Maureen D. Long

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Education

2000-2006	Massachusetts Institute of Technology (MIT), Cambridge, MA Ph.D. in Geophysics, June 2006.
1996-2000	Rensselaer Polytechnic Institute (RPI), Troy, NY B.S. *summa cum laude*, May 2000 (Geology with Physics minor).

Appointments

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

Research Interests

- Observational seismology and mantle dynamics; seismic anisotropy in the Earth's mantle
- Subduction zone dynamics and processes; subduction and the mantle flow field
- Structure and dynamics of the lowermost mantle
- Structure, evolution, and deformation of the continental lithosphere

Honors and Recognition

2016	James B. Macelwane Medal, American Geophysical Union
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 = 2043; h-index = 24; i10-index: 40.

I. Peer-Reviewed Papers

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, doi:10.1130/GES01395.1.

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. Antonijevic, 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. Papers in Review/Revision

R7. 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,* revised manuscript in review.

R6. **Long, M. D.,** Benoit, M. H., Aragon, J. C.**, 2017. A sharp gradient in seismic anisotropy across the Appalachian Mountains constrained by observations of Love-to-Rayleigh wave scattering. *Journal of Geophysical Research*, in revision.

R5. 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*, in revision.

R4. Bishop, B. T., Beck, S. L., Zandt, G., Wagner, L. S., **Long, M. D.,** Antonijevic, S. K., Kumar, A., Tavera, H., 2017. Causes and consequences of flat slab subduction in southern Peru. *Geosphere*, in review.

R3. Antonijevic, S. K., Wagner, L. S., Beck, S. L., **Long, M. D.,** Zandt, G., Biryol, C. B., 2017. Re-evaluation of volcanic patterns during slab flattening in southern Peru based on constraints from ambient noise and earthquake-generated Rayleigh waves. *Earth and Planetary Science Letters*, in review.

R2. 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*, in review.

R1. **Long, M D.,** Ford, H. A.^, Abrahams, L.**, Wirth, E. A., 2017. Deformation of the crust and mantle lithosphere beneath eastern North America due to Grenville and Appalachian orogenesis. *Lithosphere*, in review.

III. Manuscripts in Preparation

P1. Aragon, J. C.**, **Long, M. D.,** Benoit, M. H., 2017. SKS splitting across the central Appalachians: Results from the MAGIC array. Manuscript in preparation.

IV. Other Contributions (non-peer reviewed)

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 (Response to citation), *Eos*, 97, doi:10.1029/2016EO064061.

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

Current postdoctoral advisee at Yale:

- Dr. Andrea Tesoniero (2017-present)

Past postdoctoral advisees at Yale:

- 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:
- Andrea Servali (Ph.D. expected 2021) – primary advisor
- Puskar Mondal (Ph.D. expected 2021) – primary advisor
- Neala Creasy (Ph.D. expected 2019) – primary advisor
- Jie Deng (Ph.D. expected 2019) – second discourse advisor
- Neta Bar (Ph.D. expected 2020) – second discourse advisor
- Sarah Arveson (Ph.D. expected 2020) – second discourse advisor
- Peng Sun (Ph.D. expected 2020) – second discourse advisor

Past graduate advisees at Yale:
- Colton Lynner (Ph.D. 2015) – primary advisor
  Current position: Postdoctoral Researcher, University of Arizona
- Caroline Eakin (Ph.D. 2015) – primary advisor
  Current position: Research Fellow (tenure track), Australian National University
- Erin Wirth (Ph.D. 2014) – primary advisor
  Current position: Postdoctoral Research Associate, University of Washington
- Karen Paczkowski (Ph.D. 2012) – co-advisor (with Dave Bercovici & Mark Brandon)
  Current position: AAAS Executive Branch Fellow, National Science Foundation
- Jenny Hanna (M.S. 2011) – primary advisor
  Current position: Law graduate, Quinnipiac University
- Bradford Foley (Ph.D. 2014) – second discourse advisor
  Current position: Assistant Professor, Pennsylvania State University
- Anwar Mohiuddin (Ph.D. expected 2017) – second discourse advisor
  Current position: Ph.D. candidate, Yale

Ph.D. thesis committee membership (excluding advisees):
- Alexandra Goryaeva (Ph.D. 2016), Université Lille 1, Lille, France (outside examiner for thesis defense)
- Christopher Thissen (Ph.D. 2016), Yale
- Tolulope Olugboji (Ph.D. 2014), Yale
- Duayne Rieger (Ph.D. 2014), Yale
- Sapthala Karallyadda (Ph.D. 2014), Victoria University, Wellington, NZ (international examiner for thesis defense)

III. Undergraduate Research Advisees

Current undergraduate advisees:
- Bryce Crawford (Yale College ’20) – research advisor, fall 2016-present
- Juan Aragon (Yale College ’17) – research and senior thesis advisor, fall 2014-present
- Kenneth Jackson (Yale College ’17) – research advisor, summer 2014 and fall 2015-present

Past undergraduate advisees:
- 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), Yale – research co-advisor, 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
- Marjorie Hirs (Yale College ’15) – research advisor, 2012-2013
- Daniel Petkevich (Yale College ‘12) – senior essay advisor (Physics), spring 2012
- Kimberly McCormack (IRIS intern), Yale – research co-advisor, summer 2011
- Mignon Johnston (2009 summer undergraduate research assistant, Yale; 2008 summer intern, Carnegie Institution) – primary advisor for summer research
- Erin Wirth (2008 summer intern), Carnegie Institution – research advisor
- Amanda Klaus (2007 summer intern), Carnegie Institution – research co-advisor

Teaching History

2013(S), ‘14(F), ‘17(S) Introduction to Seismology (G&G456/556), Yale

- 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.

2017(S) Regional Perspectives on Global Geoscience (G&G370/757), Yale

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

2013(F), ’15(F) Natural Disasters (G&G100), Yale

- 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: 200 students.

2010, ‘12(F), ‘15(S) Forensic Geoscience (G&G240), Yale

- Undergraduate seminar course covering the applications of geophysical and geochemical methods to criminal, historical, and archeological investigations. Average enrollment: 12 students.

2009, ’12, ‘14(F) Seminar in Mantle and Core Processes (G&G744), Yale

- 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.

2010(S) Physics and Phenomenology of Subduction (G&G640), Yale

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

2009(F) Observational Seismology (G&G558), Yale

- 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 (since 2009; *indicates EarthScope Speaker Series talk)

May 2017 - EarthScope National Meeting, invited talk (upcoming)
March 2017 - Virtual guest lecture, Colgate University (upcoming)
February 2017 - Earth and Planetary Science department seminar, UC Berkeley
February 2017 - Earth and Environmental Sciences department seminar, University 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 - Seismological Society of America Eastern Section Annual Meeting, invited talk
October 2016 - Earth and Planetary Science Colloquium, McGill University*
July 2016 - SEDI (Study of Earth's Deep Interior) Symposium, Nantes, France, invited talk
July 2016 - Instructor, CIDER summer school on flow in the deep Earth, UCSB
April 2016 - Seismological Society of America Annual Meeting, invited talk
December 2015 - American Geophysical Union Fall Meeting, two invited talks
October 2015 - GeoBerlin, Berlin, Germany, invited talk
February 2015 - Seismological Laboratory seminar, California Institute of Technology
November 2014 - Earth and Planetary Science department seminar, Northwestern University
September 2014 - Earth Science department seminar, Rice University
September 2014 - Earth Science Colloquium, Lamont-Doherty Earth Observatory, Columbia
February 2014 -Weekly seminar, Department of Terrestrial Magnetism, Carnegie Institution
December 2013 - American Geophysical Union Fall Meeting, two invited talks, San Francisco, CA
October 2013 - Institute for Geophysics seminar, University of Texas at Austin
September 2013 - USArray TA Science Symposium, Woods Hole, MA, invited talk
July 2013 - Instructor, CIDER summer school on continental evolution, UC Berkeley
January 2013 - Geophysics Department seminar, Stanford University
November 2012 - Pacific Rim Subduction Workshop, invited talk, ERI, Tokyo, Japan
September 2012 - Geosciences Department guest lecture, University of Massachusetts at Amherst
April 2012 - European Geosciences Union General Assembly, invited talk, Vienna, Austria
April 2012 - Geophysics seminar, Swiss Federal Inst. of Technology (ETH), Zurich, Switzerland
February 2012 - Earth and Environmental Sciences department seminar, University of Rochester
June 2011 - Interior of the Earth Gordon Research Conference, invited talk, S. Hadley, MA
June 2011 - Interior of the Earth Gordon-Kenan Research Seminar, invited talk, S. Hadley, MA
June 2011 - EarthScope Transportable Array Working Group Webinar
April 2011 - Friday informal seminar, Earth Resources Laboratory, MIT
April 2011 - Earth Science seminar, Scripps Institution of Oceanography, UCSD
September 2010 - Earth Science department seminar, Rice University
September 2010 - Earth Sciences seminar, Washington State University
June 2010 - COMPRES annual meeting, invited keynote talk, Stevenson, WA
June 2010 - Goldschmidt meeting, invited talk, Knoxville, TN
May 2010 - European Geosciences Union General Assembly, invited talk, Vienna, Austria
April 2010 - Waveform Tomography Workshop, invited talk, RPI Inverse Problems Center
February 2010 - Earth and Atmospheric Sciences department seminar, Cornell University
December 2009 - American Geophysical Union Fall Meeting, invited talk, San Francisco, CA

October 2009 - Seismological Laboratory seminar, California Institute of Technology
September 2009 - Earth and Planetary Sciences department colloquium, Harvard University
September 2009 - Geological Sciences department colloquium, Brown University
March 2009 - Geodynamics seminar, Lamont-Doherty Earth Observatory, Columbia University
March 2009 - Geological Sciences department colloquium, Stony Brook University
March 2009 - Special seminar, Instituto Geofisico del Peru, Lima, Peru

Funding History

I. Ongoing 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). 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), no cost extension to 4/30/17. Yale budget: $197,766, plus $55,741 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). Budget: $539,932.

II. Completed sponsored projects

- 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, Seismic Experiment for Imaging Structure beneath Connecticut (SEISConn) – deployment of 15 broadband seismometers across northern CT (2015-present).
- Faculty leader of two-week Yale G&G departmental field trip for graduate and undergraduate students to Japan, June 2017 (upcoming).
- 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 will be publicly available in 2018; doi:10.7914/SN/7A_2013.*
- Co-leader of undergraduate field trips to the Caribbean (Dominica/Martinique) and Hawaii (Big Island) for G&G100 (Natural Disasters) class (March 2010, March 2012, March 2016).
- Co-chief scientist, R/V Endeavor, Eastern North American Margin Community Seismic Experiment, broadband ocean bottom seismometer (OBS) 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 N. Carolina, Virginia, W. Virginia, and Ohio (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

2017-present	Member, American Geophysical Union (AGU) Hess Medal Committee
2016-present	Member, US Scientific Earthquake Studies Advisory Committee (SESAC; *advises director of the U.S. Geological Survey on matters related to USGS participation in the National Earthquake Hazards Reduction Program*)
2016-present	Member (2016-present), chair (2017-present), Gutenberg Lecture selection committee, AGU Seismology Section
2015-present	Member, Incorporated Research Institutions for Seismology (IRIS) Education and Public Outreach Standing Committee
2014-present	Member, Seismological Society of America (SSA) Reid Medal Subcommittee
2013-2016	Member, GeoPRISMS Steering and Oversight Committee (GSOC)

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*)
2010, 2015	Member, IRIS Board of Directors Nominating Committee
2015	Member, GeoPRISMS mid-life program review report writing committee (*co-wrote report and participated in presentation to the advisory committee meeting at NSF*)
2009-2013	Member, IRIS EarthScope USArray Advisory Committee (USAAC)
2009-2013	Member, IRIS EarthScope Electromagnetic Working Group (EmWoG)
2013	Member, Amphibious Array Steering Committee (AASC) Nominations Committee
2012	Member, IRIS summer internship program selection committee

II. Editorial activities

2016-present	Associate editor, *Journal of Geophysical Research-Solid Earth*
2016-present	Associate guest editor, Subduction Top to Bottom 2 special volume, *Geosphere*
2012-2014	Co-editor, special volume on USArray science, *Earth and Planetary Science Letters* (with Alan Levander and Peter Shearer)
2003-present	Manuscript reviewer for *Bulletin of the Seismological Society of America, Current Science, Earth and Planetary Science Letters, Earth Planets Space, 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, Scientific Reports, Seismological Research Letters, Solid Earth,* and *Tectonophysics*.

III. Proposal reviews and panel service

2006-present	Proposal reviewer for National Science Foundation (EAR-CSEDI, EAR-FESD, EAR-EarthScope, EAR-Geophysics, EAR-Continental Dynamics, EAR-Tectonics, EAR-GeoPRISMS, EAR-Instrumentation and Facilities, OCE-Marine Geology & Geophysics), Czech Science Foundation, Natural Environment Research Council (UK), National Research Council (Romania), Netherlands Organization for Scientific Research, National Research Agency (France), German Research Foundation, European Research Council, and the ACS Petroleum Research Fund
2016	Panelist, USGS SCEC5 Review Panel
2015	Panelist, USGS Earthquake Hazards Program
2011	Review panelist, IRIS data product development proposals
2010	Panelist, National Science Foundation, EAR-Geophysics

IV. Activities at scientific meetings

2016	Session co-convener, "The Eastern North American Margin: Structure, dynamics, history, and processes," AGU Fall Meeting
2016	Panelist, Special Interest Group on Work-Life Balance, IRIS Workshop
2015	Session co-convener, "Slabs in Earth's mantle: Where do they go and how do they interact with the mantle?," AGU Fall Meeting
2015	Member, EarthScope National Meeting Organizing Committee
2015	Leader, webinar on Earth structure, rheology, and geodynamics, Workshop on Future Seismic and Geodetic Facility Needs in the Geosciences
2015	Member, steering committee, NSF CSEDI Science Plan Workshop
2014	Session co-convener, "Volatiles and Earth's Mantle Processes," AGU Fall Meeting
2011-2015	Outstanding Student Paper Award judge, Seismology and Study of the Earth's Deep Interior sections, AGU Fall Meeting
2013	Session co-convener, "Seismic Anisotropy: Predictions, Observations, and Interpretations," AGU Fall Meeting
2012	Session co-convener, "Fluids and Hydrous Phases in Subduction Zones," AGU Fall Meeting
2011	Session co-convener, "Features and Interpretations of D" and the Core-Mantle Boundary (CMB)," AGU Fall Meeting
2010	Session co-convener, "Seismic Anisotropy in the Mantle: Progress, Prospects, and Pitfalls," AGU Fall Meeting
2010	Discussion leader, "Mechanism and Microstructure Transitions Related to Mantle Geophysics," Gordon Research Conference on Rock Deformation
2010	Session co-organizer, "Imaging Mantle Dynamics: From Top to Bottom," IRIS Workshop
2009	Session co-convener, "Cenozoic Volcanism in Western North America: Plumes, Drips, Extension and/or Subduction?," AGU Fall Meeting
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, "New directions in seismic anisotropy," RPI Inverse Problems Center Opening Conference, April 2004

Department and University Service

I. Service to the Geology & Geophysics Department

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

2010-2015	Freshman advisor, Davenport College (3-4 advisees per academic year)
2013	Guest speaker, Davenport College Fellows Talk series

III. Service to Yale University

2011-present	Yale member representative, UNAVCO (research consortium for geodesy)
2009-present	Yale member representative, IRIS (research consortium for seismology)
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 Outreach Activities

I. Public talks and outreach

2015, 2017	Guest speaker, New Haven Mineral Club
2016	"Science on Saturdays" public lecture on natural disasters, Yale
2013	Guest speaker, Science on Screen program, Real Art Ways, Hartford, CT – gave introductory talk on seismology 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	Podcast interviewee, "Earthshaking Quakes: From Haiti to a Maine Backyard," Yale University iTunes U podcast series
2008	Participant, Science-Engineering-Technology Congressional Visits Day (met with congressional staff to encourage support for basic science funding)

II. Media interviews

2015	Interview with Connecticut News 8 on East Coast tsunami hazards
2015	Interview with Atlantic Media's CityLab on the April 2015 Nepal earthquake
2015	Interview with 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 Connecticut News, Connecticut Post, CBS News, WNPR, Yale Scientific Magazine)
2014	Interview after M=2.7 Deep River, CT earthquake, NBC-Connecticut
2013	Interview with NPR affiliate WCAI (Woods Hole, MA) for "Living Lab" program segment on the EarthScope project
2011	Interviews after March 2011 Tohoku, Japan earthquake (Connecticut Post, WSFB-Channel 3)

III. Outreach to K-12 students and educators

2015-present	Coordinator, Field Experiences for Science Teachers (FEST) project – involvement of high school science teachers in seismology field work in CT

2017 (upcoming)	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
2010	Volunteer judge, New Haven Science Fair, 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 women in STEM

2014-2016	Lunch discussion leader, Women in Science at Yale (WISAY)/Women Faculty Forum (WFF) Annual Mentoring Lunch
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