Evers, B. Fauville, G. A. Fernandez, D. Giannopoulos, S. J. Gibbons, T. Girona, B. Grecu, M. Grunberg, G. Hetényi, A. Horleston, A. Inza, J. C. E. Irving, M. Jamalreyhani, A. Kafka, M. R. Koymans, C. R. Labedz, E. Larose, N. J. Lindsey, M. McKinnon, T. Megies, M. S. Miller, W. Minarik, L. Moresi, V. H. Márquez-Ramírez, M. Möllhoff, I. M. Nesbitt, S. Niyogi, J. Ojeda, A. Oth, S. Proud, J. Pulli, L. Retailleau, A. E. Rintamäki, C. Satriano, M. K. Savage, S. Shani-Kadmiel, R. Sleeman, E. Sokos, K. Stammler, A. E. Stott, S. Subedi, M. B. Sørensen, T. Taira, M. Tapia, F. Turhan, B. van der Pluijm, M. Vanstone, J. Vergne, T. A. T. Vuorinen, T. Warren, J. Wassermann, and H. Xiao, "Global quieting of high-frequency seismic noise due to COVID-19 pandemic lockdown measures," *Science*, vol. 369, no. 6509, pp. 1338–1343, 2020. [DOI: 10.1126/science.abd2438](https://doi.org/10.1126/science.abd2438).
- 26 E. Karasözen, E. Nissen, **P. Buyukakpinar**, M. D. Cambaz, M. Kahraman, E. Kalkan Ertan, B. Abgarmi, E. Bergman, A. Ghods, and A. A. Özacar, "The 2017 July 20 Mw 6.6 Bodrum–Kos earthquake illuminates active faulting in the Gulf of Gökova, SW Turkey," *Geophysical Journal International*, vol. 214, no. 1, pp. 185–199, 2018. [DOI: 10.1093/gji/ggy114](https://doi.org/10.1093/gji/ggy114).

Data Publications

- 1 B. Strauch, **P. Buyukakpinar**, M. Hurley, M. Zimmer, and T. Walter, *Results of CO₂ flux measurements and seismic catalogue related to the August 2024 eruption at Reykjanes, SW Iceland*, GFZ Data Services, 2025. [DOI: 10.5880/GFZ.DMJQ.2025.007](https://doi.org/10.5880/GFZ.DMJQ.2025.007).

- 2 **P. Büyükakpınar**, M. P. Isken, S. Heimann, T. Dahm, D. Kühn, J. Starke, J. Á. López-Comino, S. Cesca, J. Doubrovová, E. Á. Gudnason, and T. Ágústssdóttir, *Compiled Dataset of Centroid Moment Tensor Inversion of Transtensional Opening Events in the Reykjanes Peninsula Rift Zone, SW Iceland*, GFZ Data Services, 2024. [DOI: 10.5880/GFZ.2.1.2024.002](https://doi.org/10.5880/GFZ.2.1.2024.002).
- 3 G. Petersen, **P. Büyükakpınar**, F. Vera, M. Metz, S. Cesca, K. Akbayram, J. Saul, and T. Dahm, *Dataset of backprojection and MT inversion results for 2023 Türkiye earthquake sequence*, version 1, Zenodo, 2023. [DOI: 10.5281/zenodo.7861735](https://doi.org/10.5281/zenodo.7861735).
- 4 **P. Büyükakpınar**, A. Cannata, F. Cannavò, R. De Plaen, and T. Lecocq, *Seismic velocity variation at Mt. Etna calculated by seismic ambient noise interferometry (EtnadVv)*, en, Istituto Nazionale di Geofisica e Vulcanologia (INGV), 2022. [DOI: 10.13127/ETNADVNOISE/V1.0](https://doi.org/10.13127/ETNADVNOISE/V1.0).
- 5 M. Jamalreyhani, P. Büyükakpınar, S. Cesca, T. Dahm, M. Rezapour, M. P. Isken, B. Maleki Asayesh, and S. Heimann, *Source Inversion Report on the 24 January 2020 Mw 6.8 Elazığ–Sivrice Earthquake*, version 1.0, Potsdam, Germany: GFZ Data Services, 2020. [DOI: 10.5880/GFZ.2.1.2020.004](https://doi.org/10.5880/GFZ.2.1.2020.004).

Under Review

- 1 P. Büyükakpınar, T. Dahm, S. Hainzl, and S. T. Rahmani, *Accelerating Foreshock Activity Preceding the Shallow 2025 Mw 6.2 Sındırgı Earthquake in Western Anatolia*, Under review, Geophysical Research Letters, 2026.
- 2 B. Strauch, M. Hurley, **P. Büyükakpınar**, M. Zimmer, T. R. Walter, T. Queißer, E. Á. Gudnason, D. Müller, M. Gudmundsson, C. L. Mandon, A. Stefansson, M. Isken, T. Dahm, and J. Doubrovová, *The correlation of CO₂ gas flux in Grindavík and at the Sundhnúkur crater row to the August 2024 eruption at Reykjanes, SW Iceland*, Under review, 2025.

Conference Proceedings

- 1 I. Armeanu, P. Büyükakpınar, and T. Dahm, “Spatial and Temporal Variations of Vp/Vs Ratios in the Vogtland Area,” in *86th Annual Meeting of the German Geophysical Society (DGG)*, Poster presentation, program no. P-SO.2-01, Münster, Germany, Mar. 2026.
- 2 K. Aziz, M. Isken, J. Münchmeyer, P. Büyükakpınar, D. Al-Halbouni, J. Umlauf, and T. Dahm, “Local vs. Global: Testing Neural Networks for Earthquake Localization,” in *86th Annual Meeting of the German Geophysical Society (DGG)*, Poster presentation, program no. P-S3-07, Münster, Germany, Mar. 2026.
- 3 P. Büyükakpınar, “Anatomy of Seismic Swarms in Northwest Bohemia/Vogtland—Fluid-Induced Reactivation?” in *British Seismology Meeting 2026*, Oral presentation, 20–22 April 2026, Leeds, United Kingdom, Apr. 2026.
- 4 P. Büyükakpınar, “Modelling of Earthquake Swarms Suggests Magmatic Fluids in the Upper Crust beneath the Eger Rift,” in *2nd International Workshop on Swarm-like Seismicity*, Workshop presentation at the École de Physique des Houches, 1–5 June 2026, Les Houches, France, Jun. 2026.
- 5 P. Büyükakpınar, S. Cesca, and T. Dahm, “Fault-Controlled Seismicity Associated with the 2025 Mw 6.1 Balıkesir–Sındırgı Earthquake Doublet (Western Anatolia),” in *86th Annual Meeting of the German Geophysical Society (DGG)*, Poster presentation, program no. P-SO.1-06, Münster, Germany, Mar. 2026.
- 6 P. Büyükakpınar, T. Dahm, M. Isken, J. Doubrovová, D. Křížová, M. van Laaten, J. Vlček, C. Alexandrakis-Zieger, S.-K. Kufner, J. Klicpera, H. Woith, J. Mrlina, S. Hainzl, P. Hrubcová, T. Fischer, M. Ohrnberger, R. Bauz, S. Mikulla, J. Wassermann, C. Sens-Schönfelder, and J. Burjánek, “Insights from an Ongoing Dense, Cross-Border Large-N Seismic Deployment in the West Bohemia–Vogtland Region,” in *86th Annual Meeting of the German Geophysical Society (DGG)*, Oral presentation, program no. O-SO.3-05, Münster, Germany, Mar. 2026.
- 7 T. Dahm, S. Cesca, P. Büyükakpınar, E. Rivalta, and C. Pagli, “The 2024–2025 Dike Intrusion in the Ethiopian Rift: A Seismological Study of Rapid Transcrustal Magma Transport Controlled by Reservoir-Induced Stresses,” in *86th Annual Meeting of the German Geophysical Society (DGG)*, Oral presentation, program no. O-SO.1-04, Münster, Germany, Mar. 2026.
- 8 M. Isken, P. Niemi, J. Münchmeyer, P. Büyükakpınar, and T. Dahm, “Qseek: Scalable Data-Driven Earthquake Detection and Localization,” in *2026 Annual Meeting of the Seismological Society of America (SSA)*, Oral presentation, 16 April 2026; session: Developing Data-Driven Methods in the AI Era: New Approaches to Earthquake Science III, Pasadena, California, USA, Apr. 2026.

- 9 **P. Buyukakpinar**, A. Carrillo-Ponce, H. Tanyas, M. Munir, E. Karasozen, and D. Ertuncay, “Seismic Analysis and Remote Sensing Precursors of the February 13, 2024 Çöpler Gold Mine Landslide in Erzincan, Eastern Turkey,” in *DGG German Geophysical Society Annual Meeting*, 85th Annual Meeting of the German Geophysical Society, Bochum, Germany, 2025.
- 10 **P. Buyukakpinar**, T. Dahm, S. Hainzl, M. Isken, M. Ohrnberger, J. Doubrovová, S. Wendt, and S. Funke, “A Reactivated Swarm Region in Northwest Bohemia/Vogtland: The Role of Fluids,” in *IGA/IASPEI Scientific Assembly*, Lisbon, Portugal, 2025.
- 11 **P. Buyukakpinar**, T. Dahm, M. Isken, H. Woith, J. Doubrovová, D. Křížová, J. Vlček, C. Alexandrakis-Zieger, M. van Laaten, S.-K. Kufner, and E. team, “ELISE: The Eger Large Seismic Experiment in West Bohemia and the Vogtland Region,” in *AG Seismologie Meeting*, 22–25 September 2025, Kiel, Germany, Sep. 2025.
- 12 S. Cesca, C. Pagli, A. L. Rosa, D. B. Keir, **P. Buyukakpinar**, E. Rivalta, T. Dahm, A. Ayele, and E. Lewi, “Seismological analysis of the 2024-2025 Fentale-Dofan, Ethiopia, magma driven seismic unrest,” in *IGA/IASPEI Scientific Assembly*, Lisbon, Portugal, 2025.
- 13 T. Dahm, H. Zhang, P. Laumann, **P. Buyukakpinar**, M. Isken, and S. Heimann, “What crustal magmatic reservoirs lie beneath the East Eifel volcanic fields? Clues from the Eifel Large-N passive seismic experiment,” in *DGG German Geophysical Society Annual Meeting*, 85th Annual Meeting of the German Geophysical Society, Bochum, Germany, 2025.
- 14 T. Dahm, H. Zhang, P. Laumann, X. Yuan, P. Büyüakpinar, M. Isken, and S. Heimann, “The Nature and Extent of Magma Sills Beneath the Neuwied Basin and the East Eifel Volcanic Field, Germany,” in *AG Seismologie Meeting*, 22–25 September 2025, Kiel, Germany, Sep. 2025.
- 15 T. Dahm, H. Zhang, P. Laumann, **P. Buyukakpinar**, M. Isken, and S. Heimann, “Seismic signature of lower crustal sill-type reservoirs beneath the laacher see volcano, germany,” in *IGA/IASPEI Scientific Assembly*, Lisbon, Portugal, 2025.
- 16 M. Isken, P. Hrubcová, T. Fischer, J. Doubrovová, J. Vlček, **P. Buyukakpinar**, and T. Dahm, “Automatic ML Catalogs in Action: Mapping Grindavík Dyke Growth, Iceland, in High Detail,” in *IGA/IASPEI Scientific Assembly*, Lisbon, Portugal, 2025.
- 17 P. Laumann, H. Zhang, M. P. Isken, G. Petersen, **P. Buyukakpinar**, T. Dahm, and B. Schmidt, “Investigation of seismicity in the Eifel region, using data from the Eifel Large-N Network,” in *DGG German Geophysical Society Annual Meeting*, 85th Annual Meeting of the German Geophysical Society, Bochum, Germany, 2025.
- 18 A. Olivar-Castaño, M. Ohrnberger, **P. Buyukakpinar**, T. Dahm, J. Doubrovová, T. Fischer, J. Wasserman, U. Wegler, and S. Wendt, “Development of a unified earthquake catalog for the Vogtland/West Bohemia swarm region for the investigation of the geometry of the crustal brittle-ductile boundary,” in *DGG German Geophysical Society Annual Meeting*, 85th Annual Meeting of the German Geophysical Society, Bochum, Germany, 2025.
- 19 D. Stich, **P. Buyukakpinar**, J. Morales, J. Á. López-Comino, and S. Cesca, “Local, regional and teleseismic source estimates for small earthquakes in the Granada Basin (Spain),” in *IGA/IASPEI Scientific Assembly*, Lisbon, Portugal, 2025.
- 20 T. R. Walter, E. Á. Gudnason, Ó. G. Flóvenz, G. P. Hersir, T. Dahm, P. Jousset, M. Hurley, A. V. Shevchenko, **P. Buyukakpinar**, M. Isken, M. Zimmer, B. Strauch, M. T. Gudmundsson, B. Giuliani, T. Ágústsdóttir, M. Motagh, E. P. S. Eibl, G. Petersen, S. Cesca, S. Hainzl, J. Doubrovová, and J. Burjánek, “Long-term volcano-tectonic unrest on the Reykjanes peninsula: Europe’s unique natural laboratory for studying the depth-dependent interaction of magmatic and tectonic processes,” in *IAVCEI Scientific Assembly*, Geneva, Switzerland, 2025.
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- 22 H. Zhang, L. Patrick, T. Dahm, C. H., M. Isken, and **P. Buyukakpinar**, “The upper crustal structure and seismicity of the eifel volcanic region, southwest germany using large-n seismic network data,” in *IGA/IASPEI Scientific Assembly*, Lisbon, Portugal, 2025.
- 23 **P. Buyukakpinar**, A. Carrillo-Ponce, D. Ertuncay, E. Karasozen, H. Tanyas, and T. Gorum, “The massive landslide at çöpler gold mine in erzincan, turkey on february 13, 2024,” in *39th General Assembly of the European Seismological Commission (GA ESC)*, Corfu, Greece, 2024.

- 24 **P. Buyukakpinar**, T. Dahm, M. Isken, S. Hainzl, M. Ohrnberger, J. Doubravová, S. Wendt, and S. F. and Tomáš Fischer, “Seismic Activity and Fluid Dynamics in the NW Bohemia/Vogtland Swarm Region,” in *39th General Assembly of the European Seismological Commission (GA ESC)*, Corfu, Greece, 2024.
- 25 **P. Buyukakpinar**, T. Dahm, M. Isken, S. Hainzl, M. Ohrnberger, J. Doubravová, S. Wendt, and S. Funke, “Fluid-induced earthquake swarms: The 2024 Klingenthal-Kraslice seismic activity and fluid dynamics in NW Bohemia/Vogtland,” in *AGSeismologie 2024*, Hamburg, 2024.
- 26 **P. Buyukakpinar**, A. Olivar-Castaño, M. Ohrnberger, M. Isken, T. Dahm, J. Doubravová, T. Fischer, S. Funke, and S. Wendt, “The Earthquake Relocation Analysis (2018-2024) using Automatic Waveform Detection and Machine Learning Techniques in the NW Bohemia/Vogtland Region,” in *84th Annual Meeting of the German Geophysical Society (DGG)*, 2024.
- 27 T. Dahm, **P. Buyukakpinar**, M. Isken, Ó. Flóvenz, G. P. Hersir, E. Á. Gudnason, T. Walter, C. Wollin, P. Jousset, S. Cesca, J. Doubravova, and T. Ágústsdóttir, “What seismicity tells us about deformation cycles and fluid/magmatic intrusions in the Reykjanes Peninsula volcano-tectonic systems,” in *Proceedings of the 84. Jahrestagung der Deutschen Geophysikalischen Gesellschaft*, 2024.
- 28 M. Metz, B. M. Asayesh, M. M. Aref, M. Jamalrehyani, **P. Buyukakpinar**, and T. Dahm, “Rupture History and Elastic Interaction of the 2022 Multiple Earthquakes in the Zagros Mountains, Iran,” in *SSA Abstracts*, 2024.
- 29 A. Olivar-Castaño, M. Ohrnberger, **P. Buyukakpinar**, T. Dahm, and J. D. et al., “Seismological study of the west bohemia/vogtland swarm region with waveform and catalog data,” Poster Presentation, 29 April – 3 May, Seattle, WA, 2024.
- 30 **P. Buyukakpinar**, A. Cannata, F. Cannavò, D. Carbone, R. S. M. D. Plaen, G. D. Grazia, T. King, T. Lecocq, M. Liuzzo, and G. Salerno, “Chronicle of Processes Leading to the 2018 Eruption at Mt. Etna As Inferred by Seismic Ambient Noise Along With Geophysical and Geochemical Observables,” in *49. Sitzung der AG Seismologie in Freiburg im Breisgau*, 2023.
- 31 **P. Buyukakpinar**, S. Cesca, S. Heimann, D. Kühn, J.-Á. López-Comino, and T. Dahm, “Source mechanisms of the 2020 volcano-tectonic swarm on the Reykjanes Peninsula (Iceland) by probabilistic moment tensor inversion,” in *XXVIII General Assembly of the International Union of Geodesy and Geophysics (IUGG)*, Berlin, 2023. DOI: 10.57757/IUGG23-1942.
- 32 **P. Buyukakpinar**, S. Cesca, S. Heimann, D. Kühn, J. Á. López-Comino, and T. Dahm, “Isotropic source terms during the 2020 volcano-tectonic unrest on the Reykjanes Peninsula revealed by probabilistic moment tensor inversion,” in *83. Jahrestagung der Deutschen Geophysikalischen Gesellschaft*, Bremen, Germany, 2023.
- 33 **P. Buyukakpinar**, E. Karasözen, D. Ertuncay, E. Havazlı, and E. Oral, “Genç Türk deprem bilimcilerden çağrı: Depreme dayanıklı bir Türkiye ancak ‘deprem kültürü’ ile mümkün,” in *26th Active Tectonics Research Group Meeting (ATAG26)*, Boğaziçi Üniversitesi, Kandilli Rasathanesi ve Deprem Araştırma Enstitüsü, Istanbul, Turkey, 2023.
- 34 **P. Buyukakpinar**, G. Petersen, F. Vera, M. Metz, J. Saul, S. Cesca, T. Dahm, and F. Tilmann, “2023 Güneydoğu Türkiye Sismik Dizisi: Karmaşık Bir Fay Ağının Yırtılması,” in *ATAG26*, Boğaziçi Üniversitesi Kandilli Rasathanesi ve Deprem Araştırma Enstitüsü, Istanbul, Turkey, 2023.
- 35 **P. Buyukakpinar**, G. Petersen, F. Vera, M. Metz, J. Saul, S. Cesca, T. Dahm, and F. Tilmann, “Rupture processes of the 2023 Türkiye earthquake sequence: Main- and aftershocks,” in *XXVIII General Assembly of the International Union of Geodesy and Geophysics (IUGG)*, Berlin, 2023, 2023. DOI: 10.57757/IUGG23-3247.
- 36 **P. Buyukakpinar**, G. Petersen, F. Vera, M. Metz, J. Saul, S. Cesca, T. Dahm, and F. Tilmann, “Rupture processes of the 2023 Türkiye earthquake sequence: Main- and aftershocks,” in *7th International Conference on Earthquake Engineering and Seismology (7ICEES)*, Antalya, Turkey, 2023.
- 37 **P. Buyukakpinar**, G. M. Petersen, F. O. V. Sanhueza, M. Metz, S. Cesca, K. Akbayram, J. Saul, and T. Dahm, “The 2023 Southeast Türkiye Seismic Sequence: Rupture of a Complex Fault Network,” in *49. Sitzung der AG Seismologie in Freiburg im Breisgau*, 2023.
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- 39 E. Karasözen, **P. Buyukakpinar**, D. Ertuncay, E. Havazlı, and E. Oral, “A call from early-career Turkish scientists: seismic resilience is only feasible with ‘earthquake culture,’” in *AGU Fall Meeting Abstracts*, 2023.

- 40 G. Petersen, **P. Buyukakpinar**, F. Vera, M. Metz, J. Saul, S. Cesca, T. Dahm, and F. Tilmann, "Rupture processes of the 2023 Türkiye earthquake sequence: Main- and aftershocks," in *EGU General Assembly 2023*, Vienna, Austria, 2023. [DOI: 10.5194/egusphere-egu23-17609](https://doi.org/10.5194/egusphere-egu23-17609). eprint: EGU23-17609.
- 41 G. M. Petersen, **P. Buyukakpinar**, F. O. V. Sanhueza, M. Metz, S. Cesca, K. Akbayram, J. Saul, and T. Dahm, "The rupture of a complex fault network, observed from main- and aftershocks: The February 2023 Türkiye earthquakes," in *AGU Fall Meeting Abstracts*, 2023.
- 42 **P. Buyukakpinar**, A. Cannata, F. Cannavo, D. Carbone, R. De Plaen, G. Grazia, T. King, T. Lecocq, M. Liuzzo, and G. Salerno, "Insights into the sources of seismic velocity changes at Mt. Etna volcano by comparison with other geophysical and geochemical parameters: the 2018 eruption case study," in *AGU Fall Meeting Abstracts*, vol. 2021, 2021, S35F-0270, S35F-0270.
- 43 **P. Buyukakpinar**, M. Jamalreyhani, M. Rezapour, S. Donner, N. Nooshiri, M. Hassanzadeh, P. Marzban, and B. Maleki Asayesh, "Rupture process of the 7 May 2020 Mw 5.0 Tehran earthquake and its relation with the Damavand stratovolcano, and Mosha Fault," in *EGU General Assembly Conference Abstracts*, ser. EGU General Assembly Conference Abstracts, 2021, EGU21-1759, EGU21-1759. [DOI: 10.5194/egusphere-egu21-1759](https://doi.org/10.5194/egusphere-egu21-1759).
- 44 M. Jamalreyhani, M. Rezapour, and **P. Buyukakpinar**, "Evaluation of seismic sensor orientations in the full moment tensor inversion results," in *EGU General Assembly Conference Abstracts*, ser. EGU General Assembly Conference Abstracts, 2021, EGU21-459, EGU21-459. [DOI: 10.5194/egusphere-egu21-459](https://doi.org/10.5194/egusphere-egu21-459).
- 45 E. Karasözen, L. P. Beltran, **P. Buyukakpinar**, G. Güney Doğan, D. Goldberg, M. Floyd, F. Tan, E. Bergman, E. Nissen, A. A. Özacar, and A. C. Yalciner, "The 2020 October 30 Mw 7.0 Samos earthquake," in *37th General Assembly of the European Seismological Commission*, 2021.
- 46 **P. Buyukakpinar** and M. Aktar, "The Crustal Structure of the Eastern Marmara Region Using Receiver Function Analysis," in *EGU General Assembly Conference Abstracts*, ser. EGU General Assembly Conference Abstracts, 2020, 4689, p. 4689. [DOI: 10.5194/egusphere-egu2020-4689](https://doi.org/10.5194/egusphere-egu2020-4689).
- 47 **P. Buyukakpinar** and M. Aktar, "Surface Wave Dispersion Analysis in Turkey," in *36th General Assembly of the European Seismological Commission*, 2018.
- 48 **P. Buyukakpinar** and M. Aktar, "Crustal Structure of the Eastern Marmara Region," in *9th Congress of the Balkan Geophysical Society (BGS2017)*, 2017.
- 49 **P. Buyukakpinar**, C. Gurbuz, and E. Zor, "The Crustal Structure Of The Marmara Region Using Receiver Function Analysis," in *EGU General Assembly Conference Abstracts*, ser. EGU General Assembly Conference Abstracts, 2016, EPSC2016-9650, EPSC2016-9650.
- 50 **P. Buyukakpinar**, C. Gurbuz, and E. Zor, "Moho Depth and Crustal Vp/Vs Variation in Marmara Region Obtained by Receiver Functions," in *AGU Fall Meeting Abstracts*, vol. 2014, 2014, S23C-4519, S23C-4519.
- 51 **P. Buyukakpinar**, C. Gurbuz, and E. Zor, "The Shear Wave Velocity Structure of the Marmara Region by Using Receiver Function Analysis," in *AGU Fall Meeting Abstracts*, vol. 2012, 2012, S41A-2410, S41A-2410.

Skills

Languages	■ Turkish (Native), English (Advanced; YÖKDİL English–Natural Sciences: 86.25/100, 2025), Italian (Intermediate), German (Intermediate)
Programming Languages - Software	■ Python - [Libraries in Seismology: Pyrocko, ObsPy, GMT, PyGMT, MSNoise, Seispy], Matlab - [Tools in sensor orientation for large networks and seismic waveform correlation - GISMO], Seisan, Sac, Velest, Mloc, XML/XSL, Git, GitHub, L^AT_EX, SQLite

Skills (continued)

Academic - Research Experience

Scientific research, professional teaching, international training courses, collaborative activity among colleagues, experience in fieldwork. Research interests include: Machine learning applications in seismology; imaging lithospheric structures through receiver functions and surface wave analysis; investigating earthquake rupture directivity and underlying rupture processes; exploring the physics of seismic sources, including induced and triggered earthquakes and volcano-tectonic events; analyzing seismic waveforms to interpret landslide-induced seismic records; studying magmatic processes using integrated geophysical and geochemical datasets; developing real-time early warning systems for volcanic areas through seismic ambient noise analysis.

Teaching experience

Plate Tectonics and Crustal Dynamics (Kandilli Observatory, Istanbul, Turkey, 2018), Moment Tensor Inversion (GFZ International Training Course, Potsdam, Germany, 2023, 2024, 2026), Seismic waves in the real Earth (GFZ International Training Course, Potsdam, Germany, 2023), Theory of Elastic Waves (University of Potsdam, Potsdam, Germany, 2023), Professional English/Seminar (Computer Programming Program, Department of Computer Technologies, Antalya Bilim University, remote, 2023–2024), Advanced Methods in Observational Seismology (University of Potsdam, Potsdam, Germany, 2024), **International Teaching Professionals Program (ITP), University of Potsdam, Sep 2024–Sep 2025**: One-year didactic qualification for higher education teaching, including course design, diversity-sensitive teaching, digital teaching, competence-oriented examinations, a supervised teaching project, and peer teaching observations.

Academic Service

Reviewer for: *Scientific Reports*, *Seismological Research Letters*, *Journal of Geophysical Research: Solid Earth*, *Bulletin of the Seismological Society of America*, *Geochemistry*, *Geophysics*, *Geosystems (G-Cubed)*, *Frontiers in Earth Sciences*, *International Journal of Earth Sciences*. Actively contributed to the Resolution on "Seismic resilience and disaster preparedness in earthquake-prone countries" by IASPEI (IUGG, Berlin, 2023). <http://download.iaspei.org/newsletters/2020-2029/2023-Oct.pdf>

Session Chair

1) Seismological Society of America (29 April – 3 May **2024**, Anchorage, USA) – *Illuminating Complex, Multiplet Earthquake Sequences at Kahramanmaraş (Türkiye), Herat (Afghanistan), and Beyond* 2) European Seismological Commission (22–28 September **2024**, Corfu, Greece) – *Episodic Earthquake Swarms and Recurrent Unrests: Multidisciplinary Approaches* 3) IAGA / IASPEI Joint Scientific Meeting (31 August – 5 September **2025**, Lisbon, Portugal) – *Volcano Seismology Planned / Proposed Sessions* 1) **European Seismological Commission 2026**, Istanbul, Türkiye – *Earthquake Swarms: Processes, Physics, and Implications* 2) **Deep&Topo-2026 International Symposium** (6–12 November 2026, Beijing, China) – Convener, Session 29: *Seismic Swarms and Deep-Surface Coupling: Magma, Fluids, and Topographic Evolution*

Invited Talks & Seminars

- 2026
 - *Deep Dive into the Klingenthal Swarm and ELISE Project Update* (on-site) 41st Meeting of the Seismology Network (Seismologieverbund), Jena, Germany
 - *The anatomy of seismic swarms in the Eger Rift* 91. Earthquake swarms in continental rifts | 11th May 2026, GFZ, Potsdam, Germany
- 2025
 - *Investigating Magma, Fluid, and Faulting Interactions Through Volcano Seismology: Insights from Mount Etna, the Reykjanes Peninsula, and Northwest Bohemia-Vogtland* (on-site) Istanbul Technical University, Eurasia Institute of Earth Sciences, Istanbul, Türkiye
 - *Landslide Records in Türkiye: Seismic and Remote Sensing Insights* (on-site) IAGA/IASPEI Joint Scientific Meeting, Lisbon, Portugal
- 2024
 - *Seismological techniques to characterize shallow intrusions and pre-eruptive processes: Mount Etna and South-West Iceland* (online) National Institute of Geophysics and Volcanology, Italy

Invited Talks & Seminars (continued)

- *Slow and fast shear motion in faults triggered by fluid intrusion: Iceland and Northwest Bohemia* (on-site) Institute of Geophysics, Czech Academy of Sciences, Prague, Czech Republic
- *Seismological techniques to characterize shallow intrusions and pre-eruptive processes* (on-site) University of Alaska Fairbanks, Alaska, USA
- *Slow shear motion in fluid-influenced faults: Insights from Iceland and Northwest Bohemia* (on-site) Boğaziçi University, Kandilli Observatory and Earthquake Research Institute, Istanbul, Türkiye
- 2022 ■ *Seismic Precursory Signals and Forecasting of Volcanic Eruptions, Mount Etna* (online) Turkish National Committee for Volcanology and Chemistry of the Earth's Interior (TUVAK)

Miscellaneous Experience

Certification

- 2023 ■ Multiparametric Volcano Monitoring: Data Processing, Analysis and Modelling - Improve Network School on Mount Etna, Italy <https://www.improve-etn.eu/index.php/2023/04/27/improve-network-school-on-mount-etna/>
- International Training Course on Ocean Bottom and Amphibian Experiment Seismological Data, GFZ, Potsdam, Germany <https://www.gfz.de/en/press/news/details/internationaler-schulungskurs-zu-seismologischen-daten-von-amphibischen-experimenten-am-gfz>
- 2019 ■ Advanced Workshop on Earthquake Fault Mechanics: Theory Simulation and Observation, Trieste, Italy, (ICTP), <http://indico.ictp.it/event/8715/>
- 2018 ■ International Elite PhD Course “Deep Earth Process and their Surface Expression” 2018, Istanbul, Turkey, ITU https://www.ae-info.org/ae/Acad_Main/Past_Events/2011-present/Deep%20Earth%20Processes
- The Third Geoscience Communication School (GCS), 7 May 2018 – 12 May 2018, Castiglione del Lago, Italy, <http://www.sciencecommunicationschool.org/third-school-2018/#>
- 2017 ■ Workshop on Earthquakes and Tsunami: Modeling and Observations, December, 2017 Hanoi, Vietnam, (ICTP), <http://indico.ictp.it/event/8176/overview>
- International Training Course on “Seismology, Seismic Data, Hazard Assessment and Risk Mitigation” Potsdam, Germany, GFZ, <https://www.gfz.de/en/about-us/education-and-training/seismology-and-hazard-assessment/>
- How to Relocate earthquakes, Department of Geophysics, Colorado School of Mines, Institute of Applied Mathematics, Middle Eastern Technical University in Ankara, Turkey, by Prof. Dr. Eric Bergman.

References

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