

# Gregory C. Beroza

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## Positions

|   |              |
|---|--------------|
| Wayne Loel Professor of Earth Sciences, Stanford University   | 2008-present |
| Professor of Geophysics, Stanford University                  | 2003-present |
| Associate Professor of Geophysics, Stanford University        | 1994-2003    |
| Assistant Professor of Geophysics, Stanford University        | 1990-1994    |
| Postdoctoral Associate, Massachusetts Institute of Technology | 1989-1990    |

## Education

|   |      |
|---|------|
| Ph.D. Geophysics, Massachusetts Institute of Technology     | 1989 |
| B.S. Earth Sciences, University of California at Santa Cruz | 1982 |

## Honors and Awards

|   |      |
|---|------|
| President's Initiative Distinguished International Scientist, Chinese Academy of Sciences | 2024 |
| Elected to the National Academy of Sciences   | 2022 |
| AGU Gutenberg Lecture   | 2021 |
| Humboldt Research Award (Humboldt Prize), Alexander von Humboldt Foundation               | 2020 |
| Lawson Lecture, University of California Berkeley   | 2015 |
| Beno Gutenberg Medal, European Geosciences Union  | 2014 |
| Citation, Geophysical Research Letters, 40 <sup>th</sup> Anniversary Collection           | 2014 |
| IRIS/SSA Distinguished Lecturer   | 2012 |
| RIT Distinguished Lecturer  | 2011 |
| Wayne Loel Professorship of Earth Sciences  | 2009 |
| Brinson Lecturer, Carnegie Institution of Washington                                      | 2008 |
| Fellow, American Geophysical Union  | 2008 |
| NSF Presidential Young Investigator Award   | 1991 |
| NSF Graduate Fellowship   | 1983 |
| ARCS Foundation Scholarship   | 1983 |
| UCSC Chancellor's Award for Undergraduates  | 1983 |
| Highest Honors in Major   | 1982 |
| Undergraduate Thesis Honors   | 1982 |

## Professional Activities (Past 5 years)

|  |                         |
|--|-------------------------|
| Deputy Director; Co-Director, Southern California Earthquake Center      | 2007-2014; 2014-present |
| Co-Director, Stanford Center for Induced and Triggered Seismicity        | 2013-present            |
| Member, NAS Committee on International Security and Arms Control (CISAC) | 2023-present            |
| EarthScope Consortium Board of Directors                                 | 2025-2027               |

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|--|-------------------------------|
| EarthScope Consortium Board of Directors Liason to Data Products<br>and Services Advisory Committee  | 2025-2027                     |
| Arthur L. Day Prize and Lectureship Selection Committee  | 2025                          |
| Red Team Reviewing Committee, EarthScope Consortium National<br>Geophysical Facility (NGF) Proposal  | 2024                          |
| Visiting Committee, Caltech, Division of Geological and Planetary Sciences   | 2023                          |
| Visiting Committee, Rice University, Earth, Energy, and Environmental Sciences   | 2022                          |
| Member, US-Japan (UJNR) Panel on Earthquake Research   | 2018-present                  |
| California Earthquake Prediction Evaluation Council  | 2012-present                  |
| Handling Editor, <i>Seismica</i> (Diamond Open Access Journal)   | 2022-2023                     |
| Chair, USGS Scientific Earthquake Studies Advisory Committee   | 2018-2022                     |
| NEHRP Advisory Committee on Earthquake Hazards Reduction   | 2018-2022                     |
| Guest Editor, Special AGU Volume on Machine Learning and Solid Earth   | 2020-2022                     |
| External Review Panel, SNL Low-Yield Nuclear Modeling  | 2021                          |
| LANL Capability Review Committee for the Science of Signatures Focus Area  | 2021                          |
| Georgia Tech School of Earth and Atmospheric Sciences Academic Program Review  | 2021                          |
| International Scientific Committee, Mechanistic Machine Learning and Digital Twins   | 2021                          |
| NAS Committee on Catalyzing Opportunities for Research in Earth Sciences<br>(CORES): A Decadal Survey for NSF's Division of Earth Sciences | 2018-2020                     |
| AGU Expert Outreach Network (AEON)   | 2013-2022                     |
| IRIS-Industry Working Group  | 2015-2022                     |
| Senior Advisor, Unconventional Seismic Inc.  | 2014-2020                     |
| External Review Committee, Dept. of Earth and Planetary Science, Univ. Tokyo   | 2019-2020                     |
| Visiting Committee, Dept. of Earth, Environ., and Planet. Sci., Brown University   | 2018-2019                     |
| Organizing Committee, Workshop on Machine Learning in Solid Earth Geoscience   | 2018-2019                     |
| Associate Editor, <i>Science Advances</i>  | 2016-2018                     |
| Chair, USGS Advanced National Seismic System Steering Committee  | 2013-2018                     |
| USGS Scientific Earthquake Studies Advisory Committee  | 2013-2018                     |
| California Seismic Safety Commission   | 2013-2017                     |
| AGU Seismology President-Elect/President/Past-President  | 2013-2014/2015-2016/2017-2018 |

**2025 Invited Talks (5):** INGV 25<sup>th</sup> Anniversary (Rome, Italy); 4<sup>th</sup> Schatzalp Workshop on Induced Seismicity (Davos, Switzerland); EarthScope Panel on Geophysical Insights into Natural Disasters (Minneapolis, Minnesota); 50<sup>th</sup> Anniversary International Conference of the Haicheng Earthquake (Shenyang, China); Keynote Lecture, Frontiers in Geophysics for the new Millenium (Erice, Italy)

**2024 Invited Talks (9):** IGG-Chinese Academy of Sciences (Beijing, China); Peking University (Beijing, China); University of Chinese Academy of Sciences (Beijing, China); Chengdu University of Technology (Chengdu, China); Passive Imaging and Monitoring in Wave Physics (Cargese, France); FricFrac (Oslo, Norway); Short Course on Machine Learning for Earthquake Monitoring (Naples, Italy); USTC Workshop on Induced Seismicity (Hefei, China); Frontiers and Challenges in Geophysics (Hefei, China)

**2023 Invited Talks (4):** Northern California Earthquake Hazards Workshop, USGS, Mountain View, California (remote); Lawrence Livermore National Laboratory (Livermore, California); Kyoto University (Kyoto, Japan)

**2022 Invited Talks (8):** Data-driven physical simulation seminar series (LLNL); IS Terre (Grenoble, France); École Normale Supérieure (Paris, France); Deutschen Geophysikalischen Gesellschaft, Munich, Germany (remote); Seismological Society of America (Bellevue, Washington); Japan Geophysical Union (Chiba, Japan); Turkish-German Symposium on Seismotectonic Research in the Marmara Region (Istanbul, Türkiye (remote)); 3<sup>rd</sup> International Conference on Coupled Processes in Fractured Geological Media: Observation, Modeling, and Application (Berkeley, California)

**2021 Invited Talks (15):** Plenary Speaker NITRD Big Data Interagency Working Group Virtual Workshop on Pioneering the Future of Federally Supported Data Repositories (remote); ERC TECTONIC-FEAR Seminars on Earthquake Physics, Sapienza, Rome (remote); SSA Special Session on “Data Fusion and Uncertainty Quantification in Shallow Crust Characterization and Modeling” (remote); Center for Nonlinear Studies and LANL workshop on “Machine Learning in Solid Earth Geosciences,” Santa Fe (remote); Machine Learning to Illuminate the Earth, KAUST (remote); Peking University Summer School on Summer School on Mathematical AI (remote); The Physics of Earthquake Faulting: Machine Learning to Illuminate Earthquake Precursors and Predict Laboratory Earthquakes, Sapienza (Rome, Italy); 3<sup>rd</sup> School on “Earthquakes: Nucleation, Triggering, and Relationships With Aseismic Processes” (Cargese, France); Tel Aviv University Geophysics Colloquium (remote); ETH Geophysical institutes colloquium (Zurich, Switzerland); International Symposium for the 4<sup>th</sup> anniversary of the Pohang Earthquake, Pohang, South Korea (remote); Geo-Forschung Zentrum Potsdam (Potsdam, Germany); Ludwig-Maximilian-Universität (remote); Université de Neuchâtel (Neuchâtel, Switzerland); Freie Universität (Berlin, Germany); AGU Gutenberg Lecture (remote).

### **Administrative Activities (Past 5 years)**

|   |              |
|---|--------------|
| Doerr School Budget Committee                               | 2023-present |
| Stanford VPDoR Limited Submissions Faculty Review Committee | 2022-present |
| Stanford Judicial/Conduct Panelist                          | 2021-present |
| Department Admissions Committee                             | 2018-2023    |
| Stanford Sustainability Blueprint Advisory Committee        | 2020-2021    |
| Stanford IDEAL Initiative Working Group                     | 2018-2021    |
| Chair, Stanford Earth Postdoctoral Fellows Committee        | 2020-2021    |
| Stanford University Title IX Sexual Misconduct Review Panel | 2015-2020    |
| Stanford Earth Council                                      | 2015-2020    |

### **Affiliations/Memberships**

|                                  |              |
|----------------------------------|--------------|
| American Geophysical Union       | 1983-present |
| Seismological Society of America | 1984-present |
| European Geosciences Union       | 2014-present |
| Japan Geosciences Union          | 2018-present |
| National Academy of Sciences     | 2022-present |

### **Research Advisor for Undergraduate Students (with current positions)**

Brandon Schow (BS, 2015) Database Engineer, Hensel Phelps, Colorado.  
Karen Felzer (BS 1998) Research Scientist, U.S. Geological Survey, Pasadena

## Research Advisor for Graduate Students (with current positions)

Yanlan Hu (PhD 2029 – expected) Graduate Student, Stanford University  
Yifan Yu (PhD 2027 – expected) Graduate Student, Stanford University  
Xing Tan (PhD 2027 – expected) Graduate Student, Stanford University  
Rosamiel Ries (PhD 2026 – expected) Graduate Student, Stanford University  
Trey Knudsen (PhD 2026 – expected) Graduate Student, Stanford University  
Albert Leonardo Aguilar-Suarez (PhD 2026 – expected) Graduate Student, Stanford University  
Ian McBrearty (PhD 2025) Postdoctoral Associate, Stanford University  
Ryan Schultz (PhD 2022) Oberassistent, Swiss Seismological Service, ETH, Zürich  
Yongsoo Park (PhD 2022) Research Scientist, Los Alamos National Laboratory  
Kaiwen Wang (PhD 2021) Assistant Professor, IGG Chinese Academy of Sciences, Beijing  
Weiqiang Zhu (PhD 2021) Assistant Professor, University of California, Berkeley  
Marina Kim (MS 2021) Tutor, San Jose, California  
Fatimah Al Ismail (PhD 2020) Research Scientist, ARAMCO  
Shanna Chu (PhD 2020) Research Seismologist, Fervo Energy  
Yixiao Sheng (PhD 2020) Assistant Professor, USTC, Hefei, China  
Cynthia Kelly (PhD 2018) Data Science Consultant, Stanford University School of Medicine  
Clara Yoon (PhD 2018) Research Geophysicist, US Geological Survey, Pasadena  
Karianne Bergen (PhD 2018) Assistant Professor, Brown University  
Sarah Barrett (PhD 2015) Director, MGA Operations, Hippo Insurance  
Ana Christina Aguiar (PhD 2015) Staff Researcher, Lawrence Livermore National Laboratory  
Marine Denolle (PhD 2013) Associate Professor, University of Washington  
Justin R. Brown (MS 2008, PhD 2012) (deceased)  
Annemarie Baltay (PhD 2011) Research Geophysicist, US Geological Survey, Mountain View  
Seok Goo Song (PhD 2007) Research Scientist, Earthquake Research Center, Korea Institute of  
Geoscience and Mineral Resources  
David R. Shelly (PhD 2007) Research Geophysicist, US Geological Survey, Golden  
Justin Rubinstein (MS 2002, PhD 2006) Research Geophysicist, US Geological Survey, Mountain View  
Eva Zankerka (PhD 2003) Program Manager in Seismology, National Science Foundation  
Xyoli Pérez-Campos (MS 1999, PhD 2002) Director International Monitoring System, Vienna, Austria  
P. Martin Mai (MS 1999, PhD 2001) Professor, King Abdullah University of Science and Technology  
David P. Schaff (PhD 2001) Associate Research Professor, Lamont-Doherty Earth Observatory  
Mariagiovanna Guatteri (MS 1999, PhD 2000) CEO, Swiss Re Insurance-Linked Investment Advisors  
Corporation  
Douglas A. Dodge (PhD 1997) Geophysicist, Lawrence Livermore National Laboratory  
Brian P. Cohee (PhD 1996) Chief Technology Officer, Corbis Holdings (deceased)  
Martijn Verwoerd (MS 1996) Co-founder and Managing Director, Clean Rock Energy

Harold Mendoza (MS 1995) Professor, Bakersfield College

### Research Advisor for Postdoctoral Scholars (with current positions)

|                        |   |
|------------------------|---|
| Ian McBrearty          | (2025-present) Postdoctoral Associate, Stanford University                                    |
| Shujuan Mao            | (2021-2024) Assistant Professor, University of Texas, Austin                                  |
| Artemii Novoselov      | (2022-2024) AI Researcher/Engineer, Stripe  |
| Lei Yang               | (2018-2021) Assistant Professor, IGG Chinese Academy of Sciences, Beijing                     |
| Mostafa Mousavi        | (2017-2019) Assistant Professor, Harvard University; Research Scientist, Google               |
| Xin Liu                | (2016-2020) Assistant Professor, Hong Kong University, China                                  |
| Lise Retailleau        | (2017-2020) Deputy Physicist, Observatoire Volcanologique<br>du Piton de la Fournaise, France |
| Zack Spica             | (2015-2019) Assistant Professor, University of Michigan                                       |
| Nana Yoshimitsu        | (2016-2018) Assistant Professor, Kyoto University   |
| Rob Skoumal            | (2016) Research Scientist, U.S. Geological Survey   |
| Yihe Huang             | (2014-2016) Associate Professor, University of Michigan                                       |
| Nori Nakata            | (2013-2016) Principal Research Scientist, MIT   |
| Julian Lozos           | (2014-2015) Associate Professor, Cal State University, Northridge                             |
| Amanda Thomas          | (2013-2015) Professor, University of California, Davis  |
| Pierre Boué            | (2014-2015) Assistant Professor, Université Grenoble Alpes, Grenoble                          |
| German Prieto          | (2007-2008) Associate Professor, Universidad Nacional de Colombia                             |
| Shuo Ma                | (2006-2008) Associate Professor, San Diego State University                                   |
| Hiroe Miyake           | (2003) Professor, University of Tokyo   |
| Anu Venkataraman       | (2002-2004) Geophysicist, Exxon-Mobil   |
| Mariagiovanna Guatteri | (2002-2003) CEO SRILIAC, SwissRe  |
| Xyoli Pérez-Campos     | (2002) Director, CTBTO International Monitoring System  |
| Jeff McGuire           | (2001-2002) Research Scientist, US Geological Survey, Menlo Park                              |
| Felix Waldhauser       | (2000) Research Professor, Lamont-Doherty Earth Observatory                                   |

### Honors and Awards (Advisees)

|                                  |   |      |
|----------------------------------|---|------|
| David Shelly (grad student)      | Keiiti Aki Early Career Award (AGU)             | 2008 |
| Karen Felzer (undergrad student) | Charles F. Richter Early Career Award (SSA)     | 2009 |
| German Prieto (postdoc)          | Keiiti Aki Early Career Award (AGU)             | 2010 |
| David Shelly (grad student)      | Charles F. Richter Early Career Award (SSA)     | 2011 |
| David Shelly (grad student)      | Presidential Early Career Award (US Government) | 2011 |
| David Shelly (grad student)      | James B. MacElwane Medal (SSA)                  | 2012 |
| Annemarie Baltay (grad student)  | Charles F. Richter Early Career Award (SSA)     | 2017 |
| Nori Nakata (postdoc)            | Young Scientist Award (SSJ)                     | 2017 |
| Hiroe Miyake (postdoc)           | Early Career Award (JSPS)                       | 2018 |

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|-----------------------------------|---|------|
| Amanda Thomas (postdoc)           | Charles F. Richter Early Career Award (SSA)     | 2018 |
| Xyoli Pérez-Campos (grad student) | Early-to-Mid Career Alumni Award (Stanford)     | 2019 |
| Annemarie Baltay (grad student)   | Presidential Early Career Award (US Government) | 2019 |
| Marine Denolle (grad student)     | Charles F. Richter Early Career Award (SSA)     | 2019 |
| Mostafa Mousavi (postdoc)         | Charles F. Richter Early Career Award (SSA)     | 2021 |
| Yihe Huang (postdoc)              | Keiiti Aki Early Career Award (AGU)             | 2021 |
| Nori Nakata (postdoc)             | Early Career Award (IUGG)                       | 2022 |
| Weiqiang Zhu (grad student)       | Charles F. Richter Early Career Award (SSA)     | 2025 |

## Publications

- 2025 Zali, Z., P. Martínez-Garzón, D. Mencin, and G. C. Beroza, Detection of Slow Slip Events in Strainmeter Data Using Deep Learning and Their Link to Deep Slip Transients, *Nature Communications*, (submitted).
- 2025 Song, X., M.A. Meier, W. L. Ellsworth, and G. C. Beroza, FocoNet: Transformer-based focal-mechanism determination, *J. Geophys. Res. Machine Learning*, (submitted).
- 2025 Liu, X., H. Li, G. C. Beroza, G. Zhao, and M. Liu, Thrust-fold structure and asymmetric earthquake damage near the seismogenic segment of 2008 Wenchuan earthquake from seismic attenuation and velocity tomography, *Nature Communications* (submitted).
- 2025 Prejean, S., J. Pesicek, X. Tan, W. L. Ellsworth, and G. C. Beroza, Insights into the 2025 Seismic Crisis near Santorini, Greece from Global Volcanic Unrest and Precision Seismology, *Academy of Athens Report* (submitted).
- 2025 Karimpouli, S., P. Martínez-Garzón, S. Núñez-Jara, M. Picozzi, D. Spallarossa, G. Kwiatek, Georg Dresen, M. Bohnhoff, G. Beroza, Preparatory phase of large earthquakes illuminated by unsupervised categorization of earthquake catalog features, *Nature Communications*, (in revision).
- 2025 Scotto di Uccio, F., T. Muzellec, A. Scala, G. De Landro, G. C., F. Carotenuto, L. Elia, M. Picozzi, A. Zollo, C. Strumia, G. C. Beroza, and G. Festa, Potential earthquake-prone faults identified by dense seismic array monitoring in complex extensional settings, *Scientific Reports*, (in revision).
- 2025 Park, Y., A. D. Armstrong, W. L. Yeck, D. R. Shelly, and G. C. Beroza, Divide and conquer: Separating the two probabilities in seismic phase picking, *Geophys. J. Int.*, **243**, 2, ggaf333.
- 2025 Tan, X., A. Tramelli, S. Gamaldi, G. C. Beroza, W. L. Ellsworth, and G. C. Beroza, A clearer view of the current phase of unrest at Campi Flegrei Caldera, *Science*, **390** (6768), 70-75.
- 2025 McBrearty, I. W. and G. C. Beroza, Double Difference Earthquake Location with Graph Neural Networks, *Earth Planets and Space*, **77**, 127 doi.org:10.1186/s40623-025-02251-4.
- 2025 Mousavi, S. M., C. Cattania, and G. C. Beroza, The Pursuit of Reliable Earthquake Forecasting, *Physics Today*, **78** (7), 42-50.
- 2025 Peng, L., L. Li, S. M. Mousavi, X. Zeng, and G. C. Beroza, TwoStream-EQT: A microseismic phase picking model combining time and frequency domain inputs, *Computers and Geosciences*, **204**, 105991,
- 2025 Suzuki, R., N. Uchida, W. Zhu, G. C. Beroza, T. Nakayama, G. Toyokuni, R. Takagi, R. Azuma, K. Yoshida, and A. Hasegawa, The forearc seismic belt: A fluid pathway constraining down-dip megathrust earthquake rupture, *Science*, **389** (6756), 190-194.
- 2025 Ries, R., G. C. Beroza, and W. L. Ellsworth, Stress evolution and driving mechanism of an induced earthquake sequence near Caldwell Kansas, *Bull. Seismol. Soc. Am.* (in press).
- 2025 Knudsen, T., W. L. Ellsworth, and G. C. Beroza, Source Parameter Analysis Using Maximum Amplitudes in the Time Domain, *Bull. Seismol. Soc. Am.*, **115**(3), 839-849.
- 2025 Yu, Y., W. L. Ellsworth, and G. C. Beroza, Accuracy and Precision of Earthquake Location Programs: Insights from a Synthetic Controlled Experiment, *Seismol. Res. Lett.* **96**(3), 1860-1874.
- 2025 Abercrombie, R. E., A. Baltay, S. Chu, T. Taira, D. Bindi, O. S. Boyd, X. Chen, E. S. Cochran, E. Devin, D. Dreger, W. Ellsworth, W. Fan, R. M. Harrington, Y. Huang, K. B. Kemna, M. Liu, A. Oth, G. A. Parker, C. Pennington, M. Picozzi, C. J. Ruhl, P. Shearer, D. Spallarossa, D.

- Trugman, I. Vandeventer, Q. Wu, C. Yoon, E. Yu, G. C. Beroza, T. Eulenfeld, T. Knudson, Kevin Mayeda, P. Morasca, J. S. Neely, J. Roman-Nieves, C. Satriano, M. Supino, W. R. Walter, R. Archuleta, G. M. Atkinson, G. Calderoni, C. Ji, H. Yang, J. Zhang, Overview of the SCEC/USGS Community Stress Drop Validation Study Using the 2019 Ridgecrest Earthquake Sequence. *Bull. Seismol. Soc. Am.*, doi.org/10.1785/0120240158
- 2025 Wu, J., J. Tan, J. Xu, L. Li, G. C. Beroza, K. Mumford, C. Van De Ven, B. Chen, D. Elsworth, Challenges to Sustainable Large-Scale Shale Gas Development in China, *Proc. Nat. Acad. Sci.*, **122** (18) e2415192122, doi.org/10.1073/pnas.24151921.
- 2025 Aguilar-Suarez, A.-L. and G. C. Beroza, Picking Regional Seismic Phase Arrival Times with Deep Learning, *Seismica*, **4**(1), doi.org/10.26443/seismica.v4i1.1431
- 2025 Zali, Z., P. Martínez-Garzón, G. Kwiatek, S. Nunez Jara, G. C Beroza, F. Cotton, and M. Bohnhoff, Low-frequency tremor-like episodes before the 2023  $M_w$  7.8 Türkiye earthquake linked to cement quarrying. *Scientific Reports* **15**, 6354, doi.org/10.1038/s41598-025-88381-x
- 2025 Mao, S., W. L. Ellsworth, and G. C. Beroza, Depth-dependent seismic sensing of groundwater recovery from the atmospheric-river storms of 2023, *Science* **387**, 758-763, doi:10.1126/science.adr6139.
- 2025 Park, Y., and G. C. Beroza, Reducing the Parameter Dependency of Phase-Picking Neural Networks with Dice Loss, *The Seismic Record*, **5**(1), 55–63, doi: 10.1785/0320240028.
- 2024 Beroza, G. C., and E. E. Zankerka, An Unambiguous Signature of Pore Fluid Aftershock Triggering in the Landers Earthquake Sequence, *Annals of Geophysics*, **67**(4), S432-S432.
- 2024 Annunziata, D., M. Savoia, C. Martino, F. Giampaolo, F. Piccialli, and G. C. Beroza, A Robust and Rapid Grid-Based Machine Learning Approach for Inside and Off-Network Earthquakes Classification in Dynamically Changing Seismic Networks, *Seismol. Res. Lett.* (in press).
- 2024 Scotto di Uccio, F. M. Michele, C. Strumia, M. Supino, G. C. Beroza, L. Chiaraluce, N. D’Agostino, and G. Festa, Characterization and evolution of seismic sequences in the normal fault environment of the Southern Apennines, *J. Geophys. Res.*, 129(8), e2023JB028644.
- 2024 Novoselov, A., J. Williams, J. Pace, and G. C. Beroza, PhaseHunter: Seismic Wave Onset Time Determination through Deep Learning Regression, *J. Geophys. Res. - Machine Learning and Computation* (in revision).
- 2024 Becker, D., I.W. McBrearty, G. C. Beroza, and P. Martínez-Garzón, Performance of AI-based phase picking and event association methods after the large  $M_w$  7.8 and  $M_w$  7.6 2023 Türkiye doublet, *Bull. Seismol. Soc. Am.*, doi.org/10.1785/0120240017.
- 2024 Xi, Z. S. Wei, W. Zhu, G. C. Beroza, Y. Ji, and N. Saloor, Deep learning for deep earthquakes: insights from OBS observations of the Tonga Subduction Zone, *Geophys. J. Int.*, **238**, 2, 1073–1088, doi.org/10.1093/gji/ggae200.
- 2024 Aguilar-Suarez, A. L. and G. C. Beroza, Curated Regional Earthquake Waveforms (CREW) Dataset, *Seismica* **3** (1), doi:10.26443/seismica.v3i1.1049.
- 2024 Park., Y., G. C. Beroza, and W. L. Ellsworth, Strengthening the Development and Use of “Deep” Seismic Event Catalogs, *Seismol. Res. Lett.*, doi:10.1785/0220240044
- 2024 Mousavi, S. M., G. C. Beroza, T. Mukerji, and M. Rasht-Behesi, Deep Learning Applications in Exploration Seismology: a technical survey, *Geophysics*, doi:10.1190/geo2023-0063.1.
- 2023 Kwiatek, G., P. Martínez-Garzón, D. Becker, G. Dresen., F. Cotton, G. C. Beroza, D. Acaarel, S. Ergintav, and M. Bohnhoff, Months-long seismicity transients preceding the 2023  $M_w$  7.8 Kahramanmaraş earthquake, Türkiye, *Nature Communications*, **14**, 1, 7534.
- 2023 Liu, X., G. C. Beroza, and H. Li, Ambient noise differential adjoint tomography reveals fluid-bearing rocks near active faults in the urban Los Angeles Basin, *Nature Communications Nat Commun* **14**, 6873, doi:10.1038/s41467-023-42536-4.
- 2023 Karimpouli, S., D. Caus, H. Grover, P. Martínez-Garzón, M. Bohnhoff, G. C. Beroza, G. Dresen, T. Goebel, T. Weigel, and G. Kwiatek, Explainable machine learning for labquake prediction using catalog-driven features, *Earth and Planet. Sci. Lett.*, **622**, 118383, doi:10.1016/j.epsl.2023.118383.
- 2023 Mao, S., W. L. Ellsworth, and G. C. Beroza, G. C. Adaptive coda-wave Imaging with Voronoi tessellation. *J. Geophys. Res.*, **128**, e2023JB026592. https://doi.org/10.1029/2023JB026592.
- 2023 Ide, S. and G. C. Beroza, Slow Earthquake Scaling Reconsidered as a Boundary between Distinct Modes of Rupture Propagation, *Proc. Nat Acad. Sci.*, **120** (32), e222102120.

- 2023 Schultz, R., Y. Park, Aguilar-Suarez, A. L., W. L. Ellsworth, and G. C. Beroza, En echelon faults induced by wastewater disposal near Musreau Lake, Alberta, *Geophys. J. Int.* **235** (1), 417-429
- 2023 Park, Y., G. C. Beroza, and W. L. Ellsworth, A Mitigation Strategy for the Prediction Inconsistency of Neural Phase Pickers, *Seismol. Res. Lett.*, doi:10.1785/0220230003.
- 2023 Mousavi, M. and G. C. Beroza, Machine Learning in Earthquake Seismology, *Ann. Rev. Earth. Planet. Sci.*, **51**, 105-129.
- 2023 McBrearty, I. A. and G. C. Beroza, Earthquake Phase Association with Graph Neural Networks, *Bull. Seismol. Soc. Am.*, **113**(2), 524–547, doi:10.1785/0120220182.
- 2023 Al-Ismail, F. M., W. L. Ellsworth, and G. C. Beroza, A Time-Domain Approach for Accurate Spectral Source Estimation with Application to Ridgecrest, California Earthquakes, *Bull. Seismol. Soc. Am.*, doi:10.1785/0120220228.
- 2023 Martínez-Garzón, P., G. C. Beroza, G. M. Bocchini, M. Bohnhoff, Stress loading from sea level increases can trigger earthquake sequences in a hydrothermal system near Istanbul, *Geophys. Res. Lett.*, e2022GL101258.
- 2023 Li, Y. E., D. O'Malley, G. Beroza, A. Curtis, and P. Johnson, Machine Learning Developments and Applications in Solid-Earth Geosciences: Fad or Future? *J. Geophys. Res.*, doi: 10.1029/2022JB026310.
- 2023 Schultz, R., W. L. Ellsworth, and G. C. Beroza, An ensemble approach to characterizing trailing-induced seismicity, *Seismol. Res. Lett.*, 94(2A), **699**, doi: 10.1785/0220220352.
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