CURRICULUM VITAE

Karen M. Fischer
Department of Earth, Environmental and Planetary Sciences
Brown University, Providence, Rhode Island 02912 USA

Education

Ph.D. in Geophysics, Massachusetts Institute of Technology, Cambridge, MA, 1989.
Dissertation: *The Morphology and Dynamics of Subducting Lithosphere.*
B.S. in Geology and Geophysics, *summa cum laude,* Yale University, New Haven, CT, 1983.

Professional Appointments

7/19 - present	Louis and Elizabeth Scherck Distinguished Professor of Geological Sciences, Brown University
7/02 - 6/19	Professor of Earth, Environmental and Planetary Sciences, Brown University
7/04 - 6/07	Royce Family Professor in Teaching Excellence, Brown University
7/96 - 6/02	Associate Professor of Geological Sciences, Brown University
9/90 - 6/96	Assistant Professor of Geological Sciences, Brown University
2/89 - 9/90	Postdoctoral Fellow, Lamont-Doherty Earth Observatory of Columbia University
11/88 - 1/89	Postdoctoral Associate, Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology
9/83 - 10/88	Graduate Research Assistant, Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology

Research Focus

Using seismic waves to understand the structure, dynamics and evolution of Earth's interior

Honors

Member of the American Academy of Arts and Sciences - 2025
Inge Lehmann Medal, American Geophysical Union - 2023
Meenakshi Narain Excellence in Research Mentoring Award, Brown University - 2023
W. S. Jardetzky Medal, Lamont-Doherty Earth Observatory, Columbia University - 2022
Harry Fielding Reid Medal, Seismological Society of America - 2019
Beno Gutenberg Lecturer, American Geophysical Union - 2016
Jack E. Oliver Visiting Professor, Cornell University - 2013 to 2015
Fellow of the American Geophysical Union - 2010
Karen T. Romer Award for Undergraduate Advising and Mentoring, Brown University - 2009
Royce Family Professor in Teaching Excellence, Brown University - 2004 to 2007

Service (Selected)

Profession:

Chair, Gordon Research Conference: Interior of the Earth - 6/23 to 7/25 (Co-chair 6/19 to 6/23)
Nominating Committee, EarthScope Consortium – 1/24 to 10/25
National Science Foundation Review Panels for the EarthScope (2006, 2008, 2010), Continental Dynamics (2008, 2009, 2011), Geophysics (2000-2003) programs and the Geosciences Directorate (2026)

Seismological Society of America Board of Directors - 4/21 to 4/24
Outstanding Reviewer Award - Earth and Space Science - 2024
College of Fellows Distinguished Lecturer, American Geophysical Union - 2021 and 2022
National Science Foundation Division of Earth Sciences Geophysical Facilities Portfolio Review Committee - 7/20 to 4/21
Board of Directors, IRIS Consortium - 12/15 to 12/18, 12/04 to 12/07
Organizing Committee, EarthScope National Meeting - 8/16 to 5/17
Organizing Committee, EarthScope Synthesis Workshop on the Evolution of the Southern Appalachian Lithosphere - 3/16 to 3/17
National Science Foundation EarthScope Lecturer - 2017 and 2018
Associate Editor, Science Advances - 9/14 to 9/16
Co-chair, Workshop on Future Seismic and Geodetic Facility Needs in the Geosciences - 12/14 to 9/15
Chair, Committee of Visitors, Deep Earth Processes Section, EAR Directorate, GEO Division, National Science Foundation - 1/14 to 10/14
National Science Foundation Geosciences Advisory Committee - 3/12 to 12/14
President, Seismology Section, American Geophysical Union - 1/13 to 12/14 (President-elect 7/10 to 12/12; Past President 1/15 to 12/16)
Secretary, Seismology Section, American Geophysical Union - 7/06 to 7/08
American Geophysical Union Ethics Committee - 7/11 to 12/12
American Geophysical Union Grand Challenges Committee - 1/12 to 12/12
American Geophysical Union Lehman Award Committee – 2007 and 2009
International Development Seismology Committee, IRIS Consortium -9/06 to 12/11
Co-convener, Geophysical Hazards and Plate Boundary Processes in Central America, Mexico and the Caribbean: A Workshop to Build Seismological Collaboration and Capacity (NSF/USAid) - 1/09 to 11/10
Co-chair, NSF EarthScope Science Plan Workshop and Report - 7/09 to 2/10
Co-convener, MARGINS Theoretical and Experimental Institute: Volatiles in the Subduction Factory - 07/08 to 3/10
National Science Foundation MARGINS Distinguished Lecturer - 2006 and 2008
Editor, Geochemistry, Geophysics, Geosystems (G^3) - 2/03 to 8/05
Review Panel for the Mellon Foundation Career Enhancement Awards for Junior Faculty from Underrepresented Groups - 12/01 to 2/06
Global Seismic Network Committee, IRIS Consortium - 1/04 to 12/04
American Geophysical Union Excellence in Geophysical Education Award Committee - 7/00 to 12/03
Education and Outreach Committee, IRIS Consortium - 12/96 to 12/98
Executive Committee, IRIS Consortium - 12/95 to 12/97
Data Management System Standing Committee, IRIS Consortium - 1/93 to 12/95
Associate Editor, Journal of Geophysical Research (Solid Earth) - 1/92 to 12/95
National Science Foundation Site Review Panel for the Southern California Earthquake Center - 8/96
U. S. Geological Survey NEHRP Proposal Evaluation Panels (1993, 1994, 1997, 1998)

University:
Dean of the Faculty Advisory Committee, 1/26 to present
Mentor, Junior Faculty Mentoring Program, Dean of the Faculty Office - 9/11 to present

Promotion Demystified: A Workshop for Associate Professors in the Sciences, Dean of the Faculty Office - 4/26
Workshop on Navigating the NSF Grant System for the Brown Postdoc Council Skills 101 Workshop Series - 3/23
Search Committee for IBES Director - 11/19 to 1/20
Doctoral Education Strategic Planning Committee - 9/12 to 5/13
Search Committee for the Provost - 1/98 to 5/98 and 12/10 to 4/11
Search Committee for the Vice-President for International Affairs - 6/09 to 8/09
Science Advisory Board (Undergrad Science Resource Center and its programs) - 9/07 to 12/12
Advisory Board, Sheridan Center for Teaching and Learning - 7/02 to 7/11 (Chair 7/06 to 7/08)
ADVANCE Steering Committee - 5/06 to 12/11
Chair of Undergraduate Science Education Committee - 9/06 to 9/07
Tenure, Promotions and Appointments Committee (TPAC) - 7/03 to 12/05 (Vice-Chair 9/04 to 7/05, Chair 7/05 to 12/05)
Search Committee for the Dean of Admissions - 2/05 to 7/05
Search Committee for the Dean of the Faculty - 1/04 to 5/04
Resumed Undergraduate Education Policy and Admissions Committee (RUEPAC) - 7/01 to 7/04 (Chair 7/02 to 7/04)
Committee on the Status of Women - 7/96 to 7/99 (Chair 7/97 to 7/99)
College Curriculum Council - 7/98 to 7/00 (Vice-chair 9/99 to 7/00)
University Benefits Review Committee - 7/92 to 1/99

Department:
PI of Dynamic Earth in the 21st Century, the DEEPS-Leadership Alliance summer undergraduate research program - 1/16 to present (NSF EAR REU since 1/19)
Advisor to Geophysics and Climate Physics Concentration (formerly Geology-Physics/Math) - 9/90 to 12/19, 7/24 to present
First-year and Sophomore Advisor – many years; most recently 9/24 to present
Director of Undergraduate Studies - 7/20 to 12/23
Diversity and Inclusion Action Committee - 1/17 to 12/23
Chair's Advisory Committee - 7/97 to 7/00, 7/04 to 12/05, 7/06 to 12/13, 7/14 to 7/22
Curriculum Committee - 7/94 to 7/97, 7/02 to 7/03, 7/05 to 12/05, 7/08 to 7/09
Numerous search, promotion and mentoring committees

Seismometer Deployments
(All data archived at the EarthScope Data Management System)
Missouri to Massachusetts Broadband Seismometer Experiment, U.S. - 1995 to 1996
NOMAD Broadband Seismometer Experiment, northeastern U.S. - 1997 to 1999
Florida to Edmonton Broadband Seismometer Experiment, U.S. and Canada - 2001 to 2002
TUCAN Broadband Seismometer Experiment, Costa Rica and Nicaragua - 2004 to 2006
SESAME Broadband Seismometer Experiment, southeastern U.S. - 2010 to 2014

Teaching

Courses:

2023-2024:

Semester I: EEPS 0220 – Earth and Environmental Processes (with Dan Ibarra)

Semester II: Sabbatical

2025-2026:

Semester I: EEPS 0220 – Understanding Earth and Environmental Processes (with Greg Hirth)

Semester II: EEPS 1650 - Earthquake Seismology

2024-2025:

Semester I: EEPS 0220 – Understanding Earth and Environmental Processes (with Greg Hirth)

Semester II: EEPS 2920K – Understanding the Mantle, Ice Sheets and their Interactions in Antarctica (with Victor Tsai)

Student and Postdoc Research Advising

Ph.D. Students:

Xiaoping Yang (’95)
Matthew Fouch (’99)
Aibing Li (’00, with Don Forsyth)
Chad Hall (’02, Marc Parmentier primary advisor)
Dayanthie Weeraratne (’05, Don Forsyth primary advisor, Marc Parmentier co-advisor)
Sarah Zaranek (’05, Marc Parmentier primary advisor)
Catherine Rychert (’07)
David Abt (’09)
Heather Ford (’13)
Julia MacDougall (’14)
Emily Hopper (’16)
Junlin Hua (’22)
Isabella Gama Dantas (’22)
Hannah Krueger (’23)
Yiran Huang (’26, Colleen Dalton primary advisor)
Sarah Bowers
Jessica Wen

Masters Students:

Mariela Salas (’09)
Daniel Friedman (’17)

Post-docs:

Stéphane Rondenay (2001-2003)
Vedran Lekić (2010-2011)
Margarete Jadamec (2011-2014)
Nicholas Mancinelli (2016-2018)
Zachary Eilon (2016-2017)

Eva Golos (2020-2022)
Kai-Xun Chen (2021-2023)
Michael Mann (2022-2025)

Brown Senior Theses: Michael Pasyanos ('91); Chad Nelsen ('92); Erich Roth ('93); Morgan Kinniburgh ('93); Eddy Gonzalez ('94); Julia Zaslow ('96), Alexander Stine ('96, with Marc Parmentier), Kristin Soule (‘99), Colleen Dalton (‘00), Ursula Manners (‘00), Margaret Welsh (’02), Ellen Syracuse (’03), Lindsey Doermann (’04), Elliot Grunewald (’05), Laura Martin (’06), Scott French (’07), Marsella Kachingwe (’11), Jocelyn West (’13), Alec Miller (’13.5), Greg Jordan-Detamore (’14), Adam Gilbert (’16), Camera Ford (’16), Alexandra Kim (’17), Emmanuel Guerzon (’17), Yichen Geng (‘19), Samantha Ouertani (’22), Anna Novatney (’23)

Other Undergraduate Research Projects Advised: Lynn Salvati, Elizabeth Wolf, Mariela Salas (Leadership Alliance Intern), Octavia Crompton, Natacha Meyer, Alexis Walker, Mila Owen, Erika Lopez-Garcia, Jenna Washington (Leadership Alliance Intern, Summer 2016), Joshua McDuffie (Leadership Alliance Intern, Summer 2017), Yichen Geng (UTRA, Summer 2017), Angel Santiago (Leadership Alliance Intern, Summer 2018), Zev Izenberg (UTRA, Summer 2019), Samantha Ouertani (UTRA, Summer 2019), Emily Carrero Mustelier (Leadership Alliance Intern, Summer 2020), Kara Jaramillo (Leadership Alliance Intern, Summer 2020), Grace Ward (Leadership Alliance Intern, Summer 2021), Gabrielle Rose (Leadership Alliance Intern, Summer 2023), Nicolas Valencia (Leadership Alliance Intern, Summer 2024), Ella Creane (UTRA, Spring 2026)

Peer-reviewed Publications (120)

* = student or postdoc advisee

*Wen, J. J., W. Heise, K. M. Fischer, G. A. Abers, K. van Wijk, J. D. Eccles, Z. Guo, K. Pratscher, M. Ingham, M. C. Rowe, T. Yang, J. P. Morgan, H. Chevallier, M. Soulsby, Z. Wu, J. Lin, M. K. Savage, F. Illsley-Kemp, J. Hopkins, Measuring Melt Pathways through the Lithosphere of the North Island, New Zealand, *Science Advances*, submitted.

Robinson, J. P., M. K. Savage, K. van Wijk, T. Yang, J. Lin, K. M. Fischer, G. A. Abers, H. Chevallier, J. D. Eccles, F. Illsley-Kemp, M. C. Rowe, J. P. Morgan, Z. Guo, M. Soulsby, J. Hopkins, Z. Wu, *J. J. Wen, Mantle deformation in northwestern New Zealand, *Geophys. Res. Lett.,* submitted.

Fischer, K. M., Crust and Lithospheric Structure - Seismological Constraints on the Lithosphere-Asthenosphere Boundary. In: Francesca Funicello (editor-in-chief) *Treatise on Geophysics*, 3rd edition, Oxford: Elsevier, submitted.

Brunsvik, B., Z. Eilon, A. Hariharan, E. Golos, K. M. Fischer, A new plate-scale model of the conterminous US from joint inversion of a suite of seismic data*, J. Geophys. Res.,* submitted.

Lin, J., T. Yang, Z. Li, Y. Wu, Y. Wang, D. Liu, K. van Wijk, M. Soulsby, H. Chevallier, J. P. Morgan, Z. Guo, M. K. Savage, G. A. Abers, K. M. Fischer, Seismic experiment studying the origin of Auckland Volcanic Field: Phase I Seafloor Dataset, *Seism. Res. Lett.,* in press.

Huang, Y., C. A. Dalton, K. M. Fischer, Investigating layered cratonic lithosphere in the Fennoscandian Shield, *Geochem. Geophys. Geosyst*., 27, e2026GC013210, doi: 10.1029/2026GC013210, 2026.

Golos, E. M., K. M. Fischer, Z. Eilon, Seismic constraints on temperature, partial melt, and lithosphere-asthenosphere dynamics in the southwestern United States, *Geochem. Geophys. Geosyst*., 27, e2025GC012755, doi:10.1029/2025GC012755, 2026.

Li, A., K. M. Fischer, J. Wu. Z. Tao, Reply to Comment by Peace et al. on *Revealing the Cape Verde Hotspot Track Across the Great Lakes*, *Geophys. Res. Lett.,* 52, e2025GL118941, doi: 10.1029/2025GL118941, 2025.

*Brown, S. E., K. M. Fischer, Investigating the Antarctic Lithosphere through Sp Receiver function analysis, *Geochem. Geophys. Geosyst*., 26, e2025GC012268, doi: 10.1029/2025GC012268, 2025.

Tao, Z., A. Li, J. Wu, K. M. Fischer, Revealing the Cape Verde hotspot track across the Great Lakes, *Geophys. Res. Lett.,* 52*,* e2024GL110777, doi:10.1029/2024GL110777, 2025.

*Carrero Mustelier, E., K. M. Fischer, *J. Hua, *I. Gama, P. C. La Femina, M. Higgins, Relationships between upper plate structure, mantle wedge melting and fore-arc sliver transport in the Nicaraguan subduction zone, *The Seismic Record*, 4, 252-258, doi.org/10.1785/0320240026, 2024.

*Golos, E., B. Brunsvik, Z. Eilon, K. M. Fischer, J. Byrnes, J. Gaherty, A new view of shear wavespeed and the lithosphere-asthenosphere boundary in the southwestern United States, *J. Geophys. Res*., 129, e2024JB029220, doi:10.1029/2024JB029220, 2024.

*Chen, K.-X., D. W. Forsyth, K. M. Fischer, A mid-lithospheric discontinuity detected beneath 155 Ma western Pacific seafloor using Sp receiver functions, *Geophys. Res. Lett.,* 51, e2024GL108347, doi:10.1029/2024GL108347, 2024.

Durand, S., M. Putak Juriček, K. M. Fischer, Hydrous melting and its seismic signature, *Elements*, 20, 241-246, doi: 10.2138/gselements.20.4.241, 2024.

*Mann, M. E., K. M. Fischer, J. A. Benowitz, Insights into inherited crustal features and Southern Alaska tectonic history from Sp receiver functions, *Tectonics and Seismic Structure of Alaska and Northwestern Canada: EarthScope and Beyond, Geophysical Monograph 290,* N. A. Ruppert, M. A. Jadamec, J. T. Freymueller eds., American Geophysical Union*,* 335-353, doi:10.1002/9781394195947.ch12, 2024.

Yang, X., *M. E. Mann, K. M. Fischer, M. Jadamec, S. Wei, G. Pavlis, A. Schaeffer, Synthesis of the seismic structure of the greater Alaska region: Continental lithosphere, *Tectonics and Seismic Structure of Alaska and Northwestern Canada: EarthScope and Beyond, Geophysical Monograph 290,* N. A. Ruppert, M. A. Jadamec, J. T. Freymueller eds., American Geophysical Union*,* 185-214, doi:10.1002/9781394195947.ch6, 2024.

Pavlis, G., M. Jadamec, *M. E. Mann, X. Yang, A. Schaeffer, S. Wei, K. M. Fischer, Synthesis of the Seismic Structure of the Greater Alaska Region: Subducting Slab Geometry, *Tectonics and Seismic Structure of Alaska and Northwestern Canada: EarthScope and Beyond, Geophysical Monograph 290,* N. A. Ruppert, M. A. Jadamec, J. T. Freymueller eds., American Geophysical Union*,* 237-266, doi:10.1002/9781394195947.ch8, 2024.

Jadamec, M., G. Pavlis, X. Yang, K. M. Fischer, S. Wei, *M. E. Mann, A. Schaeffer, Synthesis of the Seismic Structure of the Greater Alaska Region: Geodynamics Implications, *Tectonics and Seismic Structure of Alaska and Northwestern Canada: EarthScope and Beyond, Geophysical Monograph 290,* N. A. Ruppert, M. A. Jadamec, J. T. Freymueller eds., American Geophysical Union*,* 267, doi:10.1002/9781394195947.ch9, 2024.

*Hua, J., K. M. Fischer, T. W. Becker, E. Gazel, G. Hirth, Asthenospheric low velocity zone consistent with globally prevalent partial melting, *Nature Geo.,* doi: 10.1038/s41561-022-01116-9, 2023.

*Hua, J., K. M. Fischer, E. Gazel, E. M. Parmentier, G. Hirth, Long-distance asthenospheric transport of plume-influenced mantle, *Geochem. Geophys. Geosyst*., 24, e2022GC010605, doi:10.1029/2022GC010605, 2023.

*Gama, I., K. M. Fischer, C. A. Dalton, Z. Eilon, Variations in lithospheric thickness across the Denali Fault and in northern Alaska, *Geophys Res. Lett.,* 49, e2022GL101256, doi:10.1029/2022GL101256, 2022.

*Gama, I., K. M. Fischer, *J. Hua, Mapping the lithosphere and asthenosphere beneath Alaska with Sp converted waves, *Geochem. Geophys. Geosyst.,* 23, e2022GC010517, doi:10.1029/2022GC010517, 2022.

Higgins, M., P. C. La Femina, A. J. Saballos, *S. Ouertani, K. M. Fischer, H. Geirsson, W. Strauch, G. Mattioli, R. Malservisi, Cascading hazards in a migrating forearc-arc system: Earthquake and eruption triggering in Nicaragua, *J. Geophys. Res*., 127, e2022JB024899, doi: 10.1029/2022JB024899, 2022.

*Golos, E. M., K. M. Fischer, New insights into lithospheric structure and melting beneath the Colorado Plateau, *Geochem. Geophys. Geosyst*., 23, e2021GC010252, doi: 10.1029/2021GC010252, 2022.

*Krueger, H. E., *I. Gama, K. M. Fischer, Global variation in cratonic mid-lithospheric discontinuities from Sp receiver functions, *Geochem. Geophys. Geosyst*., 22, e2021GC009819, doi: 10.1029/2021GC009819, 2021.

*Nathan, E., *A. Hariharan, D. Florez, K. M. Fischer, Multi-layer seismic anisotropy beneath Greenland, *Geochem. Geophys. Geosyst.,* 22, e2020GC009512, doi:10.1029/2020GC009512, 2021.

*Gama, I., K. M. Fischer, Z. Eilon, *H. E. Krueger, C. A. Dalton, L. M. Flesch, Shear-wave velocity structure beneath Alaska from a Bayesian joint inversion of Sp receiver functions and Rayleigh wave phase velocities, *Earth Planet. Sci. Lett*., 560, 116785, doi: 10.1016/j.epsl.2021.116785, 2021.

Saha, S., Y. Peng, R. Dasgupta, M. Mookherjee, K. M. Fischer, Assessing the presence of volatile-bearing mineral phases in the cratonic mantle as a possible cause of mid-lithospheric discontinuities, *Earth Planet. Sci. Lett*., 553, 116602, doi: 10.1016/j.epsl.2020.116602, 2021.

Fischer, K. M., C. A. Rychert, C. A. Dalton, M. S. Miller, C. Beghein, D. L. Schutt, A comparison of oceanic and continental mantle lithosphere, *Phys. Earth Planet. Int.,* 309, 106600, doi:10.1016/j.pepi.2020.106600, 2020.

*Hua, J., K. M. Fischer, M. Wu., M., N. A. Blom, New approaches to multifrequency Sp stacking tested in the Anatolian region, *J. Geophys. Res*., 125, e2020JB020313, doi: 10.1029/2020JB020313, 2020.

Tao, Z., A. Li, K. M. Fischer, Hotspot signatures at the North American passive margin, *Geology*, 49, doi: 10.1130/G47994.1, 2020.

*Chen, K.-X., K. M. Fischer, *J. Hua, Y. Gung, Imaging crustal melt beneath northeast Japan with Ps receiver functions, *Earth Planet. Sci. Lett*., 537, 116173, doi: 10.1016/j.epsl.2020.116173, 2020.

*Hua, J., K. M. Fischer, N. J. Mancinelli, T. Bao, Imaging with pre-stack migration based on Sp scattering kernels, *Geophys. J. Int.,* 220, 428-449, doi: 10.1093/gji/ggz459, 2019.

Daniels, C., Z. Peng, Q. Wu, S. Ni, X. Meng, D. Yao, L. Wagner, K. Fischer, The 2014 Mw 4.1 South Carolina earthquake sequence: Aftershock productivity, hypocentral depths, and stress drops, *Seismol. Res. Lett.*, *91*, 452-464, doi: 10.1785/0220190034, 2019.

*Hopper, E. and K. M. Fischer, The changing face of the lithosphere-asthenosphere boundary: Imaging continental scale patterns in upper mantle structure across the contiguous U.S.

with Sp converted waves, *Geochem. Geophys. Geosyst.,* 19, doi:10.1029/2018GC007476, 2018.

*Eilon, Z., K. M. Fischer, C. A. Dalton, An adaptive Bayesian inversion for upper mantle structure using surface waves and scattered body waves, *Geophys. J. Int.,* 214, 232–253, doi:10.1093/gji/ggy137, 2018.

Wagner, L. S., K. M. Fischer, R. Hawman, E. Hopper, D. Howell, The relative roles of inheritance and long-term passive margin lithospheric evolution on the modern structure and tectonic activity in the southeastern United States, *Geosphere*, doi: 10.1130 /GES01593.1, 2018.

Jadamec, M. A., O. Kreylos, B. Chang, K. M. Fischer, and B. M. Yikilmaz, A visual survey of global slab geometries and implications for a three-dimensional subduction paradigm, *Earth and Space Science*, doi:10.1002/2017EA000349, 2018.

Hu, J., L. Liu, M. Faccenda, Q. Zhou, K. M. Fischer, S. Marshak, C. Lundstrom, Southern hemisphere cratonic root loss due to plume-lithosphere interaction, *Nature Geo.*, 11, 203–210, doi:10.1038/s41561-018-0064-1, 2018.

Chen, C., H. Gilbert, K. M. Fischer, C. L. Andronicos, G. L. Pavlis, M. W. Hamburger, S. Marshak, T. H. Larson, X. Tang, Lithospheric discontinuities beneath the U.S. Midcontinent - signatures of Proterozoic terrane accretion and failed rifting, *Earth Planet. Sci. Lett*., 481, 223-235, 10.1016/j.epsl.2017.10.033, 2018.

*Hua, J., K. M. Fischer, M. K. Savage, The lithosphere-asthenosphere boundary beneath the South Island of New Zealand, *Earth Planet. Sci. Lett*., 484, 92-102, 10.1016/j.epsl.2017.12.011, 2018.

*Mancinelli, N. J., K. M. Fischer, The spatial sensitivity of Sp converted waves---Scattered wave kernels and their applications to receiver-function migration and inversion, *Geophys. J. Int*., 212, 1722–1735, doi: 10.1093/gji/ggx506, 2017.

*Mancinelli, N. J., K. M. Fischer, C. A. Dalton, How sharp is the cratonic lithosphere-asthenosphere transition?, *Geophys. Res. Lett*., 43, 10.1002/2017GL074518, 2017.

*MacDougall, J., M. A. Jadamec, K. M. Fischer, The zone of influence of the subducting slab in the asthenospheric mantle, *J. Geophys. Res*., 122, 6599–6624,10.1002/2017JB014445, 2017.

Lekić, V., K. M. Fischer, Interpreting Sp Receiver Functions, *Geophys. J. Int*., 210, 874-886, 2017.

*Hopper, E., K. M. Fischer, L. S. Wagner, R. B. Hawman, Reconstructing the end of the Appalachian Orogeny, *Geology*, 45, 15-18, 10.1130/G38453.1, 2017.

*Hopper, E., K. M. Fischer, S. Rondenay, R. B. Hawman, L. S. Wagner, Imaging crustal structure beneath the southern Appalachians with wavefield migration, *Geophys. Res. Lett.*, 43, 12,054–12,062, 10.1002/2016GL071005, 2016.

Parker Jr., E. H., R. B. Hawman, K. M. Fischer, L. S. Wagner, Estimating crustal thickness using SsPmp in regions covered by low-velocity sediments: Imaging the Moho beneath the SESAME array, SE Atlantic Coastal Plain, *Geophys. Res. Lett*., 43, 9627–9635, 10.1002/2016GL070103, 2016.

Biryol, C. B., L. S. Wagner, K. M. Fischer, R. B. Hawman, Relationship between observed upper mantle structures and recent tectonic activity across the Southeastern United States, *J. Geophys. Res., 121*, 10.1002/2015JB012698, 2016.

*Hopper, E., K. M. Fischer, The meaning of midlithospheric discontinuities: A case study in the northern U.S. craton, *Geochem. Geophys. Geosyst.,* 16, 4057–4083, 10.1002/2015GC006030, 2015.

Parker Jr., E. H., R. B. Hawman, K. M. Fischer, L. S. Wagner, Constraining lithologic variability along the Alleghanian detachment in the southern Appalachians using passive-source seismology, *Geology, 43,* 431-434*,* 10.1130/G36517.1*,* 2015.

*MacDougall, J. G., K. M. Fischer, D. W. Forsyth, R. B. Hawman, L. S. Wagner, Shallow mantle velocities beneath the southern Appalachians from Pn phases, *Geophys. Res. Lett., 42*, 10.1002/2014GL062714, 2015.

Fischer, K. M., Crust and Lithospheric Structure - Seismological Constraints on the Lithosphere-Asthenosphere Boundary. In: Gerald Schubert (editor-in-chief) Treatise on Geophysics, 2nd edition, Oxford: Elsevier, pp. 587-612, 10.1016/B978-0-444-53802-4.00026-9, 2015.

Abers, G. A., K. M. Fischer, G. Hirth, D. A. Wiens, T. Plank, B. K. Holtzman, C. McCarthy, E. Gazel, Reconciling mantle attenuation-temperature relationships from seismology, petrology, and laboratory measurements, *Geochem. Geophys. Geosys*., *15*, 10.1002/2014GC005444, 2014.

*MacDougall, J. G., C. Kincaid, S. Szwaja, K. M. Fischer, The impact of slab dip variations, gaps, and rollback on mantle wedge flow: insights from fluids experiments, *Geophys. J. Int*., *197,* 705-730, 10.1093/gji/ggu053, 2014.

Calixto, F. J., D. Robinson, E. Sandvol, S. Kay, D. Abt, K. Fischer, B. Heit, X. Yuan, D. Comte, P. Alvarado, Shear wave splitting and shear wave splitting tomography of the southern Puna plateau, *Geophys. J. Int*., *199,* 688-699. 10.1093/gji/ggu296, 2014.

*Ford, H. S., K. M. Fischer, V. Lekić, Localized shear in the deep lithosphere beneath the San Andreas fault system, *Geology*, *42*, 295-298, 10.1130/G35128.1, 2014.

*Hopper, E., *H. A. Ford, K. M. Fischer, V. Lekić, M. J. Fouch, The lithosphere-asthenosphere boundary and the tectonic and magmatic history of the northwestern United States, *Earth. Planet. Sci. Lett*., *402*, 69-81, 10.1016/j.epsl.2013.12.016, 2014.

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Conference Presentations

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2025:

*Brown, S., *N. Valencia, *K. M Fischer, Detecting Ice-Sheet and Subglacial Variations in Antarctica Using Ps Receiver Functions, Abstract S33C-0267 presented at the 2025 AGU Fall Meeting, 15-19 Dec., 2025.

*Wen, J., K. M Fischer, G. A. Abers, K. van Wijk, J. D. Eccles, Z. Guo, T. Yang, J. P. Morgan, H. Chevallier, M. Soulsby, Z. Wu, J. Lin, M. K. Savage, F. Illsley-Kemp, Constraining Interactions between Partial Melt and the Lithosphere beneath the Auckland Volcanic Field and the North Island of New Zealand with Sp Receiver Functions, Abstract V41C-0076C presented at the 2025 AGU Fall Meeting, 15-19 Dec., 2025.

*Krueger, H. E., C. A. Dalton, K. M. Fischer, J. B. Russell, Structure of the Antarctic Uppermost Mantle: Regional-Scale Rayleigh Phase Velocity and Attenuation, Abstract DI43B-0028 presented at the 2025 AGU Fall Meeting, 15-19 Dec., 2025.

Huang, Y., C. A. Dalton, K. M. Fischer, Layered Cratonic Lithosphere: From Regional Scales to Global Perspectives, Abstract T32A-09 presented at the 2025 AGU Fall Meeting, 15-19 Dec., 2025.

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Golos, E. M., K. M. Fischer, Z. Eilon, Seismic Evidence for Melt Infiltration in the Lower Lithosphere in the Southwestern United States, Abstract T43A-06 presented at the 2025 AGU Fall Meeting, 15-19 Dec., 2025.

Additional 2025 abstracts: Two at the AGU Fall Meeting, three at the 2025 Interior of the Earth Gordon Research Conference, one at the Inge Lehmann Symposium at the University of Oslo, one at the European Geosciences Union General Assembly, and five at the 2025 Geoscience Society of New Zealand Annual Conference.

1983-2024:

~379 abstracts from meetings of the American Geophysical Union, the European Geoscience Union, Gordon Research Conferences, SAGE/GAGE, the Incorporated Research Institutions in Seismology, the Seismological Society of America, and other organizations.