William B. Frank

Assistant Professor

Dept. of Earth, Atmospheric and Planetary Sciences

February 2024

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Research statement

My research illuminates the physical mechanisms that control deformation within the Earth's crust. Understanding the continuum of rupture modes and fault instability within the Earth, from shallow stick-slip earthquakes to deep slow transients, to still deeper steady creep, is key to improved estimates of earthquake hazard. The multidisciplinary approach that defines my research group combines seismological techniques with geodetic observations to yield knowledge about the evolution of faulting processes in time and space and how the solid Earth responds to tectonic, volcanic, and anthropogenic forcings.

Academic positions

2020–present	**Assistant Professor**	Massachusetts Institute of Technology
2019–2020	**Visiting Scientist**	Massachusetts Institute of Technology
2018–2020	**Assistant Professor of Earth Sciences**	University of Southern California
2015–2017	**NSF Postdoctoral Fellow**	Massachusetts Institute of Technology
2014–2015	**Postdoctoral Researcher**	Institut de Physique du Globe de Paris
2011–2014	**Graduate Research/Teaching Assistant**	Institut de Physique du Globe de Paris

Education

2014	Ph.D. Geophysics	Institut de Physique du Globe de Paris
	Using low-frequency earthquakes as a fault probe in Guerrero, Mexico	
	(advisor: Nikolaï Shapiro)	
2011	M.Sc. Geophysics	Institut de Physique du Globe de Paris
2009	B.Sc. Earth Systems Science	University of Michigan, Ann Arbor

Awards and honors

2022	Victor P. Starr Career Development Professorship
2017	Two Editor's Citations for Excellence in Refereeing (*Geophysical Research Letters*)
2016	Editor's Citation for Excellence in Refereeing (*Journal of Geophysical Research*)
2016	Editor's Citation for Excellence in Refereeing (*Geophysical Research Letters*)
2015–2017	National Science Foundation Postdoctoral Fellowship
2011–2014	Ministry of Higher Education and Research (France) Doctoral Fellowship

Grants and fellowships

2023	*Travel: Cargese 2023 School on Active Subduction*
	National Science Foundation – EAR
	PI: **William B. Frank** ($30,000)
2023	*EAPS-WHOI Geophysics Retreat*
	MIT Office of Graduate Education
	PI: **William B. Frank** ($2,545)
2022–2024	*Subduction of the Caribbean tectonic plate revealed by atypical earthquakes*
	MIT International Science and Technology Initiatives Global Seed Fund (Colombia)
	PI: **William B. Frank** ($25,000)
	Collaboration Partner: Germàn Prieto (Universidad Nacional de Colombia)
2022–2024	*Blending together seismology and geodesy to unravel slow slip's impact on the earthquake cycle*
	MIT International Science and Technology Initiatives Global Seed Fund (France)

	PI: **William B. Frank** ($25,000) Collaboration Partners: Mathilde Radiguet (ISTerre) and Romain Jolivet (ENS Paris)
2022–2025	*Teasing out the hidden complexities of slow slip from the geodetic record in Cascadia* National Aeronautics and Space Administration – ROSES Earth Surface & Interior PI: **William B. Frank** ($542,970)
2021–2024	*The interplay between slow slip, fault coupling, and crustal earthquakes* National Aeronautics and Space Administration – ROSES Earth Surface & Interior PI: **William B. Frank** ($538,287, includes subaward of $66,539 to Laura M. Wallace at University of Texas at Austin)
2021	*Improving seismicity detection to map active structures in the Central Virginia Seismic Zone: Collaborative Research with Massachusetts Institute of Technology and Boston University* U.S. Geological Survey Earthquake Hazards Program PIs: **William B. Frank** ($64,734) and Rachel E. Abercrombie (Boston University; $26,626)
2019–2021	*Revealing the solid Earth's response to slow slip at a plate boundary* FACE Foundation – Thomas Jefferson Fund PIs: **William B. Frank** ($10,000) and Piero Poli (Institut des Sciences de la Terre; $10,000)
2019–2022	*Collaborative Research: What makes Low-Frequency Earthquakes low frequency?* National Science Foundation – EAR Geophysics PIs: **William B. Frank** ($297,798) and Rachel E. Abercrombie (Boston University; $158,998)
2019–2020	*Small earthquakes in Big Data: systematic detection of low-frequency seismicity in the Hikurangi margin* Royal Society Te Apārangi (New Zealand) – Catalyst: Seeding PI: Stephen Bannister (GNS Science) International collaboration Partner: **William B. Frank** ($59,330 NZD)
2018–2019	*Multidisciplinary exploration for slow aseismic slip and low-frequency earthquakes in the Anza Gap (San Jacinto fault zone)* Southern California Earthquake Center PIs: **William B. Frank** ($16,000) and Roland Bürgmann (University of California, Berkeley; $16,000)
2015–2017	*Exploring the evolution of faults and friction through dense repeater event catalogs* National Science Foundation – EAR Postdoctoral Fellowship PI: **William B. Frank** ($174,000)

Teaching experience

(*F=Fall; S=Spring; I=IAP; * indicates a course conducted in French*)

2022&2024S	Field Geophysics Analysis	Massachusetts Institute of Technology
2022&2024I	Field Geophysics	Massachusetts Institute of Technology
2021&2023F	Essentials of Field Geophysics	Massachusetts Institute of Technology
2022FS–	Geophysics seminar	Massachusetts Institute of Technology
2022	Mechanics of Earthquakes and Aseismic Slip	Joint EPFL/ETH summer school
2021F	Introduction to Seismology	Massachusetts Institute of Technology
2021S	Earthquakes Dynamics	Massachusetts Institute of Technology
2020S	Dynamics of Subduction Zones	University of Southern California
2018F–2019F	Planet Earth	University of Southern California
2017 (Guest)	Introduction to Seismology	Massachusetts Institute of Technology
2016	Kaufman Teaching Certificate	Massachusetts Institute of Technology

2015	Repeating seismicity tutorial	Universidad Nacional Autónoma de México Georgia Institute of Technology
2014	Intro to scientific computing*	Institut de Physique du Globe de Paris
2011–2013	Data analysis in the Earth sciences*	Institut de Physique du Globe de Paris
2011	Intro to office software*	Institut de Physique du Globe de Paris

Peer-reviewed papers

(† *indicates an advised student or postdoc author*)

37. †Beaucé, E., **W. B. Frank**, L. Seydoux, P. Poli, N. Groebner, R. D. van der Hilst, and M. Campillo (2023). BPMF: A BackProjection and Matched-Filtering Workflow for Automated Earthquake Detection and Location. *Seismological Research Letters*. DOI: 10.1785/0220230230.
36. Farge, G., C. Jaupart, **W. B. Frank**, and N. M. Shapiro (2023). Along-strike segmentation of seismic tremor and its relationship with the hydraulic structure of the subduction fault zone. *Journal of Geophysical Research: Solid Earth*. DOI: 10.1029/2023JB027584.
35. †Maubant, L., **W. B. Frank**, L. Wallace, C. Williams, and I. Hamling (2023). Imaging the spatiotemporal evolution of plate coupling with interferometric radar (InSAR) in the Hikurangi subduction zone. *Geophysical Research Letters*. DOI: 10.1029/2023GL105388.
34. †Wang, Q.-Y., **W. B. Frank**, R. E. Abercrombie, A. Kato, and K. Obara (2023). What makes low-frequency earthquakes low frequency. *Science Advances*. DOI: 10.1126/sciadv.adh3688.
33. †Mouchon, C., **W. B. Frank**, M. Radiguet, N. Cotte, and P. Poli (2023). Subdaily slow fault slip dynamics captured by low-frequency earthquakes. *AGU Advances*. DOI: 10.1029/2022AV000848.
32. †Bryan, J. T., **W. B. Frank**, and P. Audet (2023). Capturing seismic velocity changes in receiver functions with optimal transport. *Geophysical Journal International*. DOI: 10.1093/gji/ggad130.
31. †Wimez, M. and **W. B. Frank** (2022). Recursive detection of swarms of volcanic long-period seismicity in Marie Byrd, Antarctica. *Geophysical Journal International*. DOI: 10.1093/gji/ggac221.
30. Mikesell, T. D., A. Mordret, Z. Xu, and **W. B. Frank** (2022). Crustal Structure across the West Antarctic Rift System from Multicomponent Ambient Noise Surface Wave Tomography. *Seismological Research Letters*. DOI: 10.1785/0220210026.
29. Cabrera, L., P. Poli, and **W. B. Frank** (2022). Tracking the spatio-temporal evolution of foreshocks preceding the Mw 6.3 2009 L'Aquila Earthquake. *Journal of Geophysical Research: Solid Earth*. DOI: 10.1029/2021JB023888.
28. †Aden-Antoniow, F., **W. B. Frank**, and L. Seydoux (2022). An Adaptable Random Forest Model for the Declustering of Earthquake Catalogs. *Journal of Geophysical Research: Solid Earth*. DOI: 10.1029/2021JB023254.
27. Chamberlain, C. J., **W. B. Frank**, F. Lanza, J. Townend, and E. Warren-Smith (2021). Illuminating the Pre-, Co-, and Post-Seismic Phases of the 2016 M7. 8 Kaikōura Earthquake With 10 Years of Seismicity. *Journal of Geophysical Research: Solid Earth*. DOI: 10.1029/2021JB022304.
26. Husker, A. L., J. Castillo Castellanos, X. Perez-Campos, R. Valenzuela, and **W. B. Frank** (2021). Crust and upper-mantle seismic anisotropy variations from the coast to inland in central and Southern Mexico (2): correlations with tectonic tremor. *Geophysical Journal International*. DOI: 10.1093/gji/ggab429.
25. †Aden-Antoniow, F., C. Satriano, P. Bernard, N. Poiata, E.-M. Aissaoui, J.-P. Villotte, and **W. B. Frank** (2020). Statistical evidence of a seismic quiescence before the M_w8.1 Iquique earthquake, Chile. *Journal of Geophysical Research: Solid Earth*. DOI: 10.1029/2019JB019337.
24. Jolivet, R. and **W. B. Frank** (2020). The transient and intermittent nature of slow slip. *AGU Advances*. DOI: 10.1029/2019AV000126.
23. †Farge, G., N. M. Shapiro, and **W. B. Frank** (2020). Moment-duration scaling of low-frequency earthquakes in Guerrero, Mexico. *Journal of Geophysical Research: Solid Earth*. DOI: 10.1029/2019JB019099.

22. †Beaucé, E., **W. B. Frank**, A. Paul, M. Campillo, and R. D. van der Hilst (2019). Systematic Detection of Clustered Seismicity Beneath the Southwestern Alps. *Journal of Geophysical Research*. DOI: 10.1029/2019JB018110.
21. **Frank, W. B.** and E. E. Brodsky (2019). Daily measurement of slow slip from low-frequency earthquakes is consistent with ordinary earthquake scaling. *Science Advances*. DOI: 10.1126/sciadv.aaw9386.
20. Chao, K., Z. Peng, **W. B. Frank**, G. A. Prieto, and K. Obara (2019). Isolated Triggered Tremor Spots in South America: Southern Chile, Ecuador, and Central Colombia. *Seismological Research Letters*. DOI: 10.1785/0220190009.
19. Husker, A. L., **W. B. Frank**, †G. Gonzales, L. Avila, V. Kostoglodov, and E. Kazachkina (2019). Characteristic tectonic tremor activity observed over multiple slow slip cycles in the Mexican subduction zone. *Journal of Geophysical Research: Solid Earth*. DOI: 10.1029/2018JB016517.
18. Perfettini, H., **W. B. Frank**, D. Marsan, and M. Bouchon (2019). Updip and along-strike aftershock migration model driven by afterslip: application to the 2011 Tohoku-Oki aftershock sequence. *Journal of Geophysical Research: Solid Earth*. DOI: 10.1029/2018JB016490.
17. **Frank, W. B.**, B. Rousset, C. Lasserre, and M. Campillo (2018). Revealing the cluster of slow transients behind a large slow slip event. *Science Advances*. DOI: 10.1126/sciadv.aat0661.
16. **Frank, W. B.**, N. M. Shapiro, and A. A. Gusev (2018). Progressive reactivation of the volcanic plumbing system beneath Tolbachik volcano (Kamchatka, Russia) revealed by long-period seismicity. *Earth and Planetary Science Letters*. DOI: 10.1016/j.epsl.2018.04.018.
15. Perfettini, H., **W. B. Frank**, D. Marsan, and M. Bouchon (2018). A model for migration of aftershocks driven by afterslip. *Geophysical Research Letters*. DOI: 10.1002/2017GL076287.
14. **Frank, W. B.** and R. E. Abercrombie (2018). Adapting the matched-filter search to a wide-aperture network: an aftershock sequence and an earthquake swarm in Connecticut. *Bulletin of the Seismological Society of America*. DOI: 10.1785/0120170190.
13. †Beaucé, E., **W. B. Frank**, and A. Romanenko (2017). Fast matched-filter (FMF): an efficient seismic matched-filter search for both CPU and GPU architectures. *Seismological Research Letters*. DOI: 10.1785/0220170181.
12. Rousset, B., M. Campillo, C. Lasserre, **W. B. Frank**, N. Cotte, A. Walpersdorf, A. Socquet, and V. Kostoglodov (2017). A geodetic matched-filter search for slow slip with application to the Mexico subduction zone. *Journal of Geophysical Research*. DOI: 10.1002/2017JB014448.
11. Lengliné, O., **W. B. Frank**, D. Marsan, and J.-P. Ampuero (2017). Imbricated slip rate processes during slow slip transients imaged by low-frequency earthquakes. *Earth and Planetary Science Letters*. DOI: 10.1016/j.epsl.2017.07.032.
10. **Frank, W. B.**, P. Poli, and H. Perfettini (2017). Mapping the rheology of the Central Chile subduction zone with aftershocks. *Geophysical Research Letters*. DOI: 10.1002/2016GL072288.
9. **Frank, W. B.** (2016). Slow slip hidden in the noise: the intermittence of tectonic release. *Geophysical Research Letters*. DOI: 10.1002/2016GL069537.
8. **Frank, W. B.**, N. M. Shapiro, A. L. Husker, V. Kostoglodov, and M. Campillo (2016). Repeating seismicity in the shallow crust modulated by transient stress perturbations. *Tectonophysics*. DOI: 10.1016/j.tecto.2016.09.003.
7. **Frank, W. B.**, N. M. Shapiro, A. L. Husker, V. Kostoglodov, A. A. Gusev, and M. Campillo (2016). The evolving interaction of low-frequency earthquakes during transient slip. *Science Advances*. DOI: 10.1126/sciadv.1501616.
6. Wu, C., R. A. Guyer, D. R. Shelly, D. Trugman, **W. B. Frank**, J. Gomberg, and P. A. Johnson (2015). Spatial-temporal variation of low-frequency earthquake bursts near Parkfield, California. *Geophysical Journal International*. DOI: 10.1093/gji/ggv194.

5. **Frank, W. B.**, M. Radiguet, B. Rousset, N. M. Shapiro, A. L. Husker, V. Kostoglodov, N. Cotte, and M. Campillo (2015a). Uncovering the geodetic signature of silent slip through repeating earthquakes. *Geophysical Research Letters*. DOI: 10.1002/2015GL063685.
4. **Frank, W. B.**, N. M. Shapiro, A. L. Husker, V. Kostoglodov, H. S. Bhat, and M. Campillo (2015). Along-fault pore-pressure evolution during a slow-slip event in Guerrero, Mexico. *Earth and Planetary Science Letters*. DOI: 10.1016/j.epsl.2014.12.051.
3. **Frank, W. B.**, N. M. Shapiro, A. L. Husker, V. Kostoglodov, A. Romanenko, and M. Campillo (2014). Using systematically characterized low-frequency earthquakes as a fault probe in Guerrero, Mexico. *Journal of Geophysical Research*. DOI: 10.1002/2014JB011457.
2. **Frank, W. B.** and N. M. Shapiro (2014). Automatic detection of low-frequency earthquakes (LFEs) based on a beamformed network response. *Geophysical Journal International*. DOI: 10.1093/gji/ggu058.
1. **Frank, W. B.**, N. M. Shapiro, V. Kostoglodov, A. L. Husker, M. Campillo, J. S. Payero, and G. A. Prieto (2013). Low-frequency earthquakes in the Mexican Sweet Spot. *Geophysical Research Letters*. DOI: 10.1002/grl.50561.

Submitted papers

3. †Aden-Antoniow, F., **W. B. Frank**, C. J. Chamberlain, J. Townend, and S. Bannister (in revision). Low-frequency earthquakes downdip of deep slow slip beneath the North Island of New Zealand. *Journal of Geophysical Research: Solid Earth*.
2. †Wang, Q.-Y., X. Cui, **W. B. Frank**, Y. Lu, T. Hirose, and K. Obara (in revision). Untangling the tectonic and environmental drivers of the ongoing earthquake swarm in Noto, Japan. *Science Advances*.
1. Münchmeyer, J., S. Giffard-Roisin, M. Malfante, **W. B. Frank**, P. Poli, D. Marsan, and A. Socquet (submitted). Deep learning detects uncataloged low-frequency earthquakes across regions. *Seismica*.

Papers in preparation

3. †Bryan, J. T., **W. B. Frank**, and P. Audet (in prep.). Coseismic rotation of the fault stress state beneath the 2019 M7.1 Ridgecrest earthquake.
2. †Maubant, L., E. †Denise, and **W. B. Frank** (in prep.). Removing fading signals from estimates of interseismic deformation. *Geophysical Journal International*.
1. †Maubant, L., **W. B. Frank**, M. Radiguet, E. Pathier, and S. Barbot (in prep.). The impact of slow slip on apparent plate coupling and seismic hazard.

Invited conference communications

11. **Frank, W. B.** (2023a). *What makes a low-frequency earthquake a low-frequency earthquake*. Invited speaker at Cargèse 2023 School on Subduction Zone Processes, France, 9–13 October.
10. **Frank, W. B.** (2023b). *Postseismic afterslip through the lens of aftershocks*. Invited speaker at Hugo Perfettini: a life in science, France, 11 May.
9. **Frank, W. B.** (2022). *The symptomatic spatiotemporal clustering of low-frequency earthquakes and tectonic tremor*. Keynote speaker at Statistical Seismology International Conference, Cargèse, France, 17–21 October.
8. **Frank, W. B.**, R. Jolivet, and P. Poli (2019). *The transient and intermittent nature of slow slip*. Invited abstract T53C-04 presented at 2019 Fall Meeting, AGU, San Francisco, CA 9–13 December.
7. **Frank, W. B.** (2019a). *Bridging the seismic-geodetic divide: multidisciplinary imaging of slow slip dynamics*. Plenary speaker at 2019 SAGE/GAGE Science Workshop, Portland, OR, 9–11 October.
6. **Frank, W. B.** (2019b). *Bridging the seismic-geodetic divide: multidisciplinary imaging of slow slip dynamics*. Keynote speaker at International Joint Workshop on Slow Earthquakes 2019, Sendai, Japan, 21–23 September.

5. **Frank, W. B.** and E. E. Brodsky (2018). *Bridging the observational slow earthquake spectrum*. Invited abstract presented at 12th Joint Meeting of United States-Japan Cooperative Program in Natural Resources Panel on Earthquake Research, Kumamoto, Japan, 24–26 October.
4. **Frank, W. B.**, B. Rousset, C. Lasserre, and M. Campillo (2017). *Revealing the cascade of slow transients behind a large slow slip event*. Invited abstract presented at JpGU-AGU Joint Meeting, Chiba, Japan, 20–25 May.
3. **Frank, W. B.**, N. M. Shapiro, M. Campillo, A. L. Husker, V. Kostoglodov, A. A. Gusev, M. Radiguet, B. Rousset, and N. Cotte (2016). *Pinpointing transient aseismic slip at depth with seismological observations*. Invited abstract presented at Chapman Conference on Slow Slip Phenomena, AGU, Ixtapa, Mexico 22–25 February.
2. **Frank, W. B.**, N. M. Shapiro, A. L. Husker, V. Kostoglodov, A. A. Gusev, and M. Campillo (2015). *Tectonic tremor and the collective behavior of low-frequency earthquakes*. Invited abstract T22C-01 presented at 2015 Fall Meeting, AGU, San Francisco, CA 14–18 December.
1. **Frank, W. B.**, M. Radiguet, B. Rousset, N. M. Shapiro, A. L. Husker, V. Kostoglodov, N. Cotte, and M. Campillo (2015b). *Exploring slow slip in Guerrero, Mexico through repeating earthquakes*. Invited abstract presented at Tectonic Tremor and Silent Seismicity Workshop, Mexico City, Mexico 25–27 February.

Invited seminars

40. Dept. of Earth and Environmental Sciences, University of Michigan (2024).
39. Dept. of Earth Sciences, University of California, Santa Barbara (2024).
38. Dept. of Earth Sciences, University of Southern California (2024).
37. Institute of Geophysics and Planetary Physics, University of California, San Diego (2024).
36. Seismological Laboratory, California Institute of Technology (2024).
35. Dept. of Civil and Environmental Engineering, Tufts University (2023).
34. Laboratoire de Géologie, École Normale Supérieure (2023).
33. Dept. of Geosciences, Princeton University (2022).
32. ERC TECTONIC/FEAR Seminars of Earthquake Physics (2021).
31. Institute for Geophysics, University of Texas at Austin (2021).
30. Ottawa-Carleton Geoscience Centre, University of Ottawa (2020).
29. Dept. of Earth Sciences, University of Southern California (2020).
28. Dept. of Earth and Planetary Sciences, University of Tokyo (2019).
27. Earthquake Research Institute, University of Tokyo (2019).
26. Institut des Sciences de la Terre, Université Grenoble Alpes (2019).
25. Dept. of Earth, Atmospheric, and Planetary Sciences, Massachusetts Institute of Technology (2019).
24. Berkeley Seismological Laboratory, University of California, Berkeley (2019).
23. Dept. of Earth Sciences, University of California, Riverside (2019).
22. Dept. of Earth, Planetary, and Space Sciences, University of California, Los Angeles (2018).
21. Geophysics Dept., Stanford University (2018).
20. Dept. of Earth and Planetary Sciences, University of California, Santa Cruz (2018).
19. Seismological Laboratory, California Institute of Technology (2018).
18. Institute of Geological and Nuclear Science (2017).
17. School of Geography, Environment and Earth Sciences, Victoria University of Wellington (2017).
16. Earthquake Research Institute, University of Tokyo (2017).
15. Dept. of Earth and Planetary Sciences, University of Tokyo (2017).
14. Dept. of Earth, Atmospheric, and Planetary Sciences, Massachusetts Institute of Technology (2017).

13. Dept. of Earth, Environmental, and Planetary Sciences, Brown University (2017).
12. Dept. of Earth Sciences, University of Southern California (2017).
11. Institut des Sciences de la Terre, Université Grenoble Alpes (2016).
10. Dept. of Earth and Planetary Sciences, Harvard University (2016).
9. Lamont-Doherty Earth Observatory, Columbia University (2016).
8. Berkeley Seismological Laboratory, University of California, Berkeley (2016).
7. Institut de Physique du Globe de Strasbourg, École et Observatoire des Sciences de la Terre (2016).
6. Instituto Geofísica, Universidad Nacional Autónoma de México (2016).
5. Earth Resources Laboratory, Massachusetts Institute of Technology (2015).
4. Dept. of Earth and Planetary Sciences, Georgia Institute of Technology (2015).
3. Institut de Physique du Globe de Strasbourg, École et Observatoire des Sciences de la Terre (2015).
2. Instituto Geofísica, Universidad Nacional Autónoma de México (2013).
1. Schlumberger Riboud Product Center (2012).

Advised awards and honors

2023	Hugo Ortiz	EAPS Molina Distinguished Postdoctoral Fellowship
2023	Jade Eyles	Marie Sklowdoska-Curie Postdoctoral Global Fellowship
2022	Caroline Mouchon	MathWorks Science Fellowship
2022	Ayako Tsuchiyama	Seismological Society of America Annual Meeting Travel Grant
2022	Jared Bryan	Seismological Society of America Global Travel Grant
2021	Jared Bryan	Student Presentation Award at the Annual Meeting of the Seismological Society of America

Current advised

Postdoctoral researchers

- Hugo Ortiz (since 2023)
- Jade Eyles (since 2023)
- Darien Florez (since 2024)

Graduate students

- Caroline Mouchon (PhD. since 2021)
- Ayako Tsuchiyama (Ph.D. since 2021)
- Jared Bryan (Ph.D. since 2020)

Past advised

Postdoctoral researchers

- Louise Maubant (from 2021 to 2023)
  Now Postdoctoral Researcher at the Australian National University
- Qingyu Wang (from 2020 to 2023)
  Now Postdoctoral Researcher at Institut des Science de la Terre
- Léonard Seydoux (2022)
  Now Maître de Conférences at Institut de Physique du Globe de Paris
- Florent Aden-Antoniow (from 2019 to 2021)
  Now R&D Data Scientist at GNS Science

Graduate students

- Emile Denise (M.Sc.) at Massachusetts Institute of Technology (2023 internship)

- Mathilde Wimez (M.Sc.) at Massachusetts Institute of Technology (from 2018 to 2022)
  Now a field technician at the Alaska Earthquake Center (since 2022)
- Yichen Geng (M.Sc.) at Harvard University (2021)
  Now a graduate student at Harvard University (since 2021)
- Caroline Mouchon (M.Sc.) at Institut des Sciences de la Terre (with Mathilde Radiguet; 2020)
  Now a graduate student at Massachusetts Institute of Technology (since 2021)
- Xiaoyu Bruce Zhou (Ph.D.) at University of Southern California (with Yehuda Ben-Zion; from 2018 to 2020)
- Camila Cesar (M.Sc.) at University of Southern California (2018)
  Now a graduate student at Universität Bern (since 2018)
- Gaspard Farge (M.Sc.) at Institut de Physique du Globe de Paris (with Nikolaï Shapiro; 2017)
  Now a postdoctoral associate at University of California, Santa Cruz (since 2022)
- Éric Beaucé (M.Sc.) at Institut des Sciences de la Terre (with Michel Campillo; 2015)
  Now a postdoctoral fellow at Lamont-Doherty Earth Observatory, Columbia University (since 2022)

Undergraduate students

- Rania Milki (2023)

Committee member

- Hongze Bo (Ph.D.) at Massachusetts Institute of Technology (advised by Oliver Jagoutz)
- Roos Verwijs (Ph.D.) at Massachusetts Institute of Technology (advised by Camilla Cattania)
- Yudong Sun (Ph.D.) at Massachusetts Institute of Technology (advised by Camilla Cattania)
- Hilary Chang (Ph.D.) at Massachusetts Institute of Technology (advised by Nori Nakata)
- Jing Jian (M.Sc.) at Massachusetts Institute of Technology (advised by Rob van der Hilst)
- Mariona Badenas Agusti (Ph.D) at Massachusetts Institute of Technology (advised by Sara Seager and Julien de Wit)
- Thomas Luckie (Ph.D.) at University of Southern California (advised by David Okaya)
- Haoran Meng (Ph.D. 2019) at University of Southern California (advised by Yehuda Ben-Zion)
- Yifang Cheng (Ph.D.) at University of Southern California (advised by Yehuda Ben-Zion)
- Malcolm White (Ph.D.) at University of Southern California (advised by Yehuda Ben-Zion)
- Feng Zhu (Ph.D.) at University of Southern California (advised by Julien Emile-Geay)

Departmental service

2023–	Faculty search committee
2023	Chair of MIT EAPS-WHOI geophysics retreat organizing committee
2022–	EAPS Council
2022–	Pre-thesis faculty mentor
2022–	Diversity, Equity, and Inclusion committee
2022–	Organizer of Geophysics seminar series
2019–2020	Computing committee (University of Southern California)
2018–2020	Graduate student review committee (University of Southern California)

2018–2019	Graduate student recruiting committee (University of Southern California)
2018–2019	Annual merit review committee (University of Southern California)
2016–2017	Organizer of FISH (Friday Informal Seminar Hour) seminar series at the Earth Resources Laboratory

Professional service

Member	AGU Honors Inge Lehmann Award committee (since 2022)
	Subduction Zones in 4D (SZ4D) Collective Impact committee (since 2022)
	SZNet (NSF AccelNet) Coordinating Committee (since 2024)
	2024 AGU Fall Meeting Program Committee (Seismology Section representative)
Representative	EarthScope Consortium
Associate Editor	Seismological Research Letters (since 2020)
Organizer	2023 Cargèse School on Subduction Zone Processes
Plenary Chair	2021 SAGE/GAGE Science Workshop
	2020 SAGE/GAGE Science Workshop (*postponed by COVID-19 pandemic*)
Convener	2022 SSA Annual Meeting
	2020 SSA Annual Meeting (*canceled by COVID-19 pandemic*)
	2019 SSA Annual Meeting
	2018 AGU Fall Meeting session T036
	2017 AGU Fall Meeting session S019
	2016 AGU Fall Meeting session S003
Review panelist	2022 National Aeronautics and Space Administration
	2022 National Science Foundation
	2021 National Science Foundation
	2018 U.S. Geological Survey
Reviewer	for many peer-reviewed scientific journals (including but not limited to *Science*, *Geophysical Research Letters*, *Science Advances*, and *Nature Geoscience*)
	for many scientific funding agencies, including the National Science Foundation, the U.S. Geological Survey, the International Ocean Drilling Program, Agence National de Recherche (France), the Marsden Fund Council – Royal Society Te Apārangi (New Zealand); the Earthquake Commission (New Zealand), the U.S.-Israel Binational Science Foundation, Agencia Nacional de Investigación y Desarrollo (Chile), and the Czech Science Foundation
	for Princeton University Press (textbook)

Professional associations

2014–present	Seismological Society of America
2012–present	American Geophysical Union