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Education

2000-2006 Massachusetts Institute of Technology (MIT), Cambridge, MA
Ph.D., June 2006 (Geophysics).

1996-2000 Rensselaer Polytechnic Institute (RPI), Troy, NY
B.S. *summa cum laude*, May 2000 (Geology with Physics minor).

Appointments

2017-present Professor, Department of Earth and Planetary Sciences, Yale University
2016-2017 Associate Professor, Department of Geology and Geophysics, Yale University
2009-2015 Assistant Professor, Department of Geology and Geophysics, Yale University
2009-2012 Visiting Investigator, Department of Terrestrial Magnetism (DTM; now Earth and Planets Laboratory), Carnegie Institution for Science
2006-2008 Postdoctoral associate/fellow, Carnegie Institution for Science
2000-2006 Graduate research and teaching assistant, MIT
1998-2000 Undergraduate research assistant, RPI Undergraduate Research Program
1998, 1999 Summer undergraduate research intern, University of Minnesota

Research Interests

- Observational seismology and mantle dynamics; imaging of seismic anisotropy
- Subduction zone dynamics and processes; subduction and the mantle flow field
- Structure and dynamics of the lowermost mantle and the core-mantle boundary region
- Structure, evolution, and deformation of the continental crust and mantle lithosphere

Honors and Recognition

2020 Finalist, Blavatnik National Awards for Young Scientists
2019 Graduate Mentor Award, Yale Graduate School of Arts and Sciences
2016 James B. Macelwane Medal, American Geophysical Union (AGU)
2016 Fellow, American Geophysical Union
2016-2017 EarthScope Distinguished Speaker
2015 Kavli Frontiers of Science Fellow, National Academy of Sciences
2012 NSF Faculty Early Career Development (CAREER) Award
2012 Outstanding Reviewer, Geophysical Journal International

2011-2013	Alfred P. Sloan Research Fellowship (Physics)
2010	Editors' Citation for Excellence in Refereeing, JGR-Solid Earth
2007-2008	Carnegie Postdoctoral Fellowship, DTM, Carnegie
2004	Award for Excellence in Teaching, EAPS Department, MIT
2003	Outstanding Student Paper Award, Seismology Section, AGU Fall Meeting
2000-2003	NSF Graduate Research Fellowship
2000	Joseph L. Rosenholtz Prize for outstanding work in earth sciences, RPI

Publications

(*denotes graduate advisee; **denotes undergraduate advisee; ^denotes postdoctoral advisee)

Citation statistics from Google Scholar: Total citations = 3888; h-index = 33; i10-index: 70.

I. Peer-Reviewed Papers

91. Lopes, E.** , **Long, M. D.**, Karabinos, P., Aragon, J., C., 2020. Shear wave splitting and upper mantle anisotropy beneath the southern New England Appalachians: Constraints from the dense SEISConn array. *Geochemistry, Geophysics, Geosystems*, 21, e2020GC009401, doi:10.1029/2020GC009401.
90. Gao, H., Yang, X., **Long, M. D.**, Aragon, J. C., 2020. Seismic evidence for crustal modification beneath the Hartford Rift Basin in the Northeastern United States. *Geophysical Research Letters*, 47, e2020GL089316, doi:10.1029/2020GL089316.
89. Wagner, L. S., Caddick, M., Kumar, A., Beck, S. L., **Long, M. D.**, 2020. Effects of oceanic crustal thickness on intermediate depth seismicity. *Frontiers in Earth Science*, 8, 244, doi:10.3389/feart.2020.00244.
88. **Long, M. D.**, Aragon, J. C., 2020. Probing the structure of the crust and mantle lithosphere beneath the southern New England Appalachians via the SEISConn deployment. *Seismological Research Letters*, 91, 2976-2986, doi:10.1785/0220200163.
87. **Long, M. D.**, Benoit, M. H., Evans, R. L., Aragon, J. C., Elsenbeck, J., 2020. The MAGIC experiment: A combined seismic and magnetotelluric deployment to investigate the structure, dynamics, and evolution of the central Appalachians. *Seismological Research Letters*, 91, 2960-2975, doi:10.1785/0220200150.
86. Lutz, K.** , **Long, M. D.**, Creasy, N.* , Deng, J.* , 2020. Seismic anisotropy in the lowermost mantle beneath North America from SKS-SKKS splitting intensity discrepancies. *Physics of the Earth and Planetary Interiors*, 305, 106504, doi:10.1016/j.pepi.2020.106504.
85. Tesoniero, A.^ , Leng, K., **Long, M. D.**, Nissen-Meyer, T., 2020. Full-wave sensitivity of SK(K)S phases to arbitrary anisotropy in the upper and lower mantle. *Geophysical Journal International*, 222, 412-435, doi:10.1093/gji/ggaa171.
84. Creasy, N.* , Miyagi, L., **Long, M. D.**, 2020. A library of elastic tensors for lowermost mantle anisotropy studies and comparison with seismic observations. *Geochemistry, Geophysics, Geosystems*, 21, e2019GC008883, doi:10.1029/2019GC008883.
83. Mondal, P.* , **Long, M. D.**, 2020. Strong seismic anisotropy in the deep upper mantle beneath the Cascadia backarc: Constraints from probabilistic finite-frequency SKS splitting intensity tomography. *Earth and Planetary Science Letters*, 539, 116172, doi:10.1016/j.epsl.2020.116172.
82. Servali, A.* , **Long, M. D.**, Park, J., Benoit, M. H., Aragon, J. C., 2020. Love-to-Rayleigh scattering across the Eastern North American Margin. *Tectonophysics*, 776, 228321, doi:10.1016/j.tecto.2020.228321.

81. Lynner, C., van Avendonk, H. J. A., Bécel, A., Christeson, G. L., Dugan, B., Gaherty, J. B., Harder, S., Hornbach, M. J., Lizzarralde, D., **Long, M. D.**, Magnani, M. B., Shillington, D. L., Aderhold, K., Eilon, Z. C., Wagner, L. S., 2020. The Eastern North American Margin Community Seismic Experiment: An amphibious active- and passive-source dataset. *Seismological Research Letters*, 91, 533-540, doi:10.1785/0220190142.
80. Reiss, M. C.[^], **Long, M. D.**, Creasy, N.*^{*}, 2019. Lowermost mantle anisotropy beneath Africa from differential splitting of SKS-SKKS phases. *Journal of Geophysical Research*, 124, 8540-8564, doi:10.1029/2018JB017160.
79. Wolf, J.**^{*}, Creasy, N.*^{*}, **Long, M. D.**, Pisconti, A., Thomas, C., 2019. An investigation of seismic anisotropy in the lowermost mantle beneath Iceland. *Geophysical Journal International*, 219, S152-S166, doi:10.1093/gji/ggz312.
78. Evans, R. L., Benoit, M. H., **Long, M. D.**, Elsenbeck, J., Ford, H. A., Zhu, J., Garcia, X., 2019. Thin lithosphere beneath the central Appalachian Mountains: A combined seismic and magnetotelluric study. *Earth and Planetary Science Letters*, 519, 308-316.
77. Byrnes, J., Bezada, M., **Long, M. D.**, Benoit, M. H., 2019. Thin lithosphere beneath the central Appalachian Mountains: Constraints from seismic attenuation beneath the MAGIC array. *Earth and Planetary Science Letters*, 519, 297-307.
76. **Long, M. D.**, Benoit, M. H., Aragon, J. C.**^{*}, King, S. D., 2019. Seismic imaging of mid-crustal structure beneath central and eastern North America: Possibly the elusive Grenville deformation? *Geology*, 47, 371-374, doi:10.1130/G46077.1.
75. Creasy, N.*^{*}, Pisconti, A., **Long, M. D.**, Thomas, C., Wookey, J., 2019. Constraining lowermost mantle anisotropy with body wave data sets: A synthetic modeling study. *Geophysical Journal International*, 217, 766-783, doi:10.1093/gji/ggz049.
74. Bar, N.*^{*}, **Long, M. D.**, Wagner, L. S., Beck, S. L., Zandt, G., Tavera, H., 2019. Receiver function analysis reveals layered anisotropy in the crust and upper mantle beneath Peru and Bolivia. *Tectonophysics*, 753, 93-110, doi:10.1016/j.tecto.2019.01.007.
73. Mondal, P.*^{*}, **Long, M. D.**, 2019. A model space search approach to finite-frequency SKS splitting intensity tomography in a reduced parameter space. *Geophysical Journal International*, 217, 238-256, doi:10.1093/gji/ggz016.
72. Bercovici, D., Mulyukova, E., **Long, M. D.**, 2018. A simple toy model for coupled retreat and detachment of subducting slabs. *Journal of Geodynamics*, doi:10.1016/j.jog.2018.03.002.
71. Bishop, B. T., Beck, S. L., Zandt, G., Wagner, L. S., **Long, M. D.**, Tavera, H., 2018. Foreland uplift during flat subduction: Insights from the Peruvian Andes and Fitzcarrald Arch. *Tectonophysics*, 731-732, 73-84, doi:10.1016/j.tecto.2018.03.005.
70. Levin, V., **Long, M. D.**, Skryzalin, P., Li, Y., López, I.**^{*}, 2018. Seismic evidence for a recently formed mantle upwelling beneath New England. *Geology*, 46, 87-90.
69. Aragon, J. C.**^{*}, **Long, M. D.**, Benoit, M. H., 2017. Lateral variations in SKS splitting across the MAGIC array, central Appalachians. *Geochemistry, Geophysics, Geosystems*, 18, 4136-4155, doi:10.1029/2017GC007169.
68. **Long, M. D.**, Ford, H. A.[^], Abrahams, L.**^{*}, Wirth, E. A., 2017. The seismic signature of lithospheric deformation beneath eastern North America due to Grenville and Appalachian orogenesis. *Lithosphere*, 9, 987-1001, doi:10.1130/L.660.1.

67. Creasy, N.*, **Long, M. D.**, Ford, H. A.[^], 2017. Deformation of the lowermost mantle beneath Australia from observations and models of seismic anisotropy. *Journal of Geophysical Research*, 122, 5243-5267, doi:10.1029/2016JB013901.
66. Bishop, B. T., Beck, S. L., Zandt, G., Wagner, L. S., **Long, M. D.**, Antonijevec, S. K., Kumar, A., Tavera, H., 2017. Causes and consequences of flat slab subduction in southern Peru. *Geosphere*, 13, 1392-1407. (Subduction Top to Bottom 2 special issue)
65. Deng, J.*, **Long, M. D.**, Creasy, N.*, Wagner, L. S., Beck, S. L., Zandt, G., Tavera, H., 2017. Lowermost mantle anisotropy near the eastern edge of the Pacific LLSVP: Constraints from SKS-SKKS splitting intensity measurements. *Geophysical Journal International*, 210, 774-786.
64. Scire, A., Zandt, G., Beck, S. **Long, M. D.**, Wagner, L., 2017. The deforming Nazca slab in the mantle transition zone and lower mantle: Constraints from teleseismic tomography on the deeply subducted slab between 6° and 32°S. *Geosphere*, 13, 665-680. (Subduction Top to Bottom 2 special issue)
63. Lynner, C.*, **Long, M. D.**, Thissen, C. J., Paczkowski, K., Montési, L. G. J., 2017. Evaluating geodynamic models for sub-slab anisotropy: Effects of olivine fabric type. *Geosphere*, 13, 247-259. (Subduction Top to Bottom 2 special issue)
62. **Long, M. D.**, 2017. The Field Experiences for Science Teachers (FEST) Project: Involving high school science teachers in field seismology. *Seismological Research Letters*, 88, 421-429.
61. Wirth, E. A.*, **Long, M. D.**, Moriarty, J. M., 2017. A Markov chain Monte Carlo with Gibbs sampling approach to the forward modeling of anisotropic receiver functions. *Geophysical Journal International*, 208, 10-23.
60. **Long, M. D.**, 2016. The Cascadia Paradox: Mantle flow and slab fragmentation in the Cascadia subduction system. *Journal of Geodynamics*, 102, 151-170.
59. Antonijevec, S. K., Wagner, L. S., Beck, S. L., **Long, M. D.**, Zandt, G., Tavera, H., 2016. Effects of change in slab geometry on the mantle flow and slab fabric in southern Peru, *Journal of Geophysical Research*, 121, doi:10.1029/2016JB013064.
58. Ford, H. A.[^], **Long, M. D.**, Wirth, E. A., 2016. Mid-lithospheric discontinuities and complex anisotropic layering in the mantle lithosphere beneath the Wyoming and Superior Provinces. *Journal of Geophysical Research*, 121, 6675-6697, doi:10.1029/2016JB012978.
57. **Long, M. D.**, Biryol, C. B., Eakin, C. M., Beck, S. L., Wagner, L. S., Zandt, G., Minaya, E., Tavera, H., 2016. Overriding plate, mantle wedge, slab, and sub-slab contributions to seismic anisotropy beneath the northern Central Andean Plateau. *Geochemistry, Geophysics, Geosystems*, 17, 2556-2575, doi:10.1029/2016GC006316.
56. Kumar, A., Wagner, L. S., Beck, S. L., **Long, M. D.**, Zandt, G., Young, B., Tavera, H., Minaya, E., 2016. Geometry and state of stress in the central and southern Peruvian flat slab. *Earth and Planetary Science Letters*, 441, 71-80.
55. Eakin, C. M.*, **Long, M. D.**, Scire, A., Beck, S. L., Wagner, L. S., Zandt, G., Tavera, H., 2016. Internal deformation of the subducted Nazca slab inferred from seismic anisotropy. *Nature Geoscience*, 9, 56-59.
54. **Long, M. D.**, Jackson, K. G.***, McNamara, J. F.***, 2016. SKS splitting beneath Transportable Array stations in eastern North America and the signature of past lithospheric deformation. *Geochemistry, Geophysics, Geosystems*, 17, 2-15, doi:10.1029/2015GC006088.
53. Scire, A., Zandt, G., Beck, S. L., **Long, M. D.**, Wagner, L. S., Minaya, E., Tavera, H., 2016. Imaging the transition from flat to normal subduction: Variations in the structure of the Nazca slab and upper

- mantle under southern Peru and northwestern Bolivia. *Geophysical Journal International*, 204, 457-479.
52. **Long, M. D.**, Lynner, C.*, 2015. Seismic anisotropy in the lowermost mantle near the Perm Anomaly. *Geophysical Research Letters*, 42, 7073-7080, doi:10.1029/2015GL065506.
 51. Antonijevic, S. K., Wagner, L. S., Kumar, A., Beck, S. L., **Long, M. D.**, Zandt, G., Tavera, H., Condori, C., 2015. The role of ridges in the formation and longevity of flat slabs. *Nature*, 532, 212-215.
 50. Ford, H. A.^, **Long, M. D.**, 2015. A regional test of global models for flow, rheology, and seismic anisotropy at the base of the mantle. *Physics of the Earth and Planetary Interiors*, 245, 71-75.
 49. Mohiuddin, A.* , **Long, M. D.**, Lynner, C.*, 2015. Mid-mantle seismic anisotropy beneath Southwestern Pacific subduction systems and implications for mid-mantle deformation. *Physics of the Earth and Planetary Interiors*, 245, 1-14.
 48. Ford, H. A.^, **Long, M. D.**, He, X.^, Lynner, C.*, 2015. Lowermost mantle flow along the eastern edge of the African Large Low Shear Velocity Province. *Earth and Planetary Science Letters*, 420, 12-22.
 47. Lynner, C.* , **Long, M. D.**, 2015. Heterogeneous seismic anisotropy in the transition zone and uppermost lower mantle beneath Japan, Izu-Bonin, and South America. *Geophysical Journal International*, 201, 1545-1552.
 46. Eakin, C. M.* , **Long, M. D.**, Wagner, L. S., Beck, S. L., Tavera, H., 2015. Upper mantle anisotropy beneath Peru from SKS splitting: Constraints on flat slab dynamics and interaction with the Nazca Ridge. *Earth and Planetary Science Letters*, 412, 152-162.
 45. Paczkowski, K.* , Thissen, C. J., **Long, M. D.**, Montési, L. G. J., 2014. Deflection of mantle flow beneath subducting slabs and the origin of sub-slab anisotropy. *Geophysical Research Letters*, 41, 6734-6742, doi:10.1002/2014GL060914.
 44. Paczkowski, K.* , Montési, L. G. J., **Long, M. D.**, Thissen, C. J., 2014. Three-dimensional flow in the sub-slab mantle. *Geochemistry, Geophysics, Geosystems*, 15, 3989-4008, doi:10.1002/2014GC005441.
 43. Lynner, C.* , **Long, M. D.**, 2014. Testing models of sub-slab anisotropy using a global compilation of source-side shear wave splitting data. *Journal of Geophysical Research*, 119, 7226-7244, doi:10.1002/2014JB010983.
 42. Bercovici, D., **Long, M. D.**, 2014. Slab rollback instability and supercontinent dispersal. *Geophysical Research Letters*, 41, 6659-6666, doi:10.1002/2014GL061251.
 41. Wirth, E. A.* , **Long, M. D.**, 2014. A contrast in anisotropy across mid-lithospheric discontinuities beneath the central United States - A relic of craton formation. *Geology*, 42, 851-854.
 40. Lynner, C.* , **Long, M. D.**, 2014. Sub-slab anisotropy beneath the Sumatra and circum-Pacific subduction zones from source-side shear wave splitting observations. *Geochemistry, Geophysics, Geosystems*, 15, 2262-2281, doi:10.002/2014GC005239.
 39. Lynner, C.* , **Long, M. D.**, 2014. Lowermost mantle anisotropy and deformation along the boundary of the African LLSVP. *Geophysical Research Letters*, 41, 3447-3454, doi:10.1002/2014GL059875.
 38. Eakin, C. M.* , **Long, M. D.**, Beck, S. L., Wagner, L. S., Tavera, H., Condori, C., 2014. Response of the mantle to flat slab evolution: Insights from local S splitting beneath Peru. *Geophysical Research Letters*, 41, 3438-3446, doi:10.1002/2014GL059943.
 37. Benoit, M. H., **Long, M. D.**, King, S. D., 2013. Anomalously thin transition zone and apparently isotropic upper mantle beneath Bermuda: Evidence for upwelling. *Geochemistry, Geophysics, Geosystems*, 14, 4282-4291, doi:10.1002/ggge.20277.

36. Wagner, L. S., **Long, M. D.**, 2013. Distinctive upper mantle anisotropy beneath the High Lava Plains and Eastern Snake River Plain, Pacific Northwest, USA. *Geochemistry, Geophysics, Geosystems*, 14, 4647-4666, doi:10.1002/ggge.20275.
35. Eakin, C. M.*, **Long, M. D.**, 2013. Complex anisotropy beneath the Peruvian flat-slab from frequency-dependent, multiple-phase shear wave splitting analysis. *Journal of Geophysical Research*, 118, 4794-4813, doi:10.1002/jgrb.50349.
34. Wagner, L. S., Fouch, M. J., James, D. E., **Long, M. D.**, 2013. The role of hydrous phases in the formation of trench parallel anisotropy: Evidence from Rayleigh waves in Cascadia. *Geophysical Research Letters*, 40, 2642-2646, doi:10.1002/grl.50525.
33. **Long, M. D.**, 2013. Constraints on subduction geodynamics from seismic anisotropy. *Reviews of Geophysics*, 51, 76-112, doi:10.1002/rog.20008.
32. McCormack, K.** , Wirth, E. A.* , **Long, M. D.**, 2013. B-type olivine fabric and mantle wedge serpentinization beneath the Ryukyu arc. *Geophysical Research Letters*, 40, 1697-1702, doi:10.1002/grl.50369.
31. **Long, M. D.**, Wirth, E. A.* , 2013. Mantle flow in subduction systems: The mantle wedge flow field and implications for wedge processes. *Journal of Geophysical Research*, 118, 583-606, doi:10.1002/jgrb.50063.
30. Lynner, C.* , **Long, M. D.**, 2013. Sub-slab seismic anisotropy and mantle flow beneath the Caribbean and Scotia subduction zones: Effects of slab morphology and kinematics. *Earth and Planetary Science Letters*, 361, 367-378.
29. **Long, M. D.**, Till, C., Druken, K. A., Carlson, R. W., Wagner, L. S., Fouch, M. J., James, D. E., Grove, T. L., Schmerr, N., Kincaid, C., 2012. Mantle dynamics beneath the Pacific Northwest and the generation of voluminous back-arc volcanism. *Geochemistry, Geophysics, Geosystems*, 13, Q0AN01, doi:10.1029/2012GC004189.
28. Wirth, E. A.* , **Long, M. D.**, 2012. Multiple layers of seismic anisotropy and a low-velocity region in the mantle wedge beneath Japan: Evidence from teleseismic receiver functions. *Geochemistry, Geophysics, Geosystems*, 13, Q08005, doi:10.1029/2012GC004180.
27. Wagner, L. S., **Long, M. D.**, Johnston, M. D.** , Benoit, M. H., 2012. Lithospheric and asthenospheric contributions to shear-wave splitting observations in the southeastern United States. *Earth and Planetary Science Letters*, 341-344, 128-138.
26. Lynner, C.* , **Long, M. D.**, 2012. Evaluating contributions to SK(K)S splitting from lower mantle anisotropy: A case study from station DBIC, Côte d'Ivoire. *Bulletin of the Seismological Society of America*, 102, 1030-1040.
25. Hanna, J.* , **Long, M. D.**, 2012. SKS splitting beneath Alaska: Regional variability and implications for subduction processes at a slab edge. *Tectonophysics*, 530-531, 272-285.
24. Becker, T. W., Lebedev, S., **Long, M. D.**, 2012. On the relationship between azimuthal anisotropy from shear wave splitting and surface wave tomography. *Journal of Geophysical Research*, 117, B01306, doi:10.1029/2011JB008705.
23. He, X.^ , **Long, M. D.**, 2011. Lowermost mantle anisotropy beneath the northwestern Pacific: Evidence from PcS, ScS, SKS, and SKKS phases. *Geochemistry, Geophysics, Geosystems*, 12, Q12012, doi:10.1029/2011GC003779.
22. Johnston, M. D.** , **Long, M. D.**, Silver, P. G., 2011. State of stress and age offsets at oceanic fracture zones and implications for the initiation of subduction. *Tectonophysics*, 512, 47-59.

21. Druken, K. A., **Long, M. D.**, Kincaid, C., 2011. Patterns in seismic anisotropy driven by slab rollback beneath the High Lava Plains. *Geophysical Research Letters*, 38, L13310, doi:10.1029/2011GL047541.
20. Silver, P. G., **Long, M. D.**, 2011. The non-commutivity of shear wave splitting operators at low frequencies and implications for anisotropy tomography. *Geophysical Journal International*, 184, 1415-1427.
19. Foley, B. J.*, **Long, M. D.**, 2011. Upper and mid-mantle anisotropy beneath the Tonga slab. *Geophysical Research Letters*, 38, L02303, doi:10.1029/2010GL046021.
18. **Long, M. D.**, Benoit, M. H., Chapman, M. C., King, S. D., 2010. Upper mantle anisotropy and transition zone thickness beneath southeastern North America and implications for mantle dynamics. *Geochemistry, Geophysics, Geosystems*, 11, Q10012, doi:10.1029/2010GC003247.
17. **Long, M. D.**, 2010. Frequency-dependent shear wave splitting and heterogeneous anisotropic structure beneath the Gulf of California region. *Physics of the Earth and Planetary Interiors*, 182, 59-72.
16. **Long, M. D.**, Becker, T. W., 2010. Mantle dynamics and seismic anisotropy. *Earth and Planetary Science Letters*, 297, 341-354 (Frontiers article).
15. Wirth, E.*, **Long, M. D.**, 2010. Frequency-dependent shear wave splitting beneath the Japan and Izu-Bonin subduction zones. *Physics of the Earth and Planetary Interiors*, 181, 141-154.
14. **Long, M. D.**, Gao, H., Klaus, A.**, Wagner, L. S., Fouch, M. J., James, D. E., Humphreys, E. D., 2009. Shear wave splitting and the pattern of mantle flow beneath eastern Oregon. *Earth and Planetary Science Letters*, 288, 359-369.
13. **Long, M. D.**, Silver, P. G., 2009. Mantle flow in subduction systems: The sub-slab flow field and implications for mantle dynamics. *Journal of Geophysical Research*, 114, B10312, doi:10.1029/2008JB006200.
12. **Long, M. D.**, Silver, P. G., 2009. Shear wave splitting and mantle anisotropy: Measurements, interpretations, and new directions. *Surveys in Geophysics*, 30, 407-461.
11. **Long, M. D.**, 2009. Complex anisotropy in D" beneath the eastern Pacific from SKS-SKKS splitting discrepancies. *Earth and Planetary Science Letters*, 283, 181-189.
10. **Long, M. D.**, Silver, P. G., 2008. The subduction zone flow field from seismic anisotropy: A global view. *Science*, 319, 315-318.
9. Kneller, E. A., **Long, M. D.**, van Keken, P. E., 2008. Olivine fabric transitions and shear-wave anisotropy in the Ryukyu subduction system. *Earth and Planetary Science Letters*, 268, 268-282.
8. **Long, M. D.**, de Hoop, M. V., van der Hilst, R. D., 2008. Wave-equation shear wave splitting tomography. *Geophysical Journal International*, 172, 311-330.
7. **Long, M. D.**, Hager, B. H., de Hoop, M. V., van der Hilst, R. D., 2007. Two-dimensional modeling of subduction zone anisotropy with application to southwestern Japan. *Geophysical Journal International*, 170, 839-856.
6. Lev, E., **Long, M. D.**, van der Hilst, R. D., 2006. Seismic anisotropy in eastern Tibet from shear-wave splitting reveals changes in lithospheric deformation. *Earth and Planetary Science Letters*, 251, 293-304.
5. **Long, M. D.**, Xiao, X., Jiang, Z., Evans, B., Karato, S.-i., 2006. Lattice preferred orientation in deformed polycrystalline (Mg,Fe)O and implications for seismic anisotropy in D". *Physics of the Earth and Planetary Interiors*, 156, 75-88.

4. **Long, M. D.**, van der Hilst, R. D., 2006. Shear wave splitting from local events beneath the Ryukyu arc: Trench-parallel anisotropy in the mantle wedge. *Physics of the Earth and Planetary Interiors*, 155, 300-312.
3. **Long, M. D.**, van der Hilst, R. D., 2005. Estimating shear wave splitting parameters from broadband recordings in Japan: A comparison of three methods. *Bulletin of the Seismological Society of America*, 95, 1346-1358.
2. **Long, M. D.**, van der Hilst, R. D., 2005. Upper mantle anisotropy beneath Japan from shear wave splitting. *Physics of the Earth and Planetary Interiors*, 151, 206-222.
1. McCaffrey, R., **Long, M. D.**, Goldfinger, C., Zwick, P. C., Nabelek, J. L., Johnson, C. K., Smith, C., 2000. Rotation and plate locking at the southern Cascadia subduction zone, *Geophysical Research Letters*, 27, 3117-3120.

II. Manuscripts in Review/Revision

- R1. Yu, S., Garnero, E. J., Shim, S.-H., Li, M., Ko, B., Thorne, M. S., Zhao, C., **Long, M. D.**, Wolf, J.*, 2020. Ultra-high velocity zones at Earth's core-mantle boundary. Manuscript in revision.

III. Manuscripts in Preparation

- P6. Creasy, N.*, Pisconti, A., **Long, M. D.**, Thomas, C., 2021. Modeling of seismic anisotropy observations reveals plausible lowermost mantle flow directions beneath Siberia. In preparation for *Geophysical Research Letters*.
- P5. Borden, S.**, **Long, M. D.**, 2021. Application of probabilistic finite-frequency SKS splitting intensity tomography: Examples and pitfalls. In preparation for *Bulletin of the Seismological Society of America*.
- P4. Luo, Y.*, **Long, M. D.**, Karabinos, P., Kuiper, Y., Rondenay, S., Aragon, J. C., 2021. High-resolution Ps receiver function imaging of the crust and mantle lithosphere beneath the Southern New England Appalachians. In preparation for *Journal of Geophysical Research*.
- P3. Wolf, J.*, **Long, M. D.**, Nissen-Meyer, T., Leng, K., 2021. Full-wave sensitivity of SKS, SKKS, and ScS phases to variable anisotropy in the lowermost mantle. In preparation for *Geophysical Journal International*.
- P2. Mittal, V.*, **Long, M. D.**, et al., 2021. Evidence for partial melt in the uppermost mantle beneath the Central Appalachian Anomaly. In preparation for *Journal of Geophysical Research*.
- P1. **Long, M. D.**, Wagner, L. S., Evans, R. L., King, S. D., Mazza, S. E., Byrnes, J. S., Gazel, E., Johnson, E. A., Kirby, E., Bezada, M., Aragon, J. C., Liu, S., Miller, S., 2021. Evaluating models for lithospheric loss and intraplate volcanism beneath the Central Appalachian Mountains. In preparation for *Journal of Geophysical Research*.

IV. Other Contributions (non-peer reviewed)

- O11. Adams, A., **Long, M. D.**, 2020. Pairing community seismic experiments with seismic community development. *GeoPRISMS Newsletter*, submitted.
- O10. **Long, M. D.**, 2017. Review of Geophysical Data Analysis: Discrete Inverse Theory (Matlab Edition), Third Edition, by William Menke. *American Mineralogist*, 102, 321. (Book review)
- O9. **Long, M. D.**, 2016. Hooper, Long, Nishimura, Sluijs, and Villarini receive 2016 James B. Macelwane medals, *Eos*, 97, doi:10.1029/2016EO064061. (Response to citation)

- O8. Constable, C. G., Masters, T. G., Buffet, B., Day, J. M. D., Hirschmann, M., Karato, S.-i., Kellogg, L., **Long, M. D.**, Mao, W., 2016. Cooperative Studies of the Earth's Deep Interior: Understanding the origin and evolution of our planet through interdisciplinary research. Report to the National Science Foundation, available at csedi.org/2016_Report.
- O7. **Long, M. D.**, 2015. How mountains get made. *Science*, 349, 687-688. (Perspectives article)
- O6. Bécel, A., Benoit, M. H., **Long, M. D.**, Wagner, L. S., 2015. Eastern North American Margin (ENAM) Community Seismic Experiment (CSE) Broadband OBS recovery, *R/V Endeavor*, Cruise Report EN-552.
- O5. **Long, M. D.**, Levander, A., Shearer, P. M., 2014. An introduction to the special issue of Earth and Planetary Science Letters on USArray science. *Earth and Planetary Science Letters*, 402, 1-5, doi:10.1016/j.epsl.2014.06.016.
- O4. **Long, M. D.**, Levin, V., 2014. USArray reaches the East Coast. *InSights, the EarthScope Newsletter*, Winter 2014, pp. 1-2.
- O3. **Long, M. D.**, 2010. How are Earth's internal boundaries affected by dynamics, temperature, and composition? In: Facilitating New Discoveries in Seismology and Exploring the Earth: The Next Decade, IRIS Core Proposal, Vol. II, pp. 17-19.
- O2. **Long, M. D.**, 2009. Going with the mantle flow. *Nature Geoscience*, 2, 10-11. (News and Views article)
- O1. **Long, M. D.**, 2006. Anisotropy and deformation in the Earth's mantle: Seismological observations, geodynamical models, and laboratory experiments. Ph.D. Thesis, Massachusetts Institute of Technology, Cambridge, MA. Thesis supervisor: Rob van der Hilst.

Student and Postdoctoral Supervision

I. Postdoctoral Advisees

Past postdoctoral advisees at Yale:

- Dr. Miriam Reiss (2018; six-month postdoctoral scholarship from Germany)
Current position: Postdoctoral researcher, Goethe University, Frankfurt
- Dr. Andrea Tesoniero (2017-2018)
- Dr. Heather Ford (2013-2016)
Current position: Assistant Professor, University of California, Riverside
- Dr. Xiaobo He (2010-2012)
Current position: Assistant Professor, Zhejiang University

II. Graduate Advisees

Current graduate advisees at Yale:

- Puskar Mondal (Ph.D. expected 2021) – co-advisor (with Jun Korenaga)
- Yantao Luo (Ph.D. expected 2024) – primary advisor
- Jonathan Wolf (Ph.D. expected 2024) – primary advisor
- Anne Haws (Ph.D. expected 2024) – second discourse advisor

Past graduate advisees at Yale (primary advisees only):

- Neala Creasy (Ph.D. 2019)
Current position: NSF Postdoctoral Fellow, Colorado School of Mines
- Andrea Servali (M.S. 2018)
Current position: Data analyst intern, Edmodo
- Colton Lynner (Ph.D. 2015)
Current position: Assistant Professor, University of Delaware

- Caroline Eakin (Ph.D. 2015)
Current position: Research Fellow (tenure track), Australian National University
- Erin Wirth (Ph.D. 2014)
Current position: Research Geophysicist, United States Geological Survey
- Karen Paczkowski (Ph.D. 2012) – (with Dave Bercovici & Mark Brandon)
Current position: AAAS Executive Branch Fellow, National Science Foundation
- Jenny Hanna (M.S. 2011)
Current position: Solicitor, Cambridge, UK

Ph.D. thesis committee membership (excluding advisees):

- Sarah Arveson (Ph.D. 2020), Yale
- Jie Deng (Ph.D. 2019), Yale
- Anwar Mohiuddin (Ph.D. 2018), Yale
- Helen Janiszewski (Ph.D. 2017), Columbia University
- Zhen Liu (Ph.D. 2017), Yale
- Xiaojun Chen (Ph.D. 2017), Yale
- Alexandra Goryaeva (Ph.D. 2016), Université Lille 1, Lille, France
- Christopher Thissen (Ph.D. 2016), Yale
- Bradford Foley (Ph.D. 2014), Yale
- Tolulope Olugboji (Ph.D. 2014), Yale
- Duayne Rieger (Ph.D. 2014), Yale
- Saphala Karallyadda (Ph.D. 2014), Victoria University, Wellington, NZ

III. Undergraduate Research Advisees

Current undergraduate advisees:

- Raymond Zhao (Yale College '22) – research advisor, fall 2020-present

Past undergraduate advisees (*indicates co-authorship of a peer-reviewed paper):

- Ethan Lopes* (Williams College) – internship advisor and senior thesis co-advisor, 2019-2020
- Brian Zhu (Yale College '21) – research advisor, 2019-2020
- Katherine Lutz* (Yale College '20) – research advisor, 2017-2020
- Samuel Borden (Yale College '20) – research advisor for PHYS471, Independent Projects in Physics, 2018-2019 academic year, and 2019-2020
- Daniel Allen (Highline Community College) – internship advisor at Yale, summer 2019
- Emily Chu (Yale College '19) – senior essay advisor, spring 2019
- Jonathan Wolf* (University of Muenster) – internship advisor at Yale, fall 2017-winter 2018
- Juan Aragon* (Yale College '17) – research and senior thesis advisor, 2014-2017
- Kenneth Jackson* (Yale College '17) – research advisor, summer 2014 and 2015-2016
- Eric Fein (Yale College '16) – research and senior thesis advisor, 2013-2016
- Ivette López* (Yale College '16) – senior essay advisor, 2015-2016
- Lauren Abrahams* (IRIS intern), internship co-advisor at Yale, summer 2015
- Leah Campbell (Yale College '15) – research/senior essay advisor, 2012-2015
- XinXin Xu (Yale College '16) – senior essay advisor, fall 2014-2015
- John McNamara* (Yale College '17) – research advisor, summer 2014
- Daniel Petkevich (Yale College '12) – senior essay advisor (Physics), spring 2012
- Kimberly McCormack* (IRIS intern), internship co-advisor at Yale, summer 2011
- Mignon Johnston* (2008 summer intern), Carnegie Institution – research advisor
- Erin Wirth* (2008 summer intern), Carnegie Institution – research advisor
- Amanda Klaus* (2007 summer intern), Carnegie Institution – research co-advisor

Teaching History

(All at Yale University)

Forensic Geoscience (G&G240) [2010(F), 2012(F), 2015(S), 2018(S), 2019(S), 2021(S)]

- Undergraduate seminar course covering the applications of geophysical and geochemical methods to criminal, historical, and archeological investigations. Average enrollment: 15 students.

Introduction to Seismology (G&G456/556) [2013(S), 2014(F), 2017(S), 2018(F), 2020(F)]

- Advanced undergraduate and graduate course covering earthquakes and seismic waves, P and S waves, surface waves and free oscillations, remote sensing of Earth's interior and faulting mechanisms. Average enrollment: 8 students.

Natural Disasters (G&G100) [2013(F), 2015 (F), 2017(F), 2019(F)]

- Natural events and their impact on humanity and the built environment. Earthquakes, volcanoes, tsunamis, landslides, coastal flooding, tornadoes, hurricanes, and meteoritic impacts. Hazard mitigation strategies. Consequences of global warming. Average enrollment: 140 students.

Regional Perspectives on Global Geoscience (G&G370/757) [2017(S)]

- Reading seminar in preparation for two-week G&G department field trip to Japan in June 2017. Enrollment: 17 students.

Seminar in Mantle and Core Processes (G&G744) [2009(F), 2012(F), 2014(F)]

- Graduate reading seminar on the core-mantle boundary and D'' region (F09), results from the EarthScope project (F12), and structure and dynamics of the transition zone and lower mantle (F14). Average enrollment: 13 students.

Physics and Phenomenology of Subduction (G&G640) [2010(S)]

- Graduate seminar course on subduction zone processes. Enrollment: 6 students.

Observational Seismology (G&G558) [2009(F)]

- Graduate course on techniques used in global seismology, including theory and application of common analysis methods and current research topics. Included one week of field seismology experience in eastern Oregon. Enrollment: 5 students.

Invited Talks and Seminars

(Past five years only; *indicates EarthScope Speaker Series talk)

December 2020 - Special seminar, Michigan State University (via zoom)

November 2020 - Geophysics & Tectonics talk, Oklahoma State University (via zoom)

November 2020 - Geological Society of Connecticut Annual Meeting, keynote talk (via zoom)

October 2020 - Geological Society of America Annual Meeting, two invited talks (via zoom)

October 2020 - SSA Eastern Section Meeting, invited talk (via zoom)

September 2020 - COMPRES Keynote Lecture (via zoom)

June 2020 - University of Kentucky Online Geophysics & Tectonics (G&T) Seminar (via zoom)

June 2020 - Seismology/tectonics seminar, University of California, Los Angeles (via zoom)

May 2020 - Geophysics seminar, Karlsruhe Institute of Technology (via zoom)

March 2020 - Geosciences department seminar, Williams College

January 2020 - MG&G seminar, Graduate School of Oceanography, University of Rhode Island

November 2019 - Deep Earth Mini Symposium, invited talk, Universität Münster, Germany

November 2019 - Geophysics seminar, Bullard Laboratories, University of Cambridge, UK

September 2019 - Van Tuyl lecture, Department of Geology, Colorado School of Mines

July 2019 - Keynote, Earth and Planetary Interiors summer school, SUSTech, Shenzhen, China
 March 2019 - Earth and Environmental Sciences department seminar, Lehigh University
 February 2019 - Geophysics department seminar, Stanford University
 December 2018 - American Geophysical Union Fall Meeting, invited talk
 October 2018 - Earth and Space Sciences department seminar, West Chester University
 September 2018 - Earth Sciences department seminar, Southern Methodist University
 September 2018 - Earth, Atmospheric, and Planetary Sciences Department Lecture, MIT
 July 2018 - Instructor, CIDER summer school on deep Earth heterogeneity, UCSB
 June 2018 - Canadian Geophysical Union Joint Meeting, invited talk
 May 2018 - Geological Sciences departmental seminar, Binghamton University
 April 2018 - Earth and Atmospheric Sciences colloquium, Indiana University
 January 2018 - Rutgers Geology Museum Open House lecture*
 January 2018 - Edwin Allday Distinguished Lecture, University of Texas at Austin
 December 2017 - American Geophysical Union Fall Meeting, two invited talks
 November 2017 - Yale Forest Forum Seminar, School of Forestry and Environmental Studies
 October 2017 - Geological Society of America Annual Meeting, invited talk
 October 2017 - Earth and Environmental Sciences colloquium, Wesleyan University
 May 2017 - EarthScope National Meeting, invited keynote talk
 March 2017 - Virtual guest lecture, mantle plumes seminar, Colgate University
 February 2017 - Earth and Planetary Science department seminar, UC Berkeley
 February 2017 - Earth and Environmental Sciences department seminar, U. of Kentucky*
 January 2017 - Math+X seismology and mathematics symposium, Rice University, invited talk
 December 2016 - American Geophysical Union Fall Meeting, two invited talks
 December 2016 - CIDER pre-AGU kickoff workshop, keynote talk, Berkeley, CA
 November 2016 - Earth Sciences seminar, University of Southern California*
 November 2016 - Special geophysics seminar, University of Oxford, Oxford, UK
 November 2016 - Special geophysics seminar, Universität Münster, Münster, Germany
 October 2016 - Seismological Society of America Eastern Section Meeting, invited talk
 October 2016 - Geology Colloquium, West Virginia University*
 October 2016 - Earth and Planetary Science Colloquium, McGill University*
 2006 – 2015 - Approximately 45 invited talks, seminars, and departmental colloquia

Funding History

I. Ongoing sponsored projects

- NSF-Geophysics, “Collaborative Research: Towards improved imaging of the outermost core through determination of the effects of lowermost mantle heterogeneity and anisotropy.” Lead PI: Ed Garnero (ASU), additional PIs: Ebru Bozdog (Colorado School of Mines), Dan Frost (UC Berkeley), **Maureen Long** (Yale University). Project duration: 9/1/20-8/31/23 (36 months). Yale budget: \$204,973.
- NSF-Geophysics, “New approaches to shear wave splitting tomography.” PI: **Maureen Long** (Yale University). Project duration: 2/1/19 – 1/31/22 (36 months). Budget: \$331,275.
- NSF-Geophysics/EarthScope, “Modification of lithospheric structure via subduction, terrane accretion, and rifting: A case study beneath Connecticut.” PI: **Maureen Long** (Yale University). Project duration: 6/15/18 – 6/14/21 (36 months). Budget: \$385,235.

II. Completed sponsored projects

- NSF-Geophysics, “Constraining lowermost mantle flow through observations and models of seismic anisotropy.” PI: **Maureen Long** (Yale University). Project duration: 6/1/16-5/31/19 (36 months), with no cost extension to 5/31/20. Budget: \$269,934.
- NSF-EarthScope/GeoPRISMS, “Collaborative Research: Mantle dynamics, lithospheric structure, and topographic evolution of the southeastern US continental margin.” Lead PI: **Maureen Long** (Yale University); additional PIs: Margaret Benoit (The College of New Jersey), Scott King (Virginia Tech), and Eric Kirby (Oregon State). Project duration: 5/1/13-4/30/16 (36 months), with subaward and extension to 4/30/19. Yale budget: \$197,766, plus \$82,740 subaward from TCNJ.
- NSF-Geophysics, “CAREER: Geodynamics of subducting slabs in the Earth’s deep mantle from seismic anisotropy.” PI: **Maureen Long** (Yale University). Project duration: 4/1/12-3/31/17 (60 months), no cost extension to 9/30/17. Budget: \$539,932.
- NSF-EarthScope, “Anisotropic properties of the mid-lithospheric discontinuity beneath central and eastern North America.” PI: **Maureen Long** (Yale University). Project duration: 9/1/14-8/31/16 (24 months). Budget: \$161,237.
- NSF-GeoPRISMS, “Collaborative Research: A community seismic experiment targeting the pre-, syn-, and post-rift evolution of the Mid Atlantic US margin.” Lead PI: Harm van Avendonk (University of Texas at Austin); additional PIs: Anne Bécel (Lamont-Doherty Earth Observatory), Margaret Benoit (The College of New Jersey) Gail Christeson (University of Texas at Austin), Brandon Dugan (Rice University), James Gaherty (Lamont-Doherty Earth Observatory), Steven Harder (University of Texas at El Paso), Matthew Hornbach (Southern Methodist University), Daniel Lizzeralde (Woods Hole Oceanographic Institution), **Maureen Long** (Yale University) Maria Beatrice Magnani (University of Memphis), and Donna Shillington (Lamont-Doherty Earth Observatory). Project duration: 8/15/13-8/14/16 (36 months). Yale budget: \$27,349.
- NSF-Geophysics, “Collaborative Research: Study of the Peruvian flat slab and its effects on the continental lithosphere.” Lead PI: Lara Wagner (University of North Carolina); additional PIs: Susan Beck (University of Arizona), **Maureen Long** (Yale University). Project duration: 8/1/10-7/31/14 (48 months). Yale budget: \$160,936.
- NSF-Geophysics, “Collaborative Research: A global examination of the subduction zone flow field from seismic anisotropy.” Lead PI: **Maureen Long** (Yale University); additional PIs: Chris Kincaid (University of Rhode Island), Laurent Montési (University of Maryland). Project duration: 10/1/09 – 9/30/12 (36 months), no cost extension to 9/30/13. Yale budget: \$141,109.
- Alfred P. Sloan Research Fellowship. Field: Physics. Awardee: **Maureen Long** (Yale University). Project duration: 9/15/11-9/14/13 (24 months). Budget: \$50,000.

Field and Seagoing Experience

- PI, New England Seismic Transect (NEST) – deployment of ~20 broadband seismometers across Massachusetts, Vermont, and New Hampshire (with Vadim Levin; 2018-present).
- PI, Seismic Experiment for Imaging Structure beneath Connecticut (SEISConn) – deployment of 15 broadband seismometers across northern CT (2015-2019). *Data set is archived at the IRIS Data Management Center and will be publicly available in 2021; doi:10.7914/SN/XP_2015.*
- Co-leader of undergraduate field trips to the Caribbean (Dominica/Martinique), Hawaii (Big Island), the Azores (São Miguel/Pico/Faial/Terceira) and the Appalachians (Virginia/West Virginia) for G&G100 (Natural Disasters) class (March 2010, March 2012, March 2016, March 2018, March 2020).

- Faculty leader of two-week Yale G&G departmental field trip for graduate students to Japan, June 2017.
- PI, Mid-Atlantic Geophysical Integrative Collaboration (MAGIC) – deployment of 28 broadband seismometers across the mid-Atlantic Appalachians as part of the USArray Flexible Array (with Margaret Benoit; 2013-2016). *Data set is archived at the IRIS Data Management Center and is publicly available; doi:10.7914/SN/7A_2013.*
- Co-chief scientist, R/V Endeavor, Eastern North American Margin Community Seismic Experiment (ENAM CSE), broadband ocean bottom seismometer recovery cruise, spring 2015. *Data set is archived at the IRIS Data Management Center and is publicly available; doi:10.7914/SN/YO_2014.*
- PI, Peru Lithosphere and Slab Experiment (PULSE) – deployment of 40 broadband seismometers above the flat slab in Peru (with Lara Wagner and Susan Beck; 2010-2013). *Data set is archived at the IRIS Data Management Center and is publicly available; doi:10.7914/SN/ZD_2010.*
- PI, Test Experiment for Eastern North America (TEENA) – deployment of 9 broadband seismometers across the Appalachians (with Margaret Benoit; 2009-2010).
- High Lava Plains broadband seismic experiment (HLP) – deployment of 110 broadband seismometers in eastern Oregon, southwestern Idaho, and northern Nevada (2007-2009; project PIs: Matt Fouch and David James).
- GPS survey of Oregon and Washington (Summer 2000; project PI: Rob McCaffrey).

Professional Service

I. Service to professional societies and organizations

IA. Service to the American Geophysical Union (AGU)

2020-present	Member, SEDI Honors Canvassing Committee
2019-present	Member, College of Fellows New Frontiers Committee
2019-present	Member (2019-2020), chair (from 2021), Seismology Honors Canvassing Committee
2017-present	Member (2017-2019), chair (from 2020), Hess Medal Committee
2018	Chair, Seismology Section Officers Nominations Committee
2016-2017	Member (2016), chair (2017), Gutenberg Lecture Selection Committee, Seismology Section

IB. Service to the Incorporated Research Institutions for Seismology (IRIS)

2020-present	Member, Coordinating Committee
2016-present	Member (2016-2019), chair (from 2019), International Development Seismology Committee
2010, 2015, 2020	Member, Board of Directors Nominating Committee
2015-2017	Member, Education and Public Outreach Standing Committee
2013	Member, Amphibious Array Steering Committee Nominations Committee
2012	Member, summer internship program selection committee
2009-2013	Member, USArray Advisory Committee
2009-2013	Member, Electromagnetic Working Group

IC. Service to other organizations

2016-present	Member, U.S. Scientific Earthquake Studies Advisory Committee (SESAC; <i>advises director of the U.S. Geological Survey on matters related to USGS participation in the National Earthquake Hazards Reduction Program</i>)
2014-2018	Member, Seismological Society of America (SSA) Reid Medal Subcommittee
2013-2016	Member, GeoPRISMS Steering and Oversight Committee

- 2015 Participant, National Academy of Sciences/National Science Foundation Meeting of Experts, Future Seismic and Geodetic Facility Needs (*one of six experts consulted to advise NSF on future facility needs*)
- 2015 Member, GeoPRISMS mid-life program review report writing committee (*co-wrote report and participated in presentation to the advisory committee at NSF*)

II. Editorial activities

- 2018-present Editor, *Geochemistry, Geophysics, Geosystems (G-cubed)*
- 2003-present Manuscript reviewer for *AGU Books, Applied Mathematical Modelling, Bulletin of the Seismological Society of America, Computers and Geosciences, Current Science, Earth and Planetary Science Letters, Earth and Space Science, Earth Planets Space, Frontiers in Earth Science, G-cubed, Geological Society of London Special Publications, Geology, Geophysical Journal International, Geophysical Research Letters, Geoscience Frontiers, Geosphere, Gondwana Research, International Geology Review, Journal of Geodynamics, Journal of Geophysical Research-Solid Earth, Journal of Metamorphic Geology, Lithosphere, Nature, Nature Communications, Nature Geoscience, Physics of the Earth and Planetary Interiors, Precambrian Research, Proceedings of the IODP, Proceedings of the National Academy of Sciences, Pure and Applied Geophysics, Reviews of Geophysics, Science, Science Advances, Scientific Reports, Seismological Research Letters, Solid Earth, and Tectonophysics.*
- 2016-present Associate guest editor, Subduction Top to Bottom 2 special volume, *Geosphere*
- 2016-2017 Associate editor, *Journal of Geophysical Research-Solid Earth*
- 2012-2014 Co-editor, special volume on USArray science, *Earth and Planetary Science Letters* (with Alan Levander and Peter Shearer)

III. Proposal reviews and panel service

- 2006-present Proposal reviewer for National Science Foundation (programs include EAR-CSEDI, EAR-FRES, EAR-EarthScope, EAR-Geophysics, EAR-Continental Dynamics, EAR-Tectonics, EAR-GeoPRISMS, EAR-I&F, EAR-Geoinformatics, OCE-MG&G, Office of Advanced Cyberinfrastructure), National Aeronautics and Space Administration (NASA), American Chemical Society (ACS) Petroleum Research Fund, Czech Science Foundation, Natural Environment Research Council (UK), National Research Council (Romania), Netherlands Organization for Scientific Research, National Research Agency (France), German Research Foundation, and the European Research Council
- 2018 Panelist, National Science Foundation, Division of Earth Sciences
- 2016 Panelist, U.S. Geological Survey (USGS) SCEC5 Review Panel
- 2015 Panelist, USGS Earthquake Hazards Program
- 2011 Review panelist, IRIS data product development proposals
- 2010 Panelist, National Science Foundation, Division of Earth Sciences

IV. Activities at scientific meetings

- 2021 Chair, Gordon Research Conference on Interior of the Earth (upcoming)
- 2021 Member, steering committee, GAGE-SAGE Science Workshop (upcoming; 2020 meeting postponed to 2021)
- 2020 Session co-convener, Geological Society of America (GSA) Annual Meeting
- 2018-2020 Session co-convener, GSA Northeast Section Meeting (2018, 2020 (*cancelled*))
- 2009-2019 Session co-convener, AGU Fall Meeting (2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019)

2011-2019	Outstanding Student Paper Award judge, Seismology and Study of the Earth's Deep Interior sections, AGU Fall Meeting
2016	Panelist, Special Interest Group on Work-Life Balance, IRIS Workshop
2015	Member, EarthScope National Meeting Organizing Committee
2015	Webinar leader, Workshop on Future Seismic and Geodetic Facility Needs in the Geosciences
2015	Member, steering committee, NSF CSEDI Science Plan Workshop
2010	Discussion leader, Gordon Research Conference on Rock Deformation
2010	Session co-organizer, IRIS Workshop
2009	Panelist, session on interdisciplinary collaborations, Workshop for an EarthScope Science Plan
2009	Student Paper Award judge, EarthScope National Meeting
2008-2009	Outstanding Student Paper Award co-coordinator, Study of the Earth's Deep Interior section, AGU Fall Meetings
2004	Session convener, RPI Inverse Problems Center Opening Conference

Department and University Service

I. Service to the Earth & Planetary Sciences Department

2018-present	Director of Graduate Studies (on leave Spring 2020)
2018	Member, Ad Hoc Department Name Change Committee
2017 (spring)	Member, Program Review and Examination Committee
2014-2015	Director of Postdoctoral Affairs
2015	Member, Program Review and Examination Committee
2012-2014	Member, Colloquium Committee
2012-2014	Member, Graduate Admissions and Recruitment Committee
2012-2013	Member, Lithosphere and Surface Processes Faculty Search Committee
2010 (fall)	Member, Undergraduate Curriculum Committee
2009-2010	Member, Program Review and Examination Committee
2009-2010	Member, Computing Committee
2009 (spring)	Member, Graduate Admissions and Recruitment Committee

II. Service to Davenport College

2020	STEM Fellow in Residence (spring semester)
2010-present	Freshman/college advisor, Davenport College (typically 2-4 advisees/year)
2013	Guest speaker, Davenport College Fellows Talk series

III. Service to Yale University

2020-present	Member, Cooperative Research Committee
2020	Member, selection committee, Graduate School of Arts and Sciences Graduate Mentor Award
2018-2019	Member, Physical Sciences and Engineering Area Committee (PSEAC) and Tenure Appointments Committee (PSETAC)
2018-2019	Member, Graduate School of Arts and Sciences Physical Science Funding Task Force
2018-2019	Member, Graduate School of Arts and Sciences Climate and Inclusion Committee
2017-2019	Member, Faculty of Arts and Sciences Senate (<i>includes membership on 2017-2018 Faculty Advancement, Yale College Expansion, Nominations, and Diversity and Inclusion subcommittees, and 2018-2019 Executive Council, Faculty Advancement, and Diversity and Inclusion subcommittees</i>)

2018	Member, Yale College Porter and Field Prize Committee
2015, 2016	Guest lecturer, Association of Yale Alumni reunion weekend
2013	Panelist, “Behind the Scenes at NSF, DOE, DOD and Other Funding Agencies: An Insider’s Perspective on Grant Review,” Yale Office of Grant and Contract Administration
2012-2013	Member, Planning Committee, 2013 Yale Junior Faculty PI Retreat

Education and Public Outreach Activities

I. Public talks and outreach

2019	Distinguished speaker, Branford Rotary Club, Branford, CT
2018	Guest speaker, Science on the Silver Screen, Bruce Museum, Greenwich, CT – talk and discussion for the film “San Andreas”
2017	Guest speaker, Secret Science Club, Bell House, Brooklyn, NY
2017	Guest speaker, Yale-Myers Forest Summer Research Seminar, Ashford, CT
2015, 2017	Guest speaker, New Haven Mineral Club, Hamden, CT
2016	Guest speaker, Science on Saturdays public lecture, Yale
2013	Guest speaker, Science on Screen, Real Art Ways, Hartford, CT – introductory talk for the film “Tremors”
2011	Speaker and panelist, public lecture and panel on the March 2011 Tohoku, Japan earthquake and tsunami, Yale Department of Geology & Geophysics
2010	Interview with Yale University iTunes U podcast series, “Earthshaking Quakes: From Haiti to a Maine Backyard”
2008	Participant, Science-Engineering-Technology Congressional Visits Day

II. Media interviews

2020	NBC Connecticut, New Haven Register, and the Daily Nutmeg on the November 2020 New Bedford, MA earthquake
2020	Scientific American on lithospheric thickness and ore deposits
2020	WTIC1080 Radio (Hartford, CT) morning show on the New England Anomaly
2020	Fox 61 Connecticut News on the 2020 Puerto Rico earthquake sequence
2018	Fox 61 Connecticut News on the November 2018 Anchorage earthquake
2018	Hartford Courant on the New England Anomaly
2018	NBC Connecticut on East Coast tsunami hazards
2017	New Haven Register on the SEISConn experiment
2015	Connecticut News 8 on East Coast tsunami hazards
2015	Atlantic Media’s CityLab on the April 2015 Nepal earthquake
2015	NPR affiliate WNPR (Connecticut Public Radio) for “Where We Live” program segment on Connecticut earthquakes and geology
2015	Interviews on the January-February 2015 Plainfield, CT earthquake swarm (New Haven Register, Connecticut News 8, Fox 61 Connecticut News, Connecticut Post, CBS News, WNPR, Yale Scientific Magazine)
2014	NBC Connecticut on the Deep River, CT earthquake
2013	NPR affiliate WCAI (Woods Hole, MA) for “Living Lab” program segment on the EarthScope project
2011	Interviews on the March 2011 Tohoku, Japan earthquake (Connecticut Post, WSFB-Channel 3)

III. Outreach to K-12 students and educators

2015-present	Founder and coordinator, Field Experiences for Science Teachers (FEST) program (<i>involves Connecticut-based high school science teachers in one-week field seismology experiences; 19 participants to date</i>)
2019	Guest speaker, Yale Young Global Scholars Program
2010, 2019	Volunteer judge, New Haven Science Fair, New Haven, CT
2018	Co-convener, session on “Cultivating and sustaining effective teacher-scientist partnerships,” Connecticut Science Educators Annual Conference
2017	Talk on EarthScope science, Connecticut Science Educators Annual Conference
2017	Guest speaker, Darcey School, Cheshire, CT
2015, 2017	Guest speaker, Cheshire High School, Cheshire, CT
2015	Interview on the Nepal earthquake for student documentary, Journalism and Media Academy Magnet School, Hartford, CT
2010, 2012, 2014	Guest speaker, Institute for Science Instruction and Study, Southern Connecticut State University, New Haven, CT
2010	Guest speaker on natural disasters, evening program for middle and high school teachers, Peabody Museum of Natural History, New Haven, CT
2008	Guest speaker, British School, Washington, DC
2003	Science fair judge, Cambridge Rindge & Latin High, Cambridge, MA
2003	Guest speaker, Prescott Elementary School, Groton, MA
2002	Guest speaker, South Elementary School, Andover, MA

IV. Undergraduate outreach and education activities

2014	Guest speaker, Yale Society of Physics Students
2013	Instructor, IRIS summer internship program orientation week, Socorro, NM

V. Activities supporting diversity in STEM

2020	Facilitator, Yale EPS department discussion on racial equity
2020	“College Insider” podcast interview, Women in STEM Initiative’s Athena Project
2020	Mentor, Científico Latino Graduate School Mentorship Initiative (CL-GSMI)
2020	Research talk, Yale Warrior-Scholar Project (via zoom)
2019	Participant, Yale Women Faculty Forum pop-up mentoring event
2019	Panelist, Yale Graduate Women’s Welcome
2018	Faculty lunch speaker, Yale Women in Physics
2014-2016, 2018	Lunch discussion leader, Women in Science at Yale (WISAY)/Women Faculty Forum (WFF) Annual Mentoring Lunch
2015, 2018, 2019	Specialty reader, Paul & Daisy Soros Fellowships for New Americans
2012, 2015	Lunch discussion leader, Northeast Conference for Undergraduate Women in Physics, Yale University
2014	Panelist, Earth Science Women’s Network (ESWN) workshop on “Getting on the Tenure Track and Succeeding,” AGU Fall Meeting
2013	Guest dinner speaker, Undergraduate Women in Science at Yale (UWISAY)
2009, 2012	Volunteer session leader and “Ask a Scientist” participant, Yale Girls’ Science Investigations session on “The Geophysical World,” Yale University
2008	Panelist, Women in Science Forum, American University Women’s Initiative, Washington, DC
2006	Mentor, Keys to Empowering Youth (summer science program for middle school girls), MIT
2003	Invited talk on science careers, Girl Scout Troop 380, Chelmsford, MA