Maureen D. Long
Bruce D. Alexander ’65 Professor and Chair of Earth and Planetary Sciences, Yale University

PO Box 208109
New Haven, CT 06520
203-432-5031
Kline Geology Lab Room 337
maureen.long@yale.edu

Education

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

Appointments

2021-present	Chair, Department of Earth and Planetary Sciences, Yale
2021-present	Bruce D. Alexander ’65 Professor of Earth and Planetary Sciences, Yale
2017-present	Professor of Earth and Planetary Sciences, Yale
2018-2021	Director of Graduate Studies, Department of Earth and Planetary Sciences, Yale
2016-2017	Associate Professor of Geology and Geophysics, Yale
2009-2015	Assistant Professor of Geology and Geophysics, Yale
2009-2012	Visiting Investigator, Department of Terrestrial Magnetism (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 and mantle flow
- 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 continental lithosphere
- Continental intraplate volcanism and its relationship with mantle processes

Honors and Recognition

2026	Birch Lecturer, Tectonophysics Section, American Geophysical Union
2025	Outstanding Reviewer Award, Journal of Geophysical Research-Solid Earth
2025	Paul D. Bartlett, Sr. Lecturer, Linda Hall Library, Kansas City, Missouri
2024	Outstanding Reviewer Award, Geophysical Research Letters
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
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	Alfred P. Sloan Research Fellowship (Physics)
2010	Outstanding Reviewer Award, Journal of Geophysical Research-Solid Earth
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

Student and Postdoctoral Supervision

I. Postdoctoral Advisees

Current postdoctoral advisees:

- Dr. James Bourke (2025-present), Yale University

Past postdoctoral advisees, all at Yale unless otherwise noted:

- Dr. James Bourke (2023-2025); Rutgers University, co-advised with Gregory Mountain
  Current position: Postdoctoral researcher, Yale
- Dr. Frederik Link (2022-2025)
  Current position: Postdoctoral researcher, Gutenberg University, Mainz
- Dr. Eric Löberich (2022-2025)
- Dr. Miriam Reiss (2018; six-month postdoctoral scholarship from Germany)
  Current position: Junior professor, Gutenberg University, Mainz
- Dr. Andrea Tesoniero (2017-2018)
- Dr. Heather Ford (2013-2016)
  Current position: Associate Professor, University of California, Riverside
- Dr. Xiaobo He (2010-2012)
  Current position: Associate Research Professor, Zhejiang Ocean University

II. Graduate Advisees

Past graduate advisees, all at Yale unless otherwise noted (primary advisees only):

- Kimberly Espinal (Ph.D. 2025)
  Current position: Chaplain, Quinnipiac University
- Roberto Masis (Ph.D. 2025) – Rutgers University, co-advisor (with Roy Schlische)
  Current position: Adjunct instructor, Rutgers University and Sussex Community College
- Jonathan Wolf (Ph.D. 2024)
  Current position: Assistant Professor, University of California, Santa Cruz
- Yantao Luo (Ph.D. 2024)
  Current position: Research Scientist, SLB (formerly Schlumberger)
- Puskar Mondal (Ph.D. 2021) – co-advisor (with Jun Korenaga)
  Current position: Assistant Professor, Tsinghua University
- Neala Creasy (Ph.D. 2019)
  Current position: Staff Scientist, Los Alamos National Laboratory
- Colton Lynner (Ph.D. 2015)
  Current position: Associate Professor, University of Delaware
- Caroline Eakin (Ph.D. 2015)
  Current position: Fellow/Senior Lecturer, Australian National University

- Erin Wirth (Ph.D. 2014)
  Current position: Research Geophysicist, United States Geological Survey
- Karen Paczkowski (Ph.D. 2012) – co-advisor (with Dave Bercovici & Mark Brandon)
  Most recent position: AAAS Executive Branch Fellow, National Science Foundation
- Andrea Servali (M.S. 2018)
  Current position: Data scientist, Subito.it
- Jenny Hanna (M.S. 2011)
  Current position: Solicitor, Cambridge, UK

Thesis committee membership (excluding advisees) or external examiner positions:
- Autumn Muhly (Ph.D. expected 2028), University of South Carolina
- Haoyu Li (Ph.D. expected 2028), Purdue University
- Kelly Ryan (Ph.D. expected 2027), Colorado School of Mines
- Annie Haws (Ph.D. 2025), Yale
- William Frazer (Ph.D. 2024), Yale
- Meng Guo (Ph.D. 2023), Yale
- Rajani Shrestha (M.S. 2023), University of Delaware
- Roberto Masis (M.S. 2023), Rutgers University
- James Bourke (Ph.D. 2023), Rutgers University
- Jingchuan Wang (Ph.D. 2022), University of Alberta, Alberta, Canada
- Simon Schneider (Ph.D. 2022), Utrecht University, Utrecht, The Netherlands
- Roberta Carluccio (Ph.D. 2021), University of Melbourne, Melbourne, Australia
- 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
- Sapthala Karallyadda (Ph.D. 2014), Victoria University, Wellington, NZ

III. Undergraduate Research Advisees

Current undergraduate advisees:
- Victoria Vilton (Yale College ’26) – research advisor, 2022-present
- Clara Gulick (Yale College ’27) – research advisor, 2025-present
- Naomi Orcel (Yale College ’27) – research advisor, 2025-present
- Annie Chian (Yale College ’28) – research advisor, 2025-present
- Daniel Mladek (Yale College ’26) – research advisor, 2025-present
- Heather Sheridan (Williams College) – research co-advisor, summer 2025 (internship)-present

Past undergraduate advisees (*indicates co-authorship of a peer-reviewed paper; ^indicates receipt of an NSF Graduate Research Fellowship):
- Ella Xu* (Yale College ’26) – research advisor, 2022-present
- Samantha Koller (Pikes Peak State College) – research co-advisor, 2024-2025 (CRESCENT Twinning Program; co-advised with Margarete Jadamec)
- Chrishera Smith (Florida Atlantic University; Research Experiences for Veteran Undergraduates (REVU) intern) – internship co-advisor, summer 2025
- Lex Schultz^ (Yale College ’24) – research advisor, 2021-2024

- Berit Olsson (Williams College) – internship co-advisor, summer 2022
- Paleena Amy (Washington College) – internship co-advisor, summer 2022
- Dede Chapline (Pomona College) – internship co-advisor, summer 2022
- Raymond Zhao (Yale College ’22) – research advisor, 2020-2022
- 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, 2018-2020
- Daniel Allen (Highline College; REVU intern) – internship advisor, summer 2019
- Emily Chu (Yale College ’19) – senior essay advisor, spring 2019
- Jonathan Wolf* (University of Muenster) – internship co-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* (REU intern), Carnegie Institution – research advisor, summer 2008
- Erin Wirth*^ (REU intern), Carnegie Institution – research advisor, summer 2008
- Amanda Klaus* (REU intern), Carnegie Institution – research co-advisor, summer 2007

Teaching History

(All at Yale University; on parental leave from teaching during Spring 2011 and Spring 2014 semesters)

Forensic Geoscience [2010F, 2012F, 2015S, 2018S, 2019S, 2021S (online), 2023F, 2026S]

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

Natural Disasters [2013F, 2015F, 2017F, 2019F, 2022F, 2024F]

- 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: 150-200 students.

Introduction to Seismology [2013S, 2014F, 2017S, 2018F, 2020F (online), 2021F]

- 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.

Regional Perspectives on Global Geoscience [2017S]

- 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 [2009F, 2012F, 2014F]

- Graduate topical 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 [2010S]

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

Observational Seismology [2009F]

- 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 Scientific Talks and Seminars

(Selected, since 2016)

March 2026 - Department of Earth and Environmental Sciences Seminar, Boston College
February 2026 - Invited talk, High-Pressure Mineral Physics Workshop, ICTP, Brazil (remote)
December 2025 - Earth and Planets Laboratory seminar, Carnegie Institution for Science
May 2025 - Department of Earth Sciences seminar, Dartmouth College
October 2024 - Keynote, American Institute of Professional Geologists Northeast Section meeting
September 2024 - Earth Sciences & Engineering department seminar, Missouri S&T (remote)
June 2024 - Session keynote talk, Study of Earth's Deep Interior (SEDI) 18th Symposium
May 2024 - Geology & Planetary Science Club seminar, Central Connecticut State University
February 2024 - DeFord Lecture, Jackson School of Geosciences, University of Texas at Austin
January 2024 - Seismological Laboratory seminar, Caltech
November 2023 - Geophysics seminar, MIT
October 2023 - Earth Sciences department seminar, Royal Holloway University, London (remote)
October 2023 - Harrington Lecture, School of Science and Engineering, SUNY New Paltz
January 2023 - Physics and Astronomy department seminar, University of New Mexico (remote)
November 2022 - Keynote, Centre for Earth Evolution and Dynamics Symposium, Sundvollen, Norway
May 2022 - Earth, Planetary, and Space Sciences department seminar, UCLA
April 2022 - Earth and Climate Sciences seminar, University of Maine
January 2022 - Center for Earthquake Research and Information, University of Memphis (remote)
February 2021 - Appalachian Geology seminar, Virginia Tech (remote)
December 2020 - Special seminar, Michigan State University (remote)
November 2020 - Geophysics & Tectonics talk, Oklahoma State University (remote)
November 2020 - Geological Society of Connecticut Annual Meeting, keynote talk (remote)
October 2020 - Geological Society of America Annual Meeting, two invited talks (remote)
October 2020 - SSA Eastern Section Meeting, invited talk (remote)
September 2020 - COMPRES Keynote Lecture (remote)
June 2020 - University of Kentucky Online Geophysics & Tectonics (G&T) Seminar (remote)
June 2020 - Seismology/tectonics seminar, UCLA (remote)
May 2020 - Geophysics seminar, Karlsruhe Institute of Technology (remote)
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
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 - Edwin Allday Distinguished Lecture, University of Texas at Austin
December 2017 - American Geophysical Union Fall Meeting, two invited talks
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
2006 – 2016 - Approximately 55 invited talks, seminars, and departmental colloquia

Funding History

I. Ongoing sponsored projects

- NSF-Tectonics/Geophysics, "Collaborative Research: Testing for channel flow and ductile extrusion in the southeastern New England Appalachians using an integrated geophysical and geological approach." Lead PI: Yvette Kuiper (Colorado School of Mines), additional PI: **Maureen Long** (Yale University). Project duration: 7/15/22-7/14/25 (36 months), no cost extension to 7/14/26. Yale budget: $163,353.

- NSF-Geophysics/Tectonics, "Collaborative Research: How have mountain building, continental breakup, and recent mantle dynamics shaped the lithosphere beneath New England?" Lead PI: **Maureen Long** (Yale University), additional PIs: Gregory Mountain (Rutgers University), Paul Karabinos (Williams College), Laura Webb (University of Vermont). Project duration: 7/1/22-6/30/25 (36 months), no cost extension to 6/30/26. Yale budget: $271,157.

- NSF-CSEDI, "Collaborative Research: Integrating seismic anisotropy, mantle flow, and rock deformation in subduction zone settings." Lead PI: Phil Skemer (Washington University in St. Louis), additional PIs: **Maureen Long** (Yale University), Laurent Montési (University of Maryland). Project duration: 8/1/22-7/31/25 (36 months), no cost extension to 7/31/26. Yale budget: $391,770.

II. Completed 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 (Arizona State University), additional PIs: Ebru Bozdağ (Colorado School of Mines), Dan Frost (University of California, Berkeley), **Maureen Long** (Yale University). Project duration: 9/1/20-8/31/23 (36 months), no cost extension to 8/31/24. Yale budget: $204,973.

- 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), no cost extension to 11/30/24. Budget: $385,235.
- NSF-EAR, "Conference: Interior of the Earth Gordon Research Conference and Seminar." PI: **Maureen Long** (2023 Interior of the Earth Gordon Research Conference chair). Project duration: 3/1/23-9/1/23. Budget: $49,800.
- NSF-Geophysics, "New approaches to shear wave splitting tomography." PI: **Maureen Long** (Yale University). Project duration: 2/1/19 – 1/31/22 (36 months), no cost extension to 4/30/23. Budget: $331,275.
- 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

- Faculty lecturer, Yale Alumni Association trip to New Zealand, November 2025
- Co-PI, Passive Array for Critical Minerals on the Island of Newfoundland (PACMIN) – deployment of 22 broadband seismometers on the island of Newfoundland (with J. Kim Welford and Fiona Darbyshire; 2025-present). *Data set will be archived at the EarthScope Data Management Center and will be publicly available in 2029; doi:10.7914/SN/ZU_2025*
- PI, New England Seismic Transects (NEST) Nodal Deployment – deployment of 200 nodal instruments across the Laurentia/Appalachian suture in western Massachusetts and Vermont (with James Bourke, Paul Karabinos, and Laura Webb; Summer/Fall 2025). *Data set will be archived at the EarthScope Data Management Center and will be publicly available in 2027.*
- New Jersey Earthquake Rapid Deployment– deployment of 10 broadband instruments and 75 nodal instruments by Yale/Rutgers after the April 5, 2024 New Jersey earthquake (with James Bourke and Frederik Link, April 2024-April 2025). *Data set is archived at the EarthScope Data Management Center and is publicly available; doi:10.7914/5ftj-a296*
- Faculty lecturer, Yale Alumni Association trip to Iceland, June 2023
- PI, GEology of New England via Seismic Imaging Studies (GENESIS) – deployment of 6 broadband seismometers across the Nashoba Terrane in eastern Massachusetts (with Yvette Kuiper and Frederik Link; 2022-2025). *Data set is archived at the EarthScope Data Management Center and will be publicly available in 2027; doi:10.7914/SN/9P_2022*
- PI, New England Seismic Transects (NEST) – deployment of ~25 broadband seismometers across Massachusetts, Vermont, New Hampshire, and Maine (with James Bourke and Paul Karabinos; 2018-present). *Data set is archived at the EarthScope Data Management Center and will be publicly available in 2026; doi:10.7914/SN/7O_2018*
- Co-leader of undergraduate field trips to the Caribbean (Dominica/Martinique), Hawaii (Big Island), Azores (São Miguel/Pico/Faial/Terceira) and Appalachians (Virginia/West Virginia) for G&G/EPS100 (Natural Disasters; 2010, 2012, 2016, 2018, 2020)
- 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 EarthScope Data Management Center and is publicly available; doi:10.7914/SN/XP_2015*
- Faculty leader, Yale EPS departmental field trip 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 EarthScope 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 EarthScope 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 EarthScope 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). *Data set is archived at the EarthScope Data Management Center and is publicly available; doi:10.7914/SN/XC_2006*
- 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)

2025-present	Member, Seismology Section Fellows Committee
2019-2023	Member, College of Fellows New Frontiers Committee
2020-2022	Member (2020-2021), chair (2022), SEDI Honors Canvassing Committee
2017-2021	Member (2017-2019), chair (2020-2021), Hess Medal Committee
2019-2021	Member (2019-2020), chair (2021), Seismology Honors Canvassing Committee
2018	Chair, Seismology Section Officers Nominations Committee
2016-2017	Member (2016), chair (2017), Gutenberg Lecture Selection Committee

IB. Service to the Incorporated Research Institutions for Seismology (IRIS), now EarthScope Consortium

2016-2023	Member (2016-2023), chair (2020-2022), International Development Steering Committee
2020-2022	Member, Coordinating Committee
2010, 2015, 2020, 2026	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 the Seismological Society of America (SSA)

2026-present	Member, Board of Directors
2026-present	Chair, Honors Committee
2022-2024	Member, Ethics Committee
2014-2018	Member, Reid Medal Subcommittee

ID. Service to other organizations

2024-present	Member, Geological Society of America Day Medal Committee
2021-present	Chair, Advanced National Seismic System (ANSS) Steering Committee
2016-present	Member, U.S. Scientific Earthquake Studies Advisory Committee (SESAC)
2015	Participant, National Academy of Sciences/National Science Foundation Meeting of Experts, Future Seismic and Geodetic Facility Needs
2015	Member, GeoPRISMS mid-life program review report writing committee
2013-2016	Member, GeoPRISMS Steering and Oversight Committee

II. Editorial activities

2003-present	Manuscript reviewer for *Acta Geologica Sinica (English Edition), AGU Books, Applied Mathematical Modelling, Bulletin of the Seismological Society of America, Chemical Geology, Computers and Geosciences, Current Science, Earth and Planetary Science Letters, Earth and Space Science, Earth Planets Space, Earth-Science Reviews, Frontiers in Earth Science, G-cubed, Geological Society of London Special Publications, Geology, Geophysical Journal International, Geophysical Research Letters, Geoscience Frontiers, Geosphere, Gondwana Research, GSA Books, International Geology Review, Journal of Geodynamics, Journal of Geophysical Research-Solid Earth, Journal of Metamorphic Geology, Journal of Seismology,*

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, Seismica, Seismological Research Letters, Solid Earth, Surveys in Geophysics, Tectonics, and *Tectonophysics*.

2023-present	Member, Editorial Board, *Earth and Planetary Science Letters*
2018-2023	Editor, *Geochemistry, Geophysics, Geosystems* (*G-cubed*)
2021	Book manuscript reviewer, Wesleyan University Press
2016-2020	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*

III. Proposal reviews and panel service

2006-present	Proposal reviewer for National Science Foundation, 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, Swiss National Science Foundation, and the European Research Council
2010, 2018, 2022, 2023, 2024	Panelist, National Science Foundation, Directorate for Geosciences
2016	Panelist, U.S. Geological Survey (USGS) SCEC5 Review Panel
2015	Panelist, USGS Earthquake Hazards Program
2011	Review panelist, IRIS data product development proposals

IV. Activities at scientific meetings

2026	Meeting co-chair, Workshop on Integrating Seismic Anisotropy, Geodynamics, and Rock Deformation, St. Louis, MO (upcoming)
2025	Meeting co-chair, New England Intercollegiate Geology Conference, New Haven, CT
2025	Power Hour organizer, Interior of the Earth Gordon Research Conference (GRC)
2024	Member, scientific steering committee, SEDI 2024 (Study of the Earth's Deep Interior 18th Symposium), Great Barrington, MA
2023	Meeting chair, Interior of the Earth GRC, South Hadley, MA
2022	International Collaborations Special Interest Group session organizer, SAGE-GAGE Community Science Workshop
2021	Plenary session discussion leader, Rift2Ridge Workshop (virtual)
2021	Member, science planning committee, GAGE-SAGE Community Science Workshop (2020 meeting postponed to 2021 and virtual)
2020	Session co-convener, Geological Society of America (GSA) Annual Meeting (virtual)
2018-2026	Session co-convener, GSA Northeast Section Meeting (2018, 2020 (*cancelled*), 2022, 2026)
2009-2022	Session co-convener, AGU Fall Meeting (2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2021, 2022)
2011-2022	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, Rock Deformation GRC
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

V. Other activities

2018-present	External evaluator for promotion and tenure cases (~30 individual cases)
2022	External reviewer, RSMAS Graduate Programs, University of Miami

Department and University Service

I. Service to the Earth & Planetary Sciences Department

2022-2025	Member, Women in EPS at Yale (WEPSY) Planning Team
2022-2025	Member, Disability, Mental Health, and Chronic Illness (DMhCi) Working Group
2021 (spring)	Chair, Inclusion, Diversity, Equity, & Anti-Racism/Discrimination (IDEA) Committee
2018-2021	Chair, Program Review and Examination Committee (as DGS)
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

2010-2025	College advisor (academic advisor to first- and second-year students; typically 2-4 advisees/year)
2020	STEM Fellow in Residence (spring semester, until March 2020)
2013	Guest speaker, Davenport College Fellows Talk series

III. Service to Yale University

2025-present	Chair, Faculty of Arts and Sciences (FAS) Strategic Review Committee
2024-present	Member, University Budget Advisory Group
2023-present	Member, Yale Center for Geospatial Solutions (YCGS) Advisory Committee
2021-present	Member, Yale Center for Natural Carbon Capture (YCNCC) Steering Committee
2021-present	Member, STARS (Science, Technology, and Research Scholars) Advisory Board
2022-2024	Member, Graduate School of Arts and Sciences (GSAS) Executive Committee
2021-2024	Member, Planetary Solutions Project Committee
2020-2023	Member, Yale Ventures Advisory Board (formerly Cooperative Research Committee)

2018-2022	Member, GSAS Climate and Inclusion Committee
2022	Moderator, "Leadership as Scholarship" panel, FAS Leadership Series
2020	Member, selection committee, GSAS 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
2017-2019	Member, Faculty of Arts and Sciences Senate (*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 (as co-chair) subcommittees*)
2018	Member, Yale College Porter and Field Prize Committee
2015, 2016	Guest lecturer, Yale Alumni Association reunion weekend
2013	Panelist, information session on grant review processes, Yale Office of Grant and Contract Administration
2012-2013	Member, Planning Committee, 2013 Yale Junior Faculty PI Retreat

IV. Leadership training activities

2022-2023	Ivy+ Provost Leadership Fellow, Institute for Inquiry, Equity, and Leadership in the Academic Department, Faculty Advancement Network
2022	Yale Faculty of Arts and Sciences Dean's Leadership Fellow

V. Service to Yale community organizations

2024-present	Member (Secretary since 2026), Board of Trustees, St. Thomas More Catholic Chapel & Center at Yale

Public Engagement, Outreach, and DEI (Diversity, Equity, Inclusion) Activities

I. Public talks and outreach

2025	Guest speaker, Bristol Mineral and Gem Club, Bristol, CT
2025	Guest speaker, New View Community House, Acton, MA
2019	Distinguished speaker, Branford Rotary Club, Branford, CT
2018	Rutgers Geology Museum Open House public lecture
2018	Guest speaker, Science on the Silver Screen, Bruce Museum, Greenwich, CT – talk and discussion for the film "San Andreas"
2017	Secret Science Club public lecture, Bell House, Brooklyn, NY
2017	Yale-Myers Forest Summer Research Seminar public lecture, Ashford, CT
2016	Science on Saturdays public lecture, Yale
2015-2025	Regular guest speaker, New Haven Mineral Club, New Haven, CT (4 talks total)
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 and coverage

2026	CT Insider and Fox 61 Connecticut News on the March 2026 Moodus, CT earthquakes

2026	Connecticut News 8 and the Lisa Wexler Show (WICC radio) on the January 2026 Moodus, CT earthquake
2025	CNN on the July 2025 Kamchatka Peninsula earthquake and tsunami
2025	CNN International, NPR, and Radio BeFM (Busan, S. Korea) on the March 2025 Myanmar earthquake
2025	Chicago Tribune on the tectonic evolution of the Great Lakes
2025	Knowable Magazine on the evolution of the North American continent
2025	AccuWeather Network and Associated Press on the January 2025 York Harbor, ME earthquake
2024	CNN, CNN International, Connecticut News 8, and AccuWeather Network on the December 2024 Offshore Cape Mendocino, CA earthquake
2024	Middletown Press on the November 2024 Moodus, CT earthquake
2024	CNN, Al Jazeera, NBC Connecticut News, Connecticut News 8, WFSB-Channel 3, Connecticut Insider, and Yale Daily News on the April 2024 Tewksbury, New Jersey earthquake
2024	Connecticut News 8 on the March 2024 East Hampton, CT earthquake
2024	CNN on the January 2024 Noto Peninsula earthquake
2023	The Danbury News-Times on Cameron's Line and Connecticut earthquakes
2022, 2023	The Times of India on deep Earth research
2022	Connecticut News 8 on the Every Rock Has a Story YouTube series
2021	Temblor Earthquake News on aftershock sequences in Cascadia
2021	The Open Notebook on how to contact scientists for media interviews
2021	Fox 61 Connecticut News on Connecticut geology and earthquake hazards
2021	NBC Connecticut on the March 2021 West Hartford, CT earthquake
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	New Haven Register, Connecticut News 8, Fox 61 Connecticut News, Connecticut Post, CBS News, WNPR, and Yale Scientific Magazine on the January-February 2015 Plainfield, CT earthquake swarm
2014	NBC Connecticut on the August 2014 Deep River, CT earthquake
2013	NPR affiliate WCAI (Woods Hole, MA) for "Living Lab" program segment on the EarthScope project
2011	Connecticut Post and WSFB-Channel 3 on the March 2011 Tohoku, Japan earthquake

III. Outreach to K-12 students and educators

2025	Guest speaker, Yale Model United Nations conference for high school students
2024	Co-presenter, Yale Pathways to Science workshops for high school students (4 total)
2010, 2019, 2023	Volunteer judge, New Haven Science Fair, New Haven, CT

2022	Co-host, Every Rock Has a Story YouTube series episode
2019, 2021, 2022	Guest speaker, Yale Young Global Scholars Program
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
2015-2019	Founder and coordinator, Field Experiences for Science Teachers (FEST) program (*involved Connecticut-based high school science teachers in one-week field seismology experiences; 19 participants total*)
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. Mentorship and DEI activities (in addition to committee work noted above)

2025	Presenter/panelist, Yale NextGEN in STEM Conference
2024	Presenter, AMS/AGU Heads/Chairs meeting on mental health in academia (virtual)
2024	Presenter, AGU/AGI Heads and Chairs Webinar on mental health in academia
2023	Member, planning committee, STEM 101 for Parents event (co-hosted by Yale EPS, New Haven Promise, and the Ethnic Online STEM Foundation)
2023	Invited speaker, GSA Pardee Session on mental health in the geosciences
2022-2023	Mentor, AGU Mentoring Network (member of a small group of junior and senior scientists; monthly virtual meetings)
2021	Panelist, SSA Connects Mentoring Session on grant and proposal writing (virtual)
2021	Unlearning Racism in Geosciences (URGE) program – Yale pod participant
2020, 2021, 2022	Guest speaker, Yale Warrior-Scholar Project workshop (via zoom)
2020	Facilitator, Yale EPS department workshop 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)
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

Publications

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

Citation statistics from Google Scholar: Total citations = 7538; h-index = 48; i10-index: 111.
ORCID: 0000-0003-1936-3840.

I. Peer-Reviewed Papers

135. Molitor, Z.^, Link, F.^, **Long, M. D.,** Ague, J. J., 2026. Extreme Moho relief preserved in Ohio's crust. *Geological Society of America Today*, 36, 4-9, doi:10.1130/GSATG639A.1.

134. Masis, R.*****, Karabinos, P., **Long, M. D.,** Waldron, J., Bourke, J. R.^, 2026. Crustal structure of Laurentia and peri-Gondwanan terranes beneath Ireland and Britain and comparison with eastern North America. *Journal of Geophysical Research: Solid Earth,* 131, e2025JB031184, doi:10.1029/2025JB031184.

133. Wolf, J., Link, F.^, **Long, M. D.,** Garnero, E., West, J. D., 2026. Subduction-driven upper mantle flow beneath and around the Philippine Sea Plate from seismic anisotropy. *Earth and Planetary Science Letters,* 678, 119827, doi:10.1016/j.epsl.2026.119827.

132. Link, F.^, Luo, Y.*, **Long, M. D.,** 2026. Probabilistic inversion of receiver functions for layered seismic anisotropy and application to the anisotropic lithosphere of southern New England. *Geophysical Journal International*, 244, ggaf509, 1-24, doi:10.1093/gji/ggaf509.

131. Löberich, E.^, Wolf, J.*, **Long, M. D.,** 2025. Effects of vertically aligned partial melt discs on SKS splitting in a subduction zone backarc setting. *Physics of the Earth and Planetary Interiors*, 368, 107451, doi:10.1016/j.pepi.2025.107451.

130. Bourke, J. R.^, Link, F.^, **Long, M. D.,** Wright, J., 2025. Evidence for Caribbean Plate subduction beneath the Isthmus of Panama and implications for subduction initiation and the closure of the Central American Isthmus during the Miocene. *Geochemistry, Geophysics, Geosystems,* 26, e2025GC012288, doi:10.1029/2024GC012288.

129. Luo, Y.*, **Long, M. D.,** Rondenay, S., King, S. D., Mazza, S. E., Wolf, J., 2025. Mantle transition zone-penetrating upwellings beneath the eastern North American margin and beyond. *Journal of Geophysical Research: Solid Earth,* 130, e2024JB030005, doi:10.1029/2024JB030005.

128. Bourke, J. R.^, **Long, M. D.,** Link, F.^, Karabinos, P., Webb, L., Luo, Y.*, Espinal, K.*, Masis, R.*, Li, Y., 2025. Crustal properties beneath the northeastern United States shaped by past tectonic processes. Geological Society of London Special publications, v. 577: *Structure and Evolution of Laurussian Orogens in Europe and North America from Geophysical Investigations*, doi:10.1144/SP557-2024-30.

127. Li, M., Wolf, J.*, Garnero, E., **Long, M. D.,** 2024. Flow and deformation in Earth's deepest mantle: insights from geodynamic modeling and comparisons with seismic observations. *Journal of Geophysical Research: Solid Earth*, 129, e2024JB029058, doi:10.1029/2024JB029058.

126. Wolf, J.*, Frost, D., A., Brewster, A., **Long, M. D.,** Garnero, E., West, J. D., 2024. Widespread D" anisotropy beneath North America and the northeastern Pacific Ocean and implications for upper mantle anisotropy measurements. *Journal of Geophysical Research: Solid Earth,* 129, e2024JB029516, doi:10.1029/ 2024JB029516.

125. Espinal, K.*, **Long, M. D.,** Karabinos, P., Bourke, J. R.^, 2024. Lithospheric structure above the Northern Appalachian Anomaly: Initial results from the NEST array. *Geophysical Research Letters*, 51, e2024GL109955, doi:10.1029/2024GL109955.

124. Boyd, O. S., Barnhart, W. D., Bourke, J.^, Chapman, M., Earle, P. S., Huang, G-c. D., Jobe, J., Kim, W.-Y., Link, F.^, Litherland, M., **Long, M. D.,** Michael, A. J., Mooney, W. D., Mountain, G. S., Nikolaou, S., Savvaidis, A., Waldhauser, F., Wolfe, C. J., Yoon, C., 2024. Preliminary observations of the 5 April 2024, *Mw* 4.8 New Jersey earthquake. *The Seismic Record,* 4(4), 240-250, doi:10.1785/0320240024.

123. Masis, R.*, **Long, M. D.,** Karabinos, P., Bourke, J. R.^, 2024. Structure of the crust beneath the Northern Appalachian Mountains: A detailed examination of the abrupt change in crustal thickness beneath northwestern Massachusetts. *Geochemistry, Geophysics, Geosystems*, 25, e2024GC011570, doi:10.1019/2024GC011570.

122. Wolf, J.*, Li, M., **Long, M. D.,** 2024. Redistribution of low-velocity heterogeneities through subduction-driven flow in the deep mantle beneath North America. *Earth and Planetary Science Letters,* 642, 118867, doi:10.1016/j.epsl.2024.118867.

121. Wolf, J.*, **Long, M. D.,** Frost, D. A., Nissen-Meyer, T., 2024. The expression of mantle seismic anisotropy in the global seismic wavefield. *Geophysical Journal International,* 238, 346-363, doi:10.1093/gji/ggae164.

120. Wolf, J.*, Li, M., **Long, M. D.,** Garnero, E., 2024. New insights into deep mantle dynamics from the measurement and interpretation of seismic anisotropy. *Reviews of Geophysics*, 62, e2023RC000833, doi:10.1029/2023RG000833.

119. Wolf, J.*, **Long, M. D.,** 2024. Splitting of ScS waves due to lowermost mantle anisotropy: Challenges and new global measurements. *Seismica*, 3(1), doi:10.26443/seismica.v3i1.1128.

118. Frost, D. A., Garnero, E., Creasy, N., Bozdağ, E., Wolf, J.*, **Long, M. D.,** Aderoju, A., Vite, R., 2024. Heterogeneous mantle effects on the behavior of SmKS waves and outermost core imaging. *Geophysical Journal International,* 237, 1655-1673, doi:10.1093/gji/ggae135.

117. Löberich, E.^, **Long, M. D.,** 2024. Follow the trace: Becoming a seismo-detective with a campus-based Raspberry Shake seismometer. *Seismological Research Letters,* 95, 2538-2553, doi:10.1785/0220230365.

116. Wolf, J.*, Li, M., Haws, A. A.*, **Long, M. D.,** 2024. Strong seismic anisotropy due to upwelling flow at the root of the Yellowstone mantle plume. *Geology,* 52, 379-382, doi:10.1130/G51919.1.

115. Wolf, J.*, **Long, M. D.,** Frost, D. A., 2024. Ultralow velocity zone and deep mantle flow beneath the Himalayas linked to subducted slab. *Nature Geoscience,* 17, 302-308, doi:10.1038/s41561-024-01386-5.
    - Associated commentary: The ultra-lowdown on mantle heterogeneity (Editorial), *Nature Geoscience,* 17, 271, doi:10.1023/s41561-024-01432-2; Bahadori, A., Ultralow velocity zones in the deep Earth. *Nature Geoscience,* 17, 275-277, doi:10.1038/s41561-024-01415-3.

114. Link, F.^, **Long, M. D.,** 2024. SITomo – a toolbox for splitting intensity tomography and application to the European Alps. *Journal of Geodynamics,* 159, 102018, doi:10.1016/j.jog.2024.102018. (Special issue: Seismic anisotropy – from rock samples to large-scale imprints in the lithosphere asthenosphere system)

113. **Long, M. D.,** 2024. Evolution, modification, and deformation of continental lithosphere: Insights from the eastern margin of North America. *Annual Review of Earth and Planetary Sciences,* 52, 549-580, doi:10.1146/annurev-earth-040522-115229.

112. Luo, Y.*, **Long, M. D.,** Karabinos, P., Rondenay, S., Masis, R.*, 2023. First-order transition in Appalachian orogenic processes revealed by along-strike variation of the Moho geometry, *Journal of Geophysical Research: Solid Earth,* 128, e2023JB027024, doi:10.1029/2023JB027024.

111. Luo, Y.*, **Long, M. D.,** Link, F.^, Karabinos, P., Kuiper, Y., 2023. Layered anisotropy beneath southern New England from anisotropy-aware receiver function analysis: Past tectonics and present-day mantle flow. *Geochemistry, Geophysics, Geosystems*, 24, e2023GC011118, doi:10.1029/2023GC011118.

110. Haws, A. A.*, **Long, M. D.,** Luo, Y.*, 2023. Anisotropic structure of normally-dipping and flat-slab segments of the Alaska subduction zone: Insights from receiver function analysis. *Tectonophysics,* 868, 230112, doi:10.1016/j.tecto.2023.230112.

109. Wolf, J.*, **Long, M. D.,** Li, M., Garnero, E., 2023. Global compilation of deep mantle anisotropy observations and possible correlation with low velocity provinces. *Geochemistry, Geophysics, Geosystems,* 24, e2023GC011070, doi:10.1029/2023GC011070.

108. Wolf, J.*, **Long, M. D.,** 2023. Upper mantle anisotropy and flow beneath the Pacific Ocean revealed by differential PS-SKS splitting. *Geophysical Research Letters,* 50, e2023GL104402, doi:10.1029/2023GL104402.

107. Liu, S., King, S. D., **Long, M. D.,** Benoit, M. H., Aragon, J. C., 2023. Receiver function analysis reveals lateral variations in temperature and water content in the mantle transition zone beneath eastern North America. *Geophysical Research Letters,* 50, e2022GL101965, doi:10.1029/2022GL101965.

106. Wolf, J.*, **Long, M. D.,** 2023. Lowermost mantle structure beneath the central Pacific Ocean: Ultra-low velocity zones and seismic anisotropy. *Geochemistry, Geophysics, Geosystems*, 24, e2022GC010853, doi:10.1029/2022GC010853.

105. Mittal, V.*, **Long, M. D.,** Evans, R. L., Byrnes, J. S., Bezada, M., 2023. Joint analysis of seismic and electrical observables beneath the Central Appalachians requires partial melt in the upper mantle. *Geochemistry, Geophysics, Geosystems,* 24, e2022GC010690, doi:10.1029/2022GC010690.

104. Wolf, J.*, **Long, M. D.,** Frost, D. A., Garnero, E., Aderojou, A., Creasy, N., Bozdağ, E., 2023. Observations of mantle seismic anisotropy using array techniques: Shear wave splitting of beamformed SmKS phases. *Journal of Geophysical Research: Solid Earth*, 128, e2022JB025556, doi:10.1029/2022JB025556.

103. Wolf, J.*, **Long, M. D.,** Creasy, N., Garnero, E., 2023. On the measurement of S_{diff} shear wave splitting due to lowermost mantle anisotropy. *Geophysical Journal International*, 233, 900-921, doi:10.1093/gji/ggac490.

102. Pisconti, A., Creasy, N.*, Wookey, J., **Long, M. D.,** Thomas, C., 2023 (online in 2022). Mineralogy, fabric, and deformation domains in D" across the southwestern border of the African LLSVP. *Geophysical Journal International*, 232, 705-724, doi:10.1093/gji/ggac359.

101. Wolf, J.*, **Long, M. D.,** 2022. Slab-driven flow at the base of the mantle beneath the northeastern Pacific Ocean. *Earth and Planetary Science Letters,* 594, 117758, doi:10.1016/j.epsl.2022.117758.

100. Luo, Y.*, **Long, M. D.,** Rondenay, S., Karabinos, P., Kuiper, Y. D., 2022. Wavefield migration imaging of Moho geometry and upper mantle structure beneath southern New England. *Geophysical Research Letters*, 49, e2022GL099013, doi:10.1029/2022GL099013.
    - Associated commentary: van Staal, C. R., Zagorevski, A., 2023. A note on the timing and nature of the Moho geometry and upper mantle structure beneath southern New England. *Geophysical Research Letters,* 50, e2022GL102057.

99. Gao, H., **Long, M. D.,** 2022. Tectonics and geodynamics of the Cascadia subduction zone. *Elements,* 18(4), 226-231, doi:10.2138/gselements.18.4.226.

98. Goldhagen, G., Ford, H. A., **Long, M. D.,** 2022. Evidence for a lithospheric step and pervasive lithospheric thinning beneath southern New England, northeastern USA. *Geology*, 50, 1078-1082, doi:10.1130/G50133.1.

97. Wolf, J.*, **Long, M. D.,** Leng, K., Nissen-Meyer, T., 2022. Constraining deep mantle anisotropy with shear wave splitting measurements: Challenges and new measurement strategies. *Geophysical Journal International*, 230, 507-527, doi:10.1093/gji/ggac055.

96. Löberich, E., **Long, M. D.,** Wagner, L. S., Qorbani, E., Bokelmann, G., 2021. Constraints on olivine deformation from SKS shear-wave splitting beneath the southern Cascadia subduction zone back-arc. *Geochemistry, Geophysics, Geosystems*, 22, e2021GC010091, doi:10.1029/2021GC010091.

95. Creasy, N.*, Pisconti, A., **Long, M. D.,** Thomas, C., 2021. Modeling of seismic anisotropy observations reveals plausible lowermost mantle flow directions beneath Siberia. *Geochemistry, Geophysics, Geosystems*, 22, e2021GC009924, doi:10.1029/2021GC009924.

94. **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., Miller, S., Aragon, J. C., Liu, S., 2021. Evaluating models for lithospheric loss and intraplate volcanism beneath the Central Appalachian Mountains. *Journal of Geophysical Research: Solid Earth,* 126, e2021JB022571, doi:10.1029/2021JB022571.

93. Wolf, J.*, **Long, M. D.,** Nissen-Meyer, T., Leng, K., 2022 (online in 2021). Sensitivity of SK(K)S and ScS phases to heterogeneous anisotropy in the lowermost mantle from global wavefield simulations. *Geophysical Journal International*, 228, 366-386, doi:10.1093/gji/ggab347.

92. Luo, Y.*, **Long, M. D.,** Karabinos, P., Kuiper, Y., Rondenay, S., Aragon, J. C., Sawade, L., Makus, P., 2021. High-resolution Ps receiver function imaging of the crust and mantle lithosphere beneath southern New England and tectonic implications. *Journal of Geophysical Research: Solid Earth*, 126, e2021JB022170, doi:10.1029/2021JB022170.

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.

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II. Manuscripts in Review/Revision

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R3. Link, F.^, **Long, M. D.,** 2026. XKS splitting tomography reveals deformation of hydrated lithosphere at the edge of the Peruvian flat slab. *Earth and Planetary Science Letters,* in review.

R2. Bourke J.^, Link, F.^, Boyd, O., **Long, M. D.,** Savvaidis, A., Waldhauser, F., Litherland, M., 2026. Rapid deployment of seismic instrumentation following the April 5th, 2024 *Mw* 4.8 Tewksbury, NJ earthquake. *Seismological Research Letters,* accepted pending minor revisions.

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III. Manuscripts in Preparation

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