

HEATHER FORD – CURRICULUM VITAE

Assistant Professor of Geophysics

Department of Earth and Planetary Sciences

University of California - Riverside

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EDUCATION

- 2013 Brown University, **Ph.D. in Geological Sciences**
Thesis: “*A Seismological Perspective on the Lithosphere-Asthenosphere Boundary*”,
Advisor: Karen Fischer
- 2009 Brown University, **M.Sc. in Geological Sciences**
Thesis: “*The Lithosphere-Asthenosphere Boundary Beneath Australia from Sp Receiver Function Imaging*”
Advisor: Karen Fischer
- 2005 University of Michigan, **Honors B.S. in Geological Sciences, Minor in Physics**
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APPOINTMENTS

- 2016-present **Assistant Professor of Geophysics**
Dept. of Earth and Planetary Sciences, University of California, Riverside
- 2013-2016 **Postdoctoral Associate**
Dept. of Earth and Planetary Sciences, Yale University
- 2007-2013 **Graduate Research Assistant**
Dept. of Earth, Environment, and Planetary Sciences, Brown University
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PUBLICATIONS

(*Student)

- Birkey, A.* and **Ford, H. A.**, Anisotropic Structure of the Australian Continent, *Frontiers in Earth Science: Solid Earth Geophysics*, doi: 10.3389/feart.2022.1055480, 2023.
- Goldhagen, G.*, **Ford, H. A.** and Long, M. D. Evidence for a lithospheric step and pervasive lithospheric thinning beneath southern New England, *Geology*, 50(9), 1078-1082, <https://doi.org/10.1130/g50133.1> 2022.
- Ford, H. A.**, Bezada, M., Brynes, J. S., Berkey, A., and Zhu, Z.*, The CIELO seismic experiment, in prep for *Seism. Res. Lett.*, <https://doi.org/10.1785/0220210237>, 2021.
- Zhu, Z*., J. S. Brynes, M. Bezada, and **H. A. Ford**, Investigating stress localization caused by lithospheric heterogeneity: Insights from seismic attenuation, *Geochem., Geophys., Geosys.*, 22, <https://doi.org/10.1029/>, 2021.

- Berkey, A.*, **H. A. Ford**, P. Dabney*, and G. Goldhagen*, The lithospheric architecture of Australia from seismic receiver function, *J. Geophys. Res.*, 126, <https://doi.org/10.1029/2020JB020999>, 2021.
- Wu, B.*, R. Douilly, **H. A. Ford**, G. Funning, H. Lee*, S. Niyogi*, M. Mendoza*, C. Kyriakopoulos and D. Oglesby, Monitoring human activity at a very local scale with ground motion records: the early stage of COVID-19 pandemic in California, USA, New York City, USA, and Mexicali, Mexico, *Seism. Res. Lett.*, 92, <https://doi.org/10.1785/0220200257>, 2021.
- Evans, R. L., Benoit, M. D., Elsenbeck, J., M. H., Long, **Ford, H. A.**, Zhu, J. and Garcia, X. Thinned Lithosphere Beneath the central Appalachian Mountains: A Combined Seismic and Magnetotelluric Study. *Earth Planet. Sci. Lett.*, 519, 308-326, <https://doi.org/10.1016/j.epsl.2019.04.046>, 2019.
- Long, M D., **Ford, H. A.**, Abrahams, L.*, Wirth, E. A. The seismic signature of lithospheric deformation beneath eastern North America due to Grenville and Appalachian orogenesis. *Lithosphere*, 9(6), 987-1001, doi:10.1130/L660.1, 2017.
- Creasy, N.*, M. D. Long, and **H. A. Ford**, Deformation in the lowermost mantle beneath Australia from observations and models of seismic anisotropy. *J. Geophys. Res.*, 122, 5243-5267, doi:10.1029/2016JB013901, 2017.
- Ford, H. A.**, M. D. Long and E. A. Wirth, Mid-lithospheric discontinuities and complex anisotropic layering in the mantle lithosphere beneath the Wyoming and Superior Provinces. *J. Geophys. Res.*, 121, doi:10.1029/2016JB012978, 2016.
- Ford, H. A.** and M. D. Long, A regional test of global models for flow, rheology and seismic anisotropy at the base of the mantle, *Phys. Earth Planet. Int.*, 245, 71-75, doi:10.1016/j.pepi.2015.05.004, 2015.
- Ford, H. A.**, M. D. Long, C. Lynner and X. He, Lower mantle flow along the edge of the African Superplume, *Earth Planet. Sci. Lett.*, 420, 12-22, doi.org/10.1016/j.epsl.2015.03.029, 2015.
- Selway, K., **H. A. Ford**, P. Kelemen, The seismic mid-lithosphere discontinuity, *Earth Planet. Sci. Lett.*, 414, 45-57, doi:10.1016/j.epsl.2014.12.029, 2015.
- Ford, H. A.**, K.M. Fischer and V. Lekic, Localized shear in the deep lithosphere beneath the San Andreas fault system, *Geology*, 42, 295-298, doi.org/10.1130/G35128.1, 2014.
- Hopper, E., **H. A. Ford**, K.M. Fischer, V. Lekic, and 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, doi:10.1016/j.epsl.2013.12.016, 2014.
- Ford, H. A.**, K.M. Fischer, D.L. Abt, C.A. Rychert, and L.T. Elkins-Tanton, The lithosphere-asthenosphere boundary and cratonic lithospheric layering beneath Australia from Sp wave imaging, *Earth Planet. Sci. Lett.*, 300, 299-310, doi:10.1016/j.epsl.2010.10.007, 2010.
- Abt, D.L., K.M. Fischer, S.W. French, **H. A. Ford**, H. Yuan, and B. Romanowicz, North American lithospheric discontinuity structure imaged by Ps and Sp receiver functions, *J. Geophys. Res.*, 115, B09301, doi:10.1029/2009JB006914, 2010.
- Fischer, K.M., **H. A. Ford**, D.L. Abt, and C.A. Rychert, *The lithosphere-asthenosphere boundary*, Annual Review of Earth and Planetary Sciences, 38, 551-575, doi:10.1146/annurev-earth-040809-152438, 2010.

SUBMITTED

Goldhagen, G.*, H. A. Ford and K. Atit, *Gender Differences in Spatial Skills in Introductory Geoscience Students*, submitted to Journal of Geoscience Education

IN PREPARATION

Berkey, A.*, **H. A. Ford**, M. Anderson, M. J. Bezada, and J. S. Byrnes, *Insight into the evolution of the eastern margin of the Wyoming Craton from complex, laterally variable shear wave splitting*, in prep for EPSL

Goldhagen, G.*, **H. A. Ford**, J. S. Byrnes, and M. N. Brounce, *New Measurements of seismic attenuation across the East Africa Rift*, in prep for GRL

UNREFERRED WHITE PAPERS

Adams, A., E. Attias, E. Bowles-Martinez, B. Chase, C. Chesley, **H.A. Ford**, C. Gustafson, L. Heagy, H. Janiszewski, G. Lucas, D. Melgar, K. Mendoza, B.S. Murphy, S. Naif, J. Peacock, J. Pepin, P.-E. Share, V. Sahakian, X. Shi, M. Siegfried, S.J. Sim, A. Swidinsky, S. Wang (2020), Early Career Community Vision For Future Magnetotelluric Facility, submitted to the National Science Foundation in response to Dear Colleague letter 20-037.

Evans, E.L., Nikulin, A., **Ford, H.A.**, Stamps, D.S., Creasy, N., Swiatlowski, J. et al. (2020): An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Education, Workforce, and Outreach Needs. Figshare. Online resource. <https://doi.org/10.6084/m9.figshare.12398372.v1>, submitted to the National Science Foundation in response to Dear Colleague letter 20-037.

Ford, H.A., Floyd, M., Stamps, D.S., Mendoza, M., Bozdog, E., Bowden, D. et al. (2020): An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Data Services Needs. Figshare. Online resource. <https://doi.org/10.6084/m9.figshare.12398321.v1>, submitted to the National Science Foundation in response to Dear Colleague letter 20-037.

Stamps, D.S., Eilon, Z. Fan, W., Lynner, C. Kehoe, H., **Ford, H.A.**, et al. (2020): An Early Career Investigator Community Vision for the Future NSF Geophysical Facility: Instrumentation Services Needs. Figshare. Online resource. <https://doi.org/10.6084/m9.figshare.12398288.v1>, submitted to the National Science Foundation in response to Dear Colleague letter 20-037.

CONFERENCE ABSTRACTS

(*Student)

Brounce, M., **Ford, H.A.**, Fischer, T.P., Byrnes, J., Scoggins, S.*, Jaramillo, S.*, Goldhagen, G.*, and Humphreys, J.* (2022) Volatiles, redox, and mantle attenuation in the East African Rift, 2022 Goldschmidt Conference

Birkey, A.*, **Ford, H.A.**, Bezada, M., Byrnes, J. Zhu, Z.*, Shallon, B.*, On the Edge: Evolution of the Eastern Margin of the Wyoming Craton, AGU 2022 Fall Meeting

- Shallon, B.* and **Ford, H.A.**, Comparing Estimates of Lithospheric Thickness from Sp Receiver Functions and Surface Wave Tomography in the Southwestern United States, 2022 AGU Fall Meeting
- Shallon, B.* and **Ford, H. A.** (2022, 09). Characterizing the lithosphere-asthenosphere boundary in southern and eastern California. Poster Presentation at 2022 SCEC Annual Meeting.
- Lin, F., Allam, A. A., **Ford, H. A.**, & Clayton, R. W. (2022). Basic Data Properties and Preliminary Results from a Dense 3C Temporary Seismic Array across the Los Angeles Basin. Poster Presentation at 2022 SCEC Annual Meeting.
- Bezada, M.J., Zhu, Z.*, Lee, H., **Ford, H.A.**, Long, M. (2022). What is "High Resolution" When it Comes to Continental Lithospheric Structure?, SSA Seismic Tomography Conference, Fall 2022.
- Shallon, B.*, **Ford, H.A.** (2022) Comparing Lithospheric Thickness Estimates From Sp Receiver Functions and Tomography in the Southwestern U.S., SSA Seismic Tomography Conference, Fall 2022.
- Goldhagen, G.*, Atit, K., **Ford, H.A.** (2022), Using Introductory Level Geoscience Instruction to Analyze the Face of Geology through 3D Visualization, SAGE/GAGE 2022 Community Science Workshop
- Ford, H.A.**, Goldhagen, G.*, Byrnes, J. and Brounce, M.N., New Insight into the Physical Properties of the East African Mantle from Seismic Attenuation, 2022 AGU Fall Meeting
- Ford, H.A.**, and Birkey, A.*, 2021, The seismic signature of past and present tectonic and dynamic processes on the lithosphere-asthenosphere boundary, GAGE/SAGE 2021 Community Science Workshop
- Birkey, A.*, **Ford, H.A.**, Bezada, M., Byrnes, J., 2021, Anisotropy on the Eastern Margin of the Wyoming Craton, GAGE/SAGE 2021 Community Science Workshop
- Ford, H.A.**, Bezada, M.J, Byrnes, J.S., Birkey, A.* and Zhu, Z.*, 2021, The CIELO Seismic
- Shallon, B.*, **Ford, H.A.**, 2021, Better constraining the physical properties of the lithosphere-asthenosphere boundary between the southwestern United States using Sp receiver function analysis, GAGE/SAGE 2021 Community Science Workshop
- Goldhagen, G.*, **Ford, H.A.**, Byrnes, J.S., Brounce, M.N, 2021, Variations in teleseismic body-wave attenuation along the East African Rift, In AGU Fall Meeting Abstracts (Vol. 2021, pp. S25D-0280).
- Birkey, A.*, **Ford, H.A.**, Bezada, M., Anderson, M.L., Byrnes, J.S., (2021), Seismic anisotropy and lithospheric structure across the eastern margin of the Wyoming craton, In *AGU Fall Meeting Abstracts* (Vol. 2021, pp. DI45C-0028).
- Shallon, B.* and **Ford, H.A.**, 2021, Sp receiver function analysis further constraining the physical properties of the lithosphere-asthenosphere boundary within the southwestern United States, In *AGU Fall Meeting Abstracts* (Vol. 2021, pp. DI15C-0030).
- Zhu, Z.*, Bezada, M., Byrnes, J.S., **Ford, H.A.**, 2021, Revisiting uplift in the Laramide Orogeny: Evidence for the Localization of Deformation by Variations in Lithospheric Strength from both Seismic Velocity and Attenuation, In *AGU Fall Meeting Abstracts* (Vol. 2021, pp. S45G-11)

- Birkey, A.*, **Ford, H.A.**, Goldhagen, G.*, Dabney, P.∧, Structure of the Australian Lithosphere, 2020 AGU Fall Meeting, Virtual
- Goldhagen, G.*, **Ford, H.A.** and M.D. Long, Evidence for a lithospheric mantle suture between Laurentia and the Appalachian Province beneath Connecticut using Sp receiver functions, 2020 AGU Fall Meeting, Virtual
- Wu, B., R. Douilly, **H. A. Ford**, G. Funning, H. Lee, S. Niyogi, M. Mendoza, C. Kyriakopoulos and D. Oglesby, Monitoring human activity at a very local scale with ground motion records: the early stage of COVID-19 pandemic in California, USA, New York City, USA, and Mexicali, Mexico, 2020 AGU Fall Meeting, Virtual
- Zhu, Z., M. Bezada, J.S. Byrnes and **H.A. Ford**, Investigating the role of lithospheric heterogeneity in localizing deformation during the Laramide Orogeny: Insights from seismic attenuation, 2020 AGU Fall Meeting, Virtual
- Ford, H.A.** and A. Birkey*, A Brief Summary of the Seismic Characteristics of Cratonic Mantle Lithosphere, Pardee Keynote Session, 2020 GSA Annual Meeting
- Goldhagen, G.*, Atit, K. and **H.A. Ford**, Changing the face of Geology through Spatial Reasoning: Analyzing the influence of 3D teaching methods and virtual learning environments, submitted, 2019 AGU Fall Meeting, San Francisco, CA, 9-13 Dec.
- Goldhagen, G.*, **Ford, H.A.** and M.D. Long, 2019. Characterizing lithospheric structure beneath Connecticut using Sp receiver functions, submitted, 2019 AGU Fall Meeting, San Francisco, CA, 9-13 Dec.
- Birkey, A.* and **H.A. Ford**, Seismic anisotropy across the Australian continent, submitted, 2019 AGU Fall Meeting, San Francisco, CA, 9-13 Dec.
- Birkey, A.*, **Ford, H.A.**, Bezada, M., J.S. Byrnes, Evidence for the eastern terminus of the Thunder Basin Block beneath the Wyoming Craton from the CIELO seismic experiment, submitted, 2019 AGU Fall Meeting, San Francisco, CA, 9-13 Dec.
- Dabney, P., **Ford, H.A.**, Birkey, A.*, and G. Goldhagen*, An updated analysis of Australian lithospheric structure using Sp receiver functions, submitted, 2019 AGU Fall Meeting, San Francisco, CA, 9-13 Dec.
- Ford, H.A.**, Possible applications of receiver function analysis to imaging lithospheric scale shear zones: Examples from the San Andreas and Walker Lane fault systems, 2019 AGU Fall Meeting, San Francisco, CA, 9-13 Dec.
- Birkey, A.*, and **H.A. Ford**, Shear wave splitting across Australia, AGU Fall Meeting, 2018.
- Ford, H.A.**, Bezada, M., and J.S. Byrnes, Characterizing structure of the Thunder Basin Block and the Black Hills: Preliminary results from the CIELO seismic experiment, AGU Fall Meeting, 2018.
- Goldhagen, G.*, **Ford, H.A.**, and M.D. Long, Characterizing Lithospheric Structure Beneath Connecticut using Sp Receiver Functions, AGU Fall Meeting, 2018.
- Long, M.D., Aragon, J.C., **Ford, H.A.**, Goldhagen, G.*, Yang, X., Gao, H., Y.D. Kuiper, Modification of lithospheric structure via subduction, terrane accretion, and rifting: Preliminary results from the SEISConn broadband experiment, AGU Fall Meeting, 2018.
- Small, D.*, **Ford, H.A.** and A. Birkey, Characterizing Australian lithospheric anisotropy with Ps receiver function analysis, AGU Fall Meeting, 2018.

- Ford, H.A.** and E. Schnorr*, Using Receiver Function Analysis to Place Constraints on Depth Dependent Seismic Anisotropy within the Basin and Range Province, Earthscope National Meeting, Anchorage, AK, 15-18 May, 2017.
- Ford, H.A.**, Imaging variations in seismic anisotropy across the San Andreas fault system, AGU Fall Meeting, 2016.
- Benoit, M. H., Evan, R. L., M. D. Long, J. Elsenbeck, **H. A. Ford** and J. Aragon, Thick and thin: Crust and lithospheric structure of the Mid-Atlantic Margin from the MAGIC seismic array, AGU Fall Meeting, 2016.
- Evan, R. L., M. H. Benoit, M. D. Long, J. Elsenbeck and **H. A. Ford**, Evidence for lithospheric loss beneath the Appalachians along the MAGIC line, AGU Fall Meeting, 2016.
- Schnorr, E.* and **H.A. Ford**, Imaging deep crustal flow in the Basin and Range Province, AGU Fall Meeting, 2016.
- Ford, H. A.**, M. Long, and E. Wirth, Characterizing azimuthal anisotropy at the mid-lithospheric discontinuity in the Superior and Wyoming Cratons, Abstract DI24A-01, presented at the 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec. (invited, talk)
- Ford, H. A.**, and M. Long, Testing geodynamic models of lowermost mantle flow with a regional shear wave splitting data set, Abstract DI23A-07, presented at the 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec. (talk)
- Creasy, N., M. Long, and **H. A. Ford**, Constraining lowermost mantle dynamic with seismic anisotropy observations beneath Australia, Abstract DI21A-2595, presented presented at the 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
- Abrahams, L., M. Long, **H. A. Ford** and E. Wirth, Continental deformation and the mid-lithospheric discontinuity along the Grenville Front, Abstract T11B-2892, presented at the 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
- Long, M., M. Benoit, **H. A. Ford** and others, Deformation of the Continental Lithosphere at the Margins of the North American Craton: Constraints from Seismic Anisotropy, Abstract T21F-01, presented at the 2015 Fall Meeting, AGU, San Francisco, Calif., 14-18 Dec.
- Ford, H. A.**, M. Long and W. Wirth, Characterizing lithospheric anisotropy within the Superior and Wyoming cratons using Ps receiver functions, Earthscope National Conference, Mt. Stowe, VT, 14-17 June, 2015.
- Ford, H. A.**, M. Long, X. He, and C. Lynner, Characterizing and testing models of lowermost mantle flow, rheology and seismic anisotropy, using a regional shear wave splitting data set, Interior of the the Earth Gordon Research Conference, Mount Holyoke College, MA, 7-12 June, 2015.
- Ford, H. A.**, E. Hopper, K.M. Fischer, V. Lekic, K. Selway, and P. Kelemen, Seismic constrains on the evolution of the continental lithosphere-asthenosphere boundary system, Abstract DI43B-02, presented at the 2014 Fall Meeting, AGU, San Francisco, Calif., 15-19 Dec.
- Ford, H. A.**, M. Long, X. He and C. Lynner, Vertically deflected mantle flow at the eastern edge of the African Large Low Shear Velocity Province, Abstract DI41A-4318, presented at the 2014 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.

- Fischer, K.M., **H. A. Ford** and V. Lekic, Constraining deformation at the lithosphere-asthenosphere boundary beneath the San Andreas fault with Sp phases, Abstract T51H-04, presented at the 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- Ford, H. A.**, M. D. Long, C. Lynner and X. He, Forward modeling of observations of shear wave splitting along the African LLSVP: Implications for flow in the deep mantle, Abstract DI41B-06, presented at the 2013 Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- Ford, H. A.**, M. D. Long, C. Lynner and X. He, Characterizing seismic anisotropy and mantle dynamics in the lowermost mantle near the African large low shear velocity province, Interior of the the Earth Gordon Research Conference, Mount Holyoke College, MA, 2-7 June, 2013.
- Ford, H. A.**, K.M. Fischer and V. Lekic, Localized Shear In The Deep Lithosphere Beneath The San Andreas Fault System, presented at Earthscope National Meeting, Raleigh, N.C., May 13-15, 2013
- Ford, H. A.**, K.M. Fischer and V. Lekic, Significant Variations in the Strength of the Lithosphere-Asthenosphere Boundary Across the California Plate Boundary, Abstract T53D-03, presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
- Fischer, K.M., **H. A. Ford**, V. Lekic and G. Hirth, Rheological implications of the seismological lithosphere-asthenosphere boundary, Abstract T32C-05, presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
- Hopper, E., **H. A. Ford**, K.M. Fischer, V. Lekic, and M.J. Fouch, How has magmatism in the northwest United States affected the lithosphere? Insights from Sp Receiver Functions, Abstract DI21A-2349, presented at 2012 Fall Meeting, AGU, San Francisco, Calif., 3-7 Dec.
- Ford, H. A.**, K.M. Fischer and V. Lekic, Variations in Lithosphere-Asthenosphere Boundary Strength Across the California Plate Boundary, Incorporated Research Institutions for Seismology Workshop, Boise, ID, June 13-15, 2012.
- Ford, H. A.**, K.M. Fischer, H. Yuan, and B.A. Romanowicz, Characterizing anisotropic lithospheric layering and the lithosphere-asthenosphere boundary in cratonic North America with Sp receiver functions, Abstract DI51C-02 presented at 2011 Fall Meeting, AGU, San Francisco, Calif., 5-9 Dec., 2011.
- Ford, H. A.**, K.M. Fischer, D.L. Abt, H. Yuan, and B.A. Romanowicz, The structure of the cratonic lithosphere beneath North America imaged by Sp receiver functions, Interior of the the Earth Gordon Research Conference, Mount Holyoke College, MA, 5-10 June, 2011.
- Yuan, H., B.A. Romanowicz, **H. A. Ford** and K.M. Fischer, Anisotropy in the North America Craton, Paper No. 175-7, GSA Annual Meeting, Minneapolis, MN, 9-12 October 2011.
- Fischer, K.M., **H. A. Ford**, D. Abt, H. Yuan, and B.A. Romanowicz, The lithosphere-asthenosphere boundary and cratonic lithospheric layering beneath stable North America, Abstract T31F-02, presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec., 2010.
- Fischer, K.M., **H. A. Ford**, V. Lekic, and D.L. Abt, The lithosphere-asthenosphere boundary beneath North America and Australia, Abstract D132A-06, presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec., 2010.

- Romanowicz, B.A., H. Yuan, **H. A. Ford**, K.M. Fischer, and D. Abt, Stratification of Azimuthal Anisotropy in the North America Craton, Abstract T31F-03, presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec., 2010.
- Ford, H. A.**, K.M. Fischer, D.L. Abt, C.A. Rychert and L.T. Elkins-Tanton, The Lithosphere-Asthenosphere Boundary and Cratonic Lithospheric Layering Beneath Australia from Sp Wave Imaging, CIDER Workshop, UC Santa Barbara, CA, 27 June – 17 July, 2010.
- Ford, H. A.**, K.M. Fischer, D.L. Abt, C.A. Rychert and L.T. Elkins-Tanton, Imaging the Lithosphere-Asthenosphere Boundary Beneath Australia using Sp Scattered Wave Receiver Functions, IPRPI Workshop on Seismic Tomography, Troy, NY, 27-28 April, 2010.
- Ford, H. A.**, K.M. Fischer, D.L. Abt, L.T. Elkins-Tanton, and C.A. Rychert, The lithosphere-asthenosphere boundary beneath Australia imaged by Sp phases, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract DI11A-05, 2009.
- Ford, H.A.**, K.M. Fischer, and C.A. Rychert, Scattered wave imaging of the lithosphere-asthenosphere boundary in Australia, Earthscope National Meeting, Boise, ID, 12-15 May, 2009.
- Ford, H.A.**, K.M. Fischer, and C.A. Rychert, Characterizing Lithospheric Thickness in Australia using Ps and Sp Scattered Waves, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract U43B-0059, 2008.
- Fischer, K.M., D.L. Abt, **H. A. Ford**, S.W. French and C.A. Rychert, Imaging the Lithosphere-Asthenosphere Boundary with Scattered Waves, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract DI21A-1740, 2008.

INVITED PRESENTATIONS

(excludes AGU meetings)

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| Apr. 2022 | Seismological Laboratory Seminar, California Institute of Technology |
| Sep. 2021 | GAGE/SAGE Plenary Session: Behavior at and coupling across key Earth interfaces |
| Oct. 2020 | Research Symposium, Earth and Environmental Sciences, University of Kentucky |
| Oct. 2020 | Pardee Keynote Session, 2020 GSA Annual Meeting |
| Sep. 2020 | GAGE/SAGE Plenary Webinars |
| Jan. 2020 | Tectonics and Seismology Seminar, University of California, Los Angeles |
| Apr. 2019 | Seismology Lab, University of California, Berkeley |
| Jan. 2019 | Department of Earth Sciences Seminar, University of California, Santa Barbara |
| Apr. 2017 | Geosciences Department Seminar, Boise State University |
| Mar. 2017 | Earth and Planetary Geosciences Seminar, University of California, Davis |
| Jan. 2017 | Scripps Geoscience Research Division Seminar, University of California, San Diego |
| Oct. 2016 | Tectonics and Seismology Seminar, University of California, Los Angeles |
| Sep. 2016 | Seismological Laboratory Seminar, California Institute of Technology |
| Sep. 2015 | Geophysical Sciences Department Seminar, University of Chicago |
| Sep. 2015 | Geological Sciences Department Seminar, University of Illinois, Chicago |

Apr. 2015	Geophysics Group Seminar, Dept. of Geosciences, Princeton University
Mar. 2015	Geosciences Department Seminar, University of Arizona
Mar. 2014	Earth and Planetary Sciences Department Seminar, Rutgers University
Mar. 2014	Friday Seminar, Earth, Atmospheric and Planetary Sciences, MIT
Apr. 2013	Geophysics Group Seminar, Lamont-Doherty Earth Observatory

STUDENT SUPERVISION

Ashley Stroup (incoming PhD student, *starting fall 2023*)

Beth Shallon (PhD student, *expected graduation 2027*). (MSc, 2022). “The Hunt for the Lithosphere-Asthenosphere Boundary in the Southwestern U.S.: A Comparative Study of Sp Receiver Functions and Tectonics, Volcanism, and Seismic Tomography”

Gillian Goldhagen (PhD, 2022). “Characterizing and Communicating Earth Structure Through Seismology and Pedagogy”. Now a postdoctoral associate at the University of Miami (Ohio).

Andrew Birkey (PhD, 2022). “Mysteries of the Deep: A Multi-Scale Investigation of the Earth's Interior”. Now a postdoctoral associate at the University of Delaware.

UCR undergraduate advisees (GEO 190, GEO 195): Amy Steele (2023-2024), Andrea Valdes (2022), Eryck Ochoa (2022), Maxim Shapovalov (2019-2022), Mariana Reyes (2020-2021), Jose Lara (2019-2020), Madeline Churchill (2019-2020), Aleksandar Stankovic (2020), Samantha Triago (2019), Nicole Levenson (2018), Tyler Grayson (2018), Alan Horton (2018), Austin Fimbres (2017)

Non-UCR interns: Grant Clark (URISE, 2023), Anah Bogdan (URISE, 2023), Jordan Winn (RCC, 2023), Amy Steele (RCC/GEODE, 2022), Madeline Sesma (RCC/GEODE, 2020), Page Dabney (IRIS, 2019), David Small (IRIS, 2018), Chelsea McCormick (RCC/GEODE, 2017), Em Schnorr (IRIS, 2016), Lauren Abrahams (IRIS, 2015)

TEACHING EXPERIENCE (2016 - Present)

Freshman Advising Seminar in the NAS (NASC 093) A formal seminar for freshmen within the College of the Natural & Agricultural Sciences. Course goal is to provide students with the information needed to have a successful student career at the University of California, Riverside.

Introduction to Natural Hazards (GEO004) Large enrollment, introductory undergraduate course, which focuses on applying the basic principles of science to the recognition and analysis of natural hazards, and the mitigation of related disasters.

Applied and Exploration Geophysics (GEO145) Upper division undergraduate course covering application of applied geophysical techniques, including seismic reflection and refraction, electrical resistivity and potential field methods. Course includes field trips and lab.

Research and Proposal Design (GEO 201A) Teaches the fundamentals of research topic selection and development of hypotheses. Addresses presentation techniques and design of research projects, experiments, and field campaigns. Includes preparation and discussion of small grant proposals.

Proposal Writing and Review (GEO 201B) Focuses on the structure and writing of an NSF style proposal. Students are provided with example proposals and are required to write a proposal of their own.

Seminar in Earthquake Processes and Geophysics (GEO 240) Formal seminar for graduate students within the Earthquake Processes and Geophysics research group within the Dept. of Earth and Planetary Sciences. Course explores topics in areas of earthquake and fault processes, geophysics, active tectonics, geodesy and seismology.

Structure, Composition and Evolution of Earth (GEO 247) Graduate level course designed as a multidisciplinary look at the Earth's interior. Course combines geophysical and geochemical principles to constrain the formation, composition, structure, and dynamics of Earth from the inner core to the upper crust. Co-taught with Dr. Maryjo Brounce.

Tectonics of California (GEO 259) Graduate level course that provides a detailed overview of the tectonic and geologic history of the state of California and the surrounding region. Discussions relating to climate, agriculture, natural resources and the economy are included.

FUNDING AND FELLOWSHIPS

NSF-GeoPRISMS: "Mantle volatiles and attenuation in the East Africa Rift." PI Maryjo Brounce (NSF) and Co-PI Heather Ford (UCR). Project duration: 4/1/2019-3/31/2022 (36 months). Total Budget: \$392,618.

NSF-Geophysics: "Constraining depth dependent anisotropy in Australia through Ps receiver function analysis, frequency dependent shear wave splitting and forward modeling." PI: Heather Ford (UCR). Project duration: 7/1/2016-6/30/2019 (24 months). Budget: \$158,348.

Southern California Earthquake Center: "Testing models of plate boundary deformation within the mantle lithosphere beneath central and southern California." PI: Heather Ford (UCR). Project duration: 05/01/2017-09/30/2018 (12 months). Budget: \$20,000.

University of California, Riverside: Regents Faculty Development Award, 2022.

University of California, Riverside: Regents Faculty Fellowship, 2017.

RELEVANT FIELD EXPERIENCE

Los Angeles Basin (LAB) – deployment of 300 three-component nodal seismometers across the Los Angeles Basin, California. (June 2022; project PIs: Fan-Chi Lin, Robert Clayton, Heather Ford). *Data set will be archived at the IRIS Data Management Center and be made publicly available in 2024.*

Crust and lithosphere Investigation of the Easternmost expression of the Laramide Orogeny (CIELO) -deployment of 24 broadband seismometers across the Wyoming and

eastern South Dakota (2017-2019; project PIs: **Heather Ford** and Max Bezada). *Data set is archived at the IRIS Data Management Center and is publicly available; doi:10.7914/SN/2F_2017.*

Mid-Atlantic Geophysical Integrative Collaboration (MAGIC) – deployment of 28 broadband seismometers in a linear array from Ohio to Virginia (2013-2016; project PIs: Maggie Benoit and Maureen Long)

High Lava Plains broadband seismic experiment (HLP) – deployment of 110 broadband seismometers in Orogen, Idaho and Nevada (2007-2009; project PIs: Matthew Fouch and David James)

SERVICE AND OUTREACH

PROFESSIONAL SERVICE: COMMITTEE AND LEADERSHIP

2023-2024 AGU, Fall Meeting Planning Committee – Seismology Section
2023-2024 EarthScope PI Instrumentation Advisory Committee Member
2022-2024 IRIS Electromagnetic Advisory Committee Member
2021-2022 AGU, Secretary of Study of Earth’s Deep Interior (DI) Section
2020 IRIS Facility Instrumentation Working Group Member
2020 IRIS Board of Directors Nomination Committee Member
2019-2022 IRIS Data Services Standing Committee Member
2019-2020 IRIS Internship Selection Committee Member

PROFESSIONAL SERVICE: MEETINGS, OUTREACH AND REVIEWER ACTIVITIES

2020 Chair and Workshop Organizer, “Early Career Investigator Virtual Workshop on a Community Vision for the Future Geophysical Facility”
2017-2018 2018 IRIS Workshop Science Planning Committee
2015 Chair, Gordon Research Seminar - “Interior of the Earth”
2012-present Session chair and/or convener, AGU Fall Meeting (2023, 2017-2020, 2012-2013)
2016-present Reviewer for manuscript submissions to *Geosphere*, *Geophysical Journal International*, *Journal of Geophysical Research*, *GSA Books*, *Tectonophysics*, *Seismological Research Letters*, *Nature Communications*, *Geophysical Research Letters*, *Earth and Planetary Science Letters*, *Geology*, *Geochemistry Geophysics Geosystems*
2016-present Reviewer for proposal submissions to National Science Foundation (panel), National Science Foundation (ad hoc), American Chemical Society Petroleum Research Fund, UC MEXUS-CONACYT (panel)
2016-present Provided over 80 distinct letters of recommendation for students and postdocs
2017-2018 Organized and led outreach efforts associated with the CIELO seismic experiment. Worked with students from Casper College, Oglala Lakota Tribal College, South Dakota School of Mines, and the Hereford School (K-5).
2017 UCR Graduate Sustainability Network – Invited Speaker, Earth Day 2017

UNIVERSITY AND DEPARTMENT SERVICE

- 2023-present UCR Faculty Senate Committee on Information Technology, Member
- 2020-2022 UCR Faculty Senate Committee on Library and Information Technology, Member
- 2018-present UCR Academic Integrity Committee, Member
- 2022-present Dept. Earth and Planetary Sciences Graduate Student Association, Faculty Advisor
- 2020-present Dept. Earth and Planetary Sciences Scholarship Committee, Chair
- 2019-present Dept. Earth and Planetary Sciences Graduate Program Committee, Member
- 2019-present Dept. Earth and Planetary Sciences Field Logistics Committee, Member
- 2018-present Dept. Earth and Planetary Sciences Website Committee, Member
- 2018-2020 Dept. Earth and Planetary Sciences Professional Development Liaison for undergraduates
- 2019-2020 Dept. Earth and Planetary Sciences Liaison for UCR General Ed. Review Committee
- 2018-2019 UCR Chancellor's Research Fellowship Faculty Selection Committee, Member
- 2016-2017 Dept. Earth and Planetary Sciences Department Events Committee, Member
- 2017 Invited panelist for the UCR Spring 2017 Faculty Instructional Innovation Studio series
- 2010-2012 Faculty Representative, Dept. of Geological Sciences, Brown University