

# Curriculum Vitae

## I. PERSONAL INFORMATION

### I.A. UID, Name, Contact Information

**Name:** Vedran Lekic  
**Title:** Associate Professor  
**Address:** Department of Geology  
University of Maryland  
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### I.B. Academic Appointments at UMD:

2018-	Associate Professor, Department of Geology, University of Maryland, College Park
2012-2018	Assistant Professor, Department of Geology, University of Maryland, College Park.
2011	Special Member of the Graduate Faculty, Department of Geology, University of Maryland, College Park.

### I.D. Other Employment:

2010-	National Science Foundation Postdoctoral Fellow at the Department of Geological Sciences, Brown University.
2010	Postdoctoral Fellow at the Berkeley Seismological Laboratory, University of California, Berkeley.

### I.E. Educational Background:

Ph.D.	Earth and Planetary Science, University of California, Berkeley, December 2009.
A.B.	Astronomy & Astrophysics and Earth & Planetary Science, magna cum laude Harvard University, May 2004.

## II. RESEARCH, SCHOLARLY, & CREATIVE ACTIVITIES

### II.C. Articles in Refereed Journals

NB: Underlined names represent undergraduate / graduate students and \* denotes postdocs under direct supervision.

1. Cunningham, E. and **V. Lekic** (2018), Constraining Crustal Structure in the Presence of Sediment: A Multiple Converted Wave Approach, *Geophys. J. Int.*, *submitted*.
2. Gao, C. and **V. Lekic** (2018), Consequences of parameterization choices in surface wave inversion: Insights from transdimensional Bayesian methods, *Geophys. J. Int.*, *in revision*.

3. Irving, J.M.E., Cottaar, S. and **V. Lekic** (2018), Seismically determined elastic parameters for Earth's outer core, *Science Advances*, 4(6), eaar2538, <https://doi.org/10.1126/sciadv.aar2538>
4. Goodling, P.J., **Lekic, V.** and K. Prestegard (2018), Seismic signature of turbulence during the 2017 Oroville Dam spillway erosion crisis, *Earth Surf. Dynam. Discuss.*, <https://doi.org/10.5194/esurf-2017-71>
5. Olugboji\*, T.M., **Lekic, V.** and W.F. McDonough (2017), A statistical assessment of models of the US continental crust using Bayesian inversion of ambient noise surface wave dispersion data, *Tectonics*, <https://doi.org/10.1002/2017TC004468>
6. **Lekic, V.** and K.M. Fischer (2017), On Interpreting Spatially Stacked Sp Receiver Functions, *Geophys. J. Int.*, <https://doi.org/10.1093/gji/ggx206>
7. Mundl, A., Touboul, M., Jackson, M.G., Day, J.M.D., Kurz, M.D., **Lekic, V.**, Helz, R.T., and R.J. Walker (2017), Tungsten-182 Heterogeneity in Modern Ocean Island Basalts, *Science*, 356(6333), 66-69, <https://doi.org/10.1126/science.aal4179>
8. Burdick\*, S. and **V. Lekic** (2017), Velocity Variations and Uncertainty from Transdimensional P-wave Tomography of North America, *Geophys. J. Int.*, 209 (2): 1337-1351, <https://doi.org/10.1093/gji/ggx091>
9. Ballmer, M.D., Schumacher, L., **Lekic, V.**, Thomas, C., and G. Ito (2016), Compositional Layering Within the Large Low Shear-Wave Velocity Provinces in the Lower Mantle, *G-cubed*, <http://dx.doi.org/10.1002/2016GC006605>
10. Panning, M.P., Benerdt, W.B., Lognonne, P., Beucler, E., Blanchette-Guertin, J.-F., Christense, U., Dehant, V., Drilleau, M., Gao., C., Garcia, R., Giradini, D., Golombek, M., Gudkova, T., Hempel, S., Kedar, S., Khan, A., Knapmeyer, M., Knapmeyer-Endrun, B., **Lekic, V.**, Minoun, D., Mocquet, A., Pike, W.T., Plesa, A.-C., Rivoldini, A., Schmerr, N., Smrekar, S., Teanby, N.A., Tromp, J., Verhoeven, O., Weber, R., Wiczorek, M., and J. Wookey (2017), Planned Products of the Mars Structure Service for the *InSight* Mission to Mars, *Space Sci. Rev.*, 211(1-4), 611-650, <http://dx.doi.org/10.1007/s11214-016-0317-5>
11. Cottaar, S. and **V. Lekic** (2016), Morphology of Seismically Slow Lower Mantle Structures, *Geophysical Journal International*, **207**(2), 1122-1136 <http://dx.doi.org/10.1093/gji/ggw324>
12. Rudolph, M., **V. Lekic**, and C. Lithgow-Bertelloni (2015), Viscosity jump in the Earth's mid mantle, *Science*, **360** (6266), 1349-1352, <http://dx.doi.org/10.1126/science.aad1929>
13. Reeves, Z., **V. Lekic**, N. Schmerr, M. Kohler, and D. Weeraratne (2015), Lithospheric structure across the California Continental Borderland from receiver functions, *Geochem. Geophys. Geosyst.*, **16**, <http://dx.doi.org/10.1002/2014GC005617>.
14. Triana, S.A., D.S. Zimmerman, H.-C. Nataf, A. Thorette, **V. Lekic**, and D. Lathrop (2014), Helioseismology in a bottle: Modal acoustic velocimetry, *New J. Phys.* **16**, 113005, <http://dx.doi.org/10.1088/1367-2630/16/11/113005>.
15. Kolb, J. and **V. Lekic** (2014), A Robust Deconvolution Method Based on Transdimensional, Hierarchical, Bayesian Inference, *Geophys. J. Int.*, <http://dx.doi.org/10.1093/gji/ggu079>.

16. Ford, H.A., K.M. Fischer, and **V. Lekic** (2014), Localized shear in the deep lithosphere beneath the San Andreas fault system, *Geology*, **42** (4), 295-298, <http://dx.doi.org/10.1130/G35128.1>
17. Hopper, E., H.A. Ford, K.M. Fischer, **V. Lekic**, and M. J. Fouch (2014), The lithosphere-asthenosphere boundary and the tectonic and magmatic history of the northwestern United States, *Earth Planet. Sci. Lett.*, **69**, 81-89, <http://dx.doi.org/10.1016/j.epsl.2013.12.016>.
18. **Lekic, V.**, and K.M. Fischer (2014), Contrasting lithospheric signatures across the western United States revealed by Sp receiver functions, *Earth Planet. Sci. Lett.* **402**, 90-98, <http://dx.doi.org/10.1016/j.epsl.2013.11.026>.
19. Šrámek, O., W.F. McDonough, E.S., Kite, **V. Lekic**, S.T. Dye, and S. Zhong (2013), Geophysical and geochemical constraints on geoneutrino fluxes from Earth's mantle, *Earth Planet. Sci. Lett.*, **361**, 356-366, <http://dx.doi.org/10.1016/j.epsl.2012.11.001>
20. French, S.W., **V. Lekic**, and B. Romanowicz (2013), Waveform tomography reveals channelled flow at the base of the oceanic lithosphere, *Science*, **342**, 227-230, <http://dx.doi.org/10.1126/science.1241514>.
21. **Lekic, V.**, S. Cottaar, A.M. Dziewonski, and B. Romanowicz (2012), Cluster analysis of global lower mantle tomography: A new class of structure and implications for chemical heterogeneity, *Earth Planet. Sci. Lett.*, **357**, 68-77, <http://dx.doi.org/10.1016/j.epsl.2012.09.014>.
22. **Lekic, V.**, K. M. Fischer, and S.W. French (2011), Lithospheric thinning beneath rifted regions of Southern California, *Science*, **334**, 6057, 783-787, <http://dx.doi.org/10.1126/science.1208898>.
23. **Lekic, V.** and B. Romanowicz (2011b), Tectonic regionalization without *a priori* information: a cluster analysis of tomography, *Earth Planet. Sci. Lett.* **308**, 151-160, <http://dx.doi.org/10.1016/j.epsl.2011.05.050>.
24. **Lekic, V.** and B. Romanowicz (2011a), Inferring upper mantle structure by full waveform tomography using the spectral element method, *Geophys. J. Int.*, <http://dx.doi.org/10.1111/j.1365-246X.2011.04969.x>.
25. Dziewonski, A., **V. Lekic**, and B. Romanowicz (2010), Mantle Anchor Structure: An argument for bottom up tectonics, *Earth Planet. Sci. Lett.* **299**, 69-79, <http://dx.doi.org/10.1016/j.epsl.2010.08.013>.
26. Panning, M., **V. Lekic** and B. Romanowicz (2010), Importance of crustal corrections in the development of a new global model of radial anisotropy, *J. Geophys. Res.* **115**, B12325, <http://dx.doi.org/10.1029/2010JB007520>.
27. **Lekic, V.**, M. Panning, and B. Romanowicz (2010), A simple method for improving crustal corrections in waveform tomography, *Geophys. J. Int.*, **182**(1), 265-278, <http://dx.doi.org/10.1111/j.1365-246X.2010.04602.x>.
28. **Lekic, V.**, J. Matas, M. Panning, and B. Romanowicz (2010), Reply to "Comment on 'Measurement and implications of frequency dependence of attenuation'" by I. Morozov, *Earth Planet. Sci. Lett.*, **293**, 216-217, <http://dx.doi.org/10.1016/j.epsl.2010.02.039>.

29. **Lekic, V.**, J. Matas, M. Panning, and B. Romanowicz (2009), Measurement and implications of frequency dependence of attenuation, *Earth Planet. Sci. Lett.*, **282**, 285-293, <http://dx.doi.org/10.1016/j.epsl.2009.03.030>.
30. Cammarano, F., **V. Lekic**, M. Manga, M. Panning, and B. Romanowicz (2006), Long-period seismology on Europa: 1. Physically consistent interior models, *J. Geophys. Res.*, **111**, E12009, <http://dx.doi.org/10.1029/2006JE002710>.
31. Panning, M., **V. Lekic**, M. Manga, F. Cammarano, and B. Romanowicz (2006), Long-period seismology on Europa: 2. Predicted seismic response, *J. Geophys. Res.*, **111**, E12008, <http://dx.doi.org/10.1029/2006JE002712>.
32. Dunn, R.A., **V. Lekic**, R.S. Detrick, and D.R. Toomey (2005), Three-dimensional seismic structure of the Mid-Atlantic Ridge (35°N): Evidence for focused melt supply and lower crustal dike injection, *J. Geophys. Res.*, **110**, B09101, <http://dx.doi.org/10.1029/2004JB003473>.

## II.D. Published in Conference Proceedings

1. Dye, S.T., Huang, Y., **Lekic, V.**, McDonough, W.F., and O. Šrámek (2015), Geoneutrinos and Earth Models, *Physics Procedia*, **61**: 310:318, doi:10.1016/j.phpro.2014.12.050.
2. The Asteroid Probe Experiment (APEX): Seismology at 99942 Apophis (2018), N. C. Schmerr, **V. Lekic**, A. Mautino, J. B. Plescia, M. Paul, D. C. Richardson, H. Yu, J. V. DeMartini, *Lunar and Planetary Science Conference Abstracts*.
3. Tidaaly-driven Seismicity: An Application to Europa (2018), T.A. Hurford, W.G. Henning, **V. Lekic**, N. Schmerr, M. P. Panning, S. Kattenhorn, M. Manga, F. Nimmo, L.C. Quick, and A.R. Rhoden, *Lunar and Planetary Science Conference Abstracts*.

## II.E. Conferences, Workshops, and Talks

### II.E.1 Keynotes

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| 2013/6/1  | Gordon Research Seminar, Mt. Holyoke, MA. Title: “New mantle structures imaged using full waveform SEM-based tomography”   |
| 2013/6/4  | Gordon Research Conference, Mt. Holyoke, MA. Title: “A long period view of LLSVPs”   |
| 2013/6/19 | COMPRES annual meeting, Keynote speaker, Lake Geneva, WI. Title: “Emerging consensus on large scale shear wave speed structure in the mantle”  |
| 2014/7/7  | Cooperative Institute for Dynamic Earth Research (CIDER), Kavli Institute for Theoretical Physics, University of California, Santa Barbara, CA. ( <a href="#">video</a> ) Title: “Seismology 1: Introduction to body waves, surface waves, seismic sources...” |
| 2015/1/21 | CSEDI Science Plan Workshop, University of California, San Deigo, CA. Title: “Seismological constraints on large and meso-scale structure of the lower mantle.”  |
| 2015/10/5 | Ocean Bottom Seismology Symposium, Vancouver, WA. Title: “Lithospheric structure offshore southern California from receiver functions.”  |

- 2016/5/25 NSLS-II User Meeting Workshop, Brookhaven National Laboratory, NY. Title: “Viscosity Jump in the Earth’s Mid Mantle.”
- 2017/5/18 EarthScope National Meeting, Anchorage, AK. Title: “What have we learned about the North American lithosphere from EarthScope data.”
- 2018/6/14 IRIS 2018 Workshop, Albuquerque, NM. Title: “A Seismically Sound Foundation: Reference Models and Datasets.”

## **II.E.2 Invited Talks**

- 2011/3/25 Swiss Federal Institute of Technology, Zurich, Switzerland. Title: “Dramatic lithospheric thinning beneath rifted regions of Southern California”
- 2011/4/5 Ecole normale supérieure de Lyon / Université de Lyon, France. Title: “High Resolution Global Tomography of the Upper Mantle”
- 2011/4/20 Lamont Doherty Earth Observatory (LDEO), Columbia University, NY. Title: “Dramatic lithospheric thinning beneath rifted regions of Southern California.”
- 2011/4/28 The Ohio State University, Columbus, OH. Title: “Dramatic lithospheric thinning beneath rifted regions of Southern California.”
- 2011/9/13 Southern California Earthquake Center Annual Meeting, Palms Springs, CA. Title: “Dramatic lithospheric thinning beneath rifted regions of Southern California.”
- 2011/9/21 EarthScope Institute: The Lithosphere-Asthenosphere Boundary, Portland, OR. Title: “Dramatic lithospheric thinning beneath rifted regions of Southern California.”
- 2011/10/25 Équipe de Sismologie - Institut de Physique du Globe de Paris, France. Title: “Dramatic lithospheric thinning beneath rifted regions of Southern California.”
- 2012/1/11 Geological Society of Washington, DC. Title: “Imaging the bottom of tectonic plates: Rifting in Southern California.”
- 2012/4/4 Smithsonian Institution, Washington, DC. Title: “Lithospheric thinning beneath rifted regions of Southern California.”
- 2012/4/11 Department of Terrestrial Magnetism, Carnegie Institution of Washington, DC. Title: “Lithospheric thinning beneath rifted regions of Southern California.”
- 2012/4/12 Johns Hopkins University, Baltimore, MD. Title: “Lithospheric thinning beneath rifted regions of Southern California.”
- 2012/5/18 Seismological Laboratory, California Institute of Technology, CA, Title: “Lithospheric structure beneath Southern California and the Rio Grande Rift.”
- 2012/7/5 Symposium on the Study of the Earth’s Deep Interior, Leeds, UK. Title: “A re-analysis of lower mantle tomographic models.”
- 2012/9/20 Potomac Geological Society, Washington, DC. Title: “Imaging the bottom of tectonic plates: Rifting in Southern California.”
- 2012/11/13 Colloque international en anglais, Collège de France, Paris, France ([video](#)). Title: “Cluster analysis of global lower mantle tomography: a new class of structure and implications for chemical heterogeneity.”

- 2013/5/9 CIDER Attenuation Workshop, Lamont-Doherty Earth Observatory, Columbia University, New York, NY. Title: “Constraining the frequency dependence of attenuation with free oscillations.”
- 2013/9/20 Department of Geosciences, Princeton University, NJ. Title: “Seismic constraints on the deformation of continental lithosphere”
- 2013/10/9 Dept. of Earth & Space Sciences, University of California, Los Angeles, CA. Title: “Seismic constraints on the structure and deformation of continental lithosphere”
- 2014/1/13 Geological and Planetary Sciences Division, Caltech, CA. Title: “Seismic constraints on the structure and deformation of continental lithosphere”
- 2014/1/22 Department of Geology and Geophysics, Yale University, New Haven, CT. Title: “Seismic constraints on the structure and deformation of continental lithosphere”
- 2014/3/20 Department of Geology and Environmental Sciences, James Madison University, Harrisonburg, VA. Title: “Seismic constraints on the structure and deformation of continental lithosphere”
- 2014/7/1 Geoneutrino Working Group Meeting at the Kavli Institute for Theoretical Physics, Santa Barbara, CA. Title: “Properties of LLSVPs and ULZVs”
- 2015/1/22 Department of Geophysics, School of Earth, Energy, and Environmental Sciences, Stanford University, Palo Alto, CA. Title: “Seismic Constraints on Lithospheric Structure and Deformation.”
- 2015/2/26 Department of Geological Sciences, University of Florida, Gainesville, FL. Title: “Seismic constraints on the structure and deformation of continental lithosphere.”
- 2015/3/12 Distinguished Lecture Series seminar, Department of Geology and Geophysics, University of Utah, Salt Lake City, UT. Title: “Seismic constraints on the structure and deformation of continental lithosphere”
- 2015/4/9 Montana Bureau of Mines and Geology, Montana Tech, Butte, MT. Title: “Seismic constraints on the structure and deformation of continental lithosphere”
- 2015/4/22 Department of Geology, Wayne State University, Detroit, MI. Title: “Seismic constraints on the structure and deformation of continental lithosphere”
- 2015/6/4 Department of Terrestrial Magnetism, Carnegie Institution for Science, Washington, DC. Title: “Lower Mantle Structure Across Scales”
- 2015/9/10 Packard Fellows Meeting, Monterey, CA. Title: “Imaging the Earth’s interior with seismic waves”
- 2015/10/7 Department of Geological Sciences, University of Oregon, Eugene, OR. Title: “Seismic constraints on the structure and deformation of continental lithosphere”
- 2015/11/6 Department of Geosciences, Virginia Tech, Blacksburg, VA. Title: “Constraining lithospheric structure using seismology.”
- 2015/11/10 Department of Physics, University of Maryland, College Park, MD. Title: “Imaging the Earth’s interior using seismic waves.”
- 2016/3/8 Rocky Mountain Science Seminar, USGS, Denver, CO. Title: “Constraining lithospheric structure and deformation beneath the United States.”

- 2016/5/6 CIDER Community Workshop at Point Reyes, CA. Title: "Inferences and implications of a viscosity increase in the mid mantle."
- 2016/9/4 Geological Society of Washington. Title: "Peering in the Earth with an EarthScope"
- 2016/9/27 Geological Society of America Annual Meeting, Title: "EarthScope-Enabled Insights into the North American Crust and Mantle," paper no. 202-8.
- 2017/1/25 Department of Physics, Howard University, Title: "Imaging the Earth's deep interior using seismic waves."
- 2017/2/17 Department of Earth, Environmental and Planetary Sciences, Case Western Reserve University, Title: "Viscosity and Velocity Structure of the Lower Mantle."
- 2017/11/17 Department of Geophysical Sciences, University of Chicago, Title: "From imaging to hypothesis testing: the future of structural seismology."
- 2018/3/15 Department of Geological Sciences, Brown University, Title: "From imaging to hypothesis testing: the future of structural seismology."
- 2018/5/16 Invited talk at SSA joint meeting in Miami, FL, Title: "The 3-D Reference Earth Model: Status and Preliminary Results"
- 2018/5/23 Department of Earth and Planetary Sciences, University of California, Davis, Title: "Imaging Tectonic Plates with Surface and Converted Waves"

## II.E.8 Non-Refereed Abstracts

NB: Only abstracts first-authored by myself or students / postdocs under my direct supervision are listed. Underlined names represent undergraduate students under direct supervision, (\*) denotes postdoctoral researchers under direct supervision, and (†) denotes graduate students under direct supervision.

1. **Lekic, V.**, Moulík\*, P. and B. Romanowicz, Invited: The 3-D Reference Earth Model: Status and Preliminary Results, *Seismological Research Letters*, 89(2B), 2018.
2. Pearson†, K., Thomas, A.M. and **V. Lekic**, Determining periodicity in non-homogeneous catalogs using a modified Schuster test with application to induced seismicity in Oklahoma, *Seismological Research Letters*, 89(2B), 2018.
3. Olugboji\*, T., Moulík\*, P., Plattner, A. and **V. Lekic**, Intra-LLSVP heterogeneity from spherical slepian analysis, *AGU Fall Meeting, D131A-0387*, 2017.
4. Cunningham†, E. and **V. Lekic**, Lithospheric structure and relationship to seismicity beneath the Southeastern US using receiver functions, *AGU Fall Meeting, T11A-0442*, 2017.
5. Goodling†, P., **V. Lekic** and K.L. Prestegard, Seismic analysis of the 2017 Oroville Dam Spillway Erosion Crisis, *AGU Fall Meeting, EP53C-1761*, 2017.
6. Hariharan, A., Moulík\*, P. and **V. Lekic**, Probing mantle heterogeneity across spatial scales, *AGU Fall Meeting, D131A-0389*, 2017.

7. Burdick\*, S., Waszek, L. and **V. Lekic**, Anisotropic structure of the Inner Core and its uncertainty from transdimensional body-wave tomography, *AGU Fall Meeting*, DI33B-0409, 2017.
8. Gao<sup>†</sup>, C. and **V. Lekic**, Quantifying uncertainties of seismic Bayesian inversion of Northern Great Plains (Invited), *AGU Fall Meeting*, U13B-06, 2017.
9. Gao<sup>†</sup>, C. and **V. Lekic**, Assessing the uncertainties of seismic velocity and anisotropy structure of Northern Great Plains using a transdimensional Bayesian approach, *AGU Fall Meeting*, S23A-0774, 2017.
10. **Lekic, V.**, Moulik\*, P. and B. Romanowicz, The 3D Reference Earth Model: Status and Preliminary Results, *AGU Fall Meeting*, DI44A-08, 2017.
11. Izquierdo<sup>†</sup>, K., **V. Lekic** and L. Montesi, Constraining mass anomalies in the interior of spherical bodies using transdimensional Bayesian hierarchical inference, *AGU Fall Meeting*, S32B-04, 2017.
12. Chiorini, S. and **V. Lekic**, Characteristics of swarm seismicity in Northern California, *AGU Fall Meeting*, S53B-0706, 2017.
13. Moulik\*, P., **Lekic, V.** and B. Romanowicz, REM-3D Reference Datasets: Reconciling large and diverse compilations of travel-time observations, *AGU Fall Meeting*, DI31A-0388, 2017.
14. Washington, B., **Lekic, V.** and N.C. Schmerr, Characterizing the seismic ocean bottom environment of the Bransfield Strait, *AGU Fall Meeting*, S21C-0734, 2017.
15. Burdick\*, S., Moulik\*, P., Waszek, L. and **V. Lekic**, Whole Earth P-wave structure from transdimensional tomography, *AGU Fall Meeting*, DI23C-04, 2016.
16. Izquierdo<sup>†</sup>, K., Montesi, L. and **V. Lekic**, Constraining mass anomalies using transdimensional gravity inversions, *AGU Fall Meeting*, NS41A-1892, 2016.
17. Eagon, A.J., Waszek, L., **Lekic, V.**, Schmerr, N.C., and A. M. Bishop Courtier, Constraining mantle discontinuity structure beneath North America using ScS reverberations, *AGU Fall Meeting*, DI11A-2322, 2016.
18. **Lekic, V.**, Moulik\*, P., Romanowicz, B. and A.M. Dziewonski, The 3D reference Earth model (REM-3D): Update and outlook, *AGU Fall Meeting*, DI31A-2617, 2016.
19. Moulik\*, P., **Lekic, V.** and B. Romanowicz, REM-3D reference dataset: Reconciling ~100 million surface-wave observations, *AGU Fall Meeting*, DI31A-2618, 2016.
20. Gao<sup>†</sup>, C. and **V. Lekic**, Quantifying the uncertainties and multi-parameter trade-offs in joint inversion of receiver functions and surface wave velocity and ellipticity, *AGU Fall Meeting*, NS31B-02, 2016.
21. Cunningham<sup>†</sup>, E. and **V. Lekic**, Constraining crustal structure in sediment dominated regions: an H-k-V stacking method, *AGU Fall Meeting*, S32C-03, 2016.
22. Chiorini, S., Thomas, A. and **V. Lekic**, Catalog and characteristics of earthquake swarms in Northern California, *AGU Fall Meeting*, S53A-2819, 2016.
23. Olugboji\*, T.M., **Lekic, V.**, Burdick\*, S. and C. Gao<sup>†</sup>, Multi-scale probabilistic seismic imaging with the USArray (Invited), *AGU Fall Meeting*, T22D-05, 2016.



24. Mautino<sup>†</sup>, A., Adams, M., Stone, D., Triana, S., Lathrop, D., and **V. Lekic**, Assessment of and improvements to acoustic velocimetry in flows in core-like geometries, *AGU Fall Meeting*, P41A-2046, 2015.
25. Schnurr, J., Olugboji<sup>\*</sup>, T., and **V. Lekic**, Investigating Sources of Uncertainty in Surface Wave Ellipticity Measurements across the USArray, *AGU Fall Meeting*, S21B-2681, 2015.
26. Burdick<sup>\*</sup>, S. and **V. Lekic**, Investigating the Farallon Slab with Probabilistic Traveltime Tomography (Invited), *AGU Fall Meeting*, T24A-04, 2015.
27. Gao<sup>†</sup>, C., **Lekic, V.**, and T. Olugboji<sup>\*</sup>, Constraining anisotropy in the US continental lithosphere using a joint inversion of receiver function and ambient noise data, *AGU Fall Meeting*, S14A-05, 2015.
28. Olugboji<sup>\*</sup>, T., **V. Lekic**, Gao<sup>†</sup>, C., and W. McDonough, Evaluating models of the US Continental Crust using Ambient Noise Datasets: A Transdimensional Approach, *AGU Fall Meeting*, T11A-2860, 2015.
29. Guandique, J., Burdick<sup>\*</sup>, S., and **V. Lekic**, Characterizing waveform uncertainty due to ambient noise for the Global Seismic Network, *AGU Fall Meeting*, S21B-2692, 2015.
30. Griebel, K., Schmerr, N., Courtier, A., and **V. Lekic**, Imaging Mantle Discontinuities Beneath North America Using ScS Reverberations, *AGU Fall Meeting*, D151A-2605, 2015.
31. **Lekic, V.** and S. Cottaar, Morphology of Large- and Meso-scale structures in the Mid and Lower Mantle, *AGU Fall Meeting*, D143B-08, 2015.
32. **Lekic, V.**, Gao<sup>†</sup>, C., Olugboji<sup>\*</sup>, T., and S. Burdick<sup>\*</sup>, Quantifying Uncertainty Across an Array of Seismic Applications (Invited), *AGU Fall Meeting*, S31B-04, 2015.
33. Cunningham<sup>†</sup>, E. and **V. Lekic**, The structure of continental crust: comparison of body wave apparent incidence angle and receiver function results, *AGU Fall Meeting*, T11D-2915, 2015.
34. Burdick<sup>\*</sup>, S. and **V. Lekic**, Global traveltime tomography with USArray Transportable Array Data (Invited), *EarthScope National Meeting*, Stowe, VT, June 15-17, 2015.
35. Gao<sup>†</sup>, C., Olugboji<sup>\*</sup>, T., and **V. Lekic**, Development of a transdimensional Bayesian joint inversion and its application of USArray ambient noise tomography, *EarthScope National Meeting*, Stowe, VT, June 15-17, 2015.
36. Olugboji<sup>\*</sup>, T., Schnurr, J., Gao<sup>†</sup>, C., Cunningham<sup>†</sup>, E., Burdick<sup>\*</sup>, S., **V. Lekic**, McDonough, and W., R. Rudnick, The Composition of the US Continental Crust: A Transdimensional Approach, *Gordon Research Conference, Interior of the Earth*, South Hadley, MA, June 7-12, 2015.
37. **Lekic, V.**, Cottaar, S., and J. Matas, Large- and meso-scale structure of Low Shear Velocity Provinces (Invited), *AGU Fall Meeting*, D133B-05, 2014.
38. Gao<sup>†</sup>, C. and **V. Lekic**, Transdimensional Bayesian joint inversion of complementary seismic observables with realistic data uncertainties, *AGU Fall Meeting*, S53A-4489, 2014.
39. Cunningham<sup>†</sup>, E., **V. Lekic**, New seismic observables constrain structure within the continental lithosphere, *AGU Fall Meeting*, T32A-03, 2014.

40. **Lekic, V.**, French, S.W., B.A. Romanowicz, Low velocities in the oceanic upper mantle and their relation to plumes: insights from SEM-based waveform tomography, *AGU Fall Meeting, DI21A-2267*, 2013.
41. Reeves<sup>†</sup>, Z.A., **Lekic, V.**, Weeraratne, D.S., M.D. Kohler, Constraining Lithospheric Structure across the California Borderland using Receiver Functions, *AGU Fall Meeting, S31A-2343*, 2013.
42. **Lekic, V.**, Fischer, K.M. Contrasting Lithospheric Signatures Across the Western United States Revealed by Sp Receiver Functions, *EarthScope National Meeting*, 2013.
43. **Lekic, V.**, Matas, J. Constraining lateral temperature and attenuation variations in the lower mantle, *AGU Fall Meeting, DI44A-02*, 2012.
44. Cunningham, E.E., Frassetto, A., **Lekic, V.** Obtaining interpretable receiver functions to study lithospheric structure in the central US, *AGU Fall Meeting, T53C-2722*, 2012.
45. Kandell, A., **Lekic, V.**, Stine, A. Antarctic microseism: relationship with sea ice extent and the southern annual mode, *AGU Fall Meeting, S53C-2524*, 2012.
46. Kolb, J., **Lekic, V.** A robust deconvolution method based on transdimensional hierarchical Bayesian inference, *AGU Fall Meeting, S43A-2465*, 2012.
47. **Lekic, V.**, Fischer, K.M. Lithospheric structure of the Rio-Grande Rift and the Colorado Plateau, *AGU Fall Meeting*, 2011.
48. **Lekic, V.**, French, S. W., Fischer, K. M. Lithospheric Structure Beneath the Salton Trough/Gulf of California Region from Sp Receiver Functions, *AGU Fall Meeting*, 2010.
49. **Lekic, V.** and B. Romanowicz, Joint inversion of long period waveform and surface wave dispersion data for crust and mantle structure using the Spectral Element Method, *AGU Fall Meeting*, 2009.
50. **Lekic, V.** and B. Romanowicz. Global upper mantle radially anisotropic model developed using the spectral element method. *AGU Fall Meeting*, 2008.
51. **Lekic, V.** and B. Romanowicz. Finite frequency upper mantle tomography using the spectral element method. *AGU Fall Meeting*, 2007.
52. **Lekic, V.** and B. Romanowicz. Applying the spectral element method to tomography: crustal effects. *Wilhelm and Else Heraeus Seminar: Density, Temperature and Elastic Constants of Earth's Mantle II, Linderhof, Germany*, 2007.
53. **Lekic, V.**, Reif, C., Dziewonski, A., Sheehan, A., van Summeren, J. Seismic constraints on slab interaction with the transition zone. *AGU Fall Meeting*, 2006.
54. **Lekic, V.** and B. Romanowicz. Applying the spectral element method to model 3D attenuation in the upper mantle. *AGU Fall Meeting*, 2006.
55. **Lekic, V.**, Capdeville, Y., Romanowicz, B. Towards a high resolution 3D attenuation model of the upper mantle. *AGU Fall Meeting*, 2005.
56. **Lekic, V.**, Dunn, R., Toomey, D., Detrick, R. Shallow mantle and crustal structure beneath the Mid-Atlantic Ridge (35N): melt supply and crustal construction. *AGU Fall Meeting*, 2004.

## **II.E.12 Workshops**

Co-organizer of the Cooperative Institute for Dynamic Earth Research (CIDER) Summer School on the nature, origin, and consequences of mantle heterogeneity to be held at the Kavli Institute for Theoretical Physics at University of California, Santa Barbara, July 8-August 4, 2018.

Co-organizer of Cooperative Institute for Dynamic Earth Research (CIDER) workshop on tying observational and experimental investigations of seismic attenuation, held at the Lamont-Doherty Earth Observatory, Columbia University, New York, May 9-11, 2013

Chief organizer for Cooperative Institute for Dynamic Earth Research (CIDER) workshop on the development of a three-dimensional reference seismic Earth model, held at the University of Maryland, College Park, April 26-27, 2013.

## **II.J Sponsored Research**

### **II.J.1 Grants**

1. Co-PI on “Collaborative Research: Bayesian Estimation of Mantle Viscosity Structure and Geodynamic Implications” funded by the National Science Foundation Geophysics Program in the amount of \$39,976 during 9/2016-8/2018.
2. Co-PI on “Constraining Europa’s Interior Structure and Rotation History through Tidal Tectonic Modeling” funded by National Aeronautics and Space Administration Outer Planets Research in the amount of \$13,434 during 6/2016 – 5/2017.
3. Principal Investigator on “Collaborative Research: Developing a Three-Dimensional Seismic Reference Earth Model (REM-3D) in Collaboration with the Community” funded by the National Science Foundation Geophysics Program in the amount of \$345,000 during 7/2014 – 6/2017.
4. Principal (Sole) Investigator on “CAREER: Seismic Imaging of Large-Scale Structure in the Lithosphere and the Core-Mantle Boundary Region” funded by the National Science Foundation Geophysics Program and the Division of Advanced Cyberinfrastructure (ACI) Program in the amount of \$647,000 during 7/2014 – 6/2019.
5. Co-Investigator on “CSEDI Collaborative Research: Investigating the Nature of the Subcontinental Upper Mantle” funded by the National Science Foundation Collaborative Studies of the Earth’s Deep Interior Program in the amount of \$259,998 during 9/2014-8/2016.
6. Principal Investigator on Working Group proposal “Development of a 3D seismic reference Earth model” funded by the Collaborative Institute for Dynamic Earth Research in the amount of \$20,000 during 2013.
7. Co-investigator on Working Group proposal “On the Interpretation of Upper Mantle Seismic Attenuation Measurements” funded by the Collaborative Institute for Dynamic Earth Research in the amount of \$20,000 during 2013.

## **II.K Fellowships, Gifts, and Other Funded Research**

2014-2019	Packard Foundation Fellowship for Science and Engineering - \$875,000
2010-2012	National Science Foundation Postdoctoral Fellowship
2006-2009	National Science Foundation Graduate Research Fellowship
2004-2006	Berkeley Fellowship, University of California, Berkeley

## **II.O Other Research/Scholarship/Creative Activities**

Co-organized web-based seminar on identifying and discussing major scientific targets in global seismology for the Incorporated Research Institutions for Seismology *Wavefields Initiative* (August 22<sup>nd</sup>, 2014).

Co-organized web-based seminar on identifying and discussing major scientific targets in regional seismology for the Incorporated Research Institutions for Seismology *Wavefields Initiative* (September 8<sup>th</sup>, 2014).

IRIS Workshop June 2018

## **III. TEACHING, MENTORING, AND ADVISING**

### **III.A Courses Taught**

#### *GEOL 200: Earth's Fury*

This I-Series course is built around the questions of how scientists study hazards and how societies prepare for these rare but dramatic events? In a very interactive class environment and through hands-on exercises and reading discussions in sections, students study the science behind earthquakes and volcanoes, how it guides monitoring, forecasting, prevention, and response, and the cultural and ethical aspects of these events. Taught in: Fall 2014, enrollment 120; Fall 2016, enrollment 180.

#### *GEOL 447 & 647: Observational Geophysics*

This course aims to introduce advanced undergraduate students and beginning graduate students to instrument design/performance, signal processing, data analysis and inverse theory in geophysics. Students learn how geophysical instruments work, how to relate their output to physical quantities, how to identify and apply a variety of signal processing and data analysis techniques. Students learn to formulate, solve and evaluate geophysical inverse problems and develop MATLAB programming skills.

The format of the course is unusual: lectures alternate with in-class MATLAB-based practicals, in which students learn how to apply and implement the ideas they learn in the lectures to actual geophysical datasets.

Taught in: Fall 2012, enrollment 10; Fall 2013, enrollment 17; Fall 2014, enrollment 6; Fall 2015, enrollment 12; Fall 2016, enrollment 10.

#### *GEOL 457 & 657: Seismology and Seismic Wave Propagation*

This course aims to introduce advanced undergraduate students and beginning graduate students to earthquakes and seismic wave generation and propagation. Students learn about stress and strain, the seismic wave equation, methods for calculating wave propagation through layered and heterogeneous media, imaging of shallow structure using seismic reflection, converted-wave and tomographic imaging of global structure. The final third of the course focuses on describing seismic sources – earthquakes, tremor, slip – understanding rate-and-state friction and ways of characterizing seismic hazard. Taught in: Spring 2013, enrollment 6; Spring 2014, enrollment 8; Spring 2016, enrollment 12.

#### *GEOL 789E: Inverse Problem Theory*

This graduate seminar is designed to engage graduate students with the theory and practice of solving inverse problems. The course is framed in the context of Bayesian data analysis, allowing the concepts of inverse theory to be applied to a broad range of problems in the Earth sciences that involve making inferences / drawing conclusions based on observed data. The course culminates in a term paper involving the development and application of a Bayesian inversion for analyzing seismic, gravity, geochemical, and other data.

Taught in: Spring 2015, enrollment 3, with additional 2 auditing; Spring 2017, enrollment 6, with additional 5 auditing.

#### Co-Instructor, *Solid Earth Geophysics*

Taught introduction to geophysics to advanced undergraduates and beginning graduate students with Prof. D.W. Forsyth, Dept. of Geological Sciences, Brown University.

Taught in 2010, 2011.

### **III.B Teaching Innovations**

#### **III.B.3 Software, Applications, Online Education, etc.**

- 2014      Developed MATLAB-based computational seismic tomography tutorial for the NSF-funded CIDER Summer Program at the Kavli Institute for Theoretical Physics. Graduate students from the United States and abroad were taught, in a hands-on fashion, about the resolving power and limitations of global seismic tomography.
- 2016      Consulted as a subject matter expert in the creation of educational material for the middle school curriculum with the Planet3 platform (<http://exploreplanet3.com>), which combines immersive media and state-of-the-art game design with a visionary teaching approach.

#### **III.B.6 Course or Curriculum Development**

- 2012      Designed, developed and taught a new course *Observational Geophysics* in the Department of Geology, which is eligible for meeting the geophysics requirement for majors and geophysics minors. The course incorporates 12 in-class, hands-on, MATLAB practicals in which students apply the concepts taught during lectures to actual geophysical datasets.

- 2013-14 Developing curriculum for GEOL 457/657 – Seismology / Seismic Wave Propagation (offered Spring 2013, 2014), which course aims to introduce advanced undergraduate and beginning graduate students to the study of elasticity, seismic wave propagation, imaging used in seismic exploration, and the characterization of earthquakes.
- 2014-15 Designed, developed, and taught a new course Inverse Problem Theory in the Department of Geology, which aims to give graduate students the theoretical background for and practical application of Bayesian inference and model selection using geodetic, seismological, and geochemical data. The course is framed in the context of Bayesian data analysis, allowing the concepts of inverse theory to be applied to a broad range of problems in the Earth sciences that involve making inferences / drawing conclusions based on observed data. The course culminates in a term paper involving the development and application of a Bayesian inversion for analyzing seismic, gravity, geochemical, and other data.
- 2015-16 Co-developed (with John Merck and Dan Lathrop) a new Geophysics track of the undergraduate Geology major. The geophysics curriculum is designed to meet the requirements of industry, graduate school, and government. For the B.S. degree, the students are required to complete introductory geology and physics requirements (39 credits) and upper-level requirements including Depth options, Context options, and Breadth options (30 - 35 credits) in addition to the General Education Program requirements and the completion of at least 120 credits in total. In order to receive a degree in Geophysics, the department requires that students must have a grade of C- or better in the required geology courses, and an average of C- or better in the supporting courses.
- This new major track will enable students primarily interested in the application of the methods of physics to geosciences issues to take advantage of Geology's growing corps of faculty specialists in geophysics, research expertise, and range of course offerings in this area in order to gain access to the best careers and most prestigious graduate programs in this field. The proposed track recognizes that the professional requirements for entry into such careers and graduate programs are distinct from those of general geosciences. It is intended, therefore, to encourage rigorous preparation in mathematics and physics that the standard geology professional track does not require, while eliminating onerous geology requirements that are not required for advancement in geophysics.
- First students enrolled in the major during the 2016-2017 Academic Year.
- <https://www.geol.umd.edu/undergraduate/ugdgeophysmajor.php>

### **III.C. Advising: Research**

#### **III.C.1 Undergraduate**

##### **Senior thesis students (GEOL 393/394):**

1. Fall 2012 and Fall 2013, Alan Cinsavich – “Intraplate seismicity of the Gorda Plate”
2. Fall 2013 and Fall 2014, Adele Lu – “Removing air-pressure noise from broadband seismic data: application to Antarctica as an analog for the *NASA Insight* Mars Lander”

3. Fall 2015 and Spring 2016, Sutton Chiorini – “Swarm-like seismicity in Northern California”
4. Fall 2016 and Spring 2017, Jeffrey Adams – “Strike-slip faulting on Europa”
5. Spring 2017 and Fall 2018, Peter Meehan – “Origin of the Cheverly Booms”

**Physics research experience students (PHYS 299B):**

1. Orlando M. Romeo – Analysis of frequency-dependence of P wave traveltime measurements
2. Timothy (Joey) Taylor – Inferring position, size, and shape of subsurface density anomalies from surface gravity observations

**Research advisor to (\* denotes participants in SeismoABCs):**

1. Nicholas Anuforoh, Spring 2013
2. Rannie Ayoub, Spring 2014
3. Benjamin Belzer, Spring 2014
4. Sutton Chiorini\*, Fall 2013 – Spring 2017. Sutton presented the research on earthquake swarms that she has carried out in my lab at the 2016 Fall Meeting of the American Geophysical Union. She went on to attend a Master’s program in geophysics at Miami University of Ohio (as a student of Mike Brudzinski), having also been admitted to Lehigh University.
5. Erin Cunningham – Incorporated Research Institutions for Seismology summer 2012 intern from Tulane University. Now, Ph.D. student at the University of Maryland, College Park
6. Jeffrey Gay – Montana State University summer 2012 and 2013 intern. Jeff is currently a M.S. student at the University of Utah.
7. Jonathan Guandique – Incorporated Research Institutions for Seismology summer 2015 intern from Fort Valley State University. He is now an undergraduate student at Penn State University and will be starting our Master’s program in Fall 2017.
8. Alex J. Kandell, Spring 2012 – Spring 2013: After graduating from the University of Maryland, College Park, Alex enrolled in a Master’s program in seismology at Rice University.
9. Jesse M. Kolb, Spring 2012 – Summer 2013: After graduating from the University of Maryland, College Park, Jesse completed a Master’s degree in exploration seismology at the University of Calgary (CREWES), and is currently a software developer at Uber Technologies, Inc.
10. Brendan Lockhart, Fall 2012 – Spring 2014
11. Anthony Mautino, Spring 2014 – Summer 2014: After graduating from the University of Maryland, College Park, Anthony completed a Master’s degree in Geology at the University of Maryland, College Park. He was offered ), who has been offered a technical software development position at NASA Goddard.

12. Michael Ream, Spring 2012, Fall 2013 – Spring 2014: After graduating from the University of Maryland, College Park, Mike is now a Ph.D. student at Portland State University.
13. Julie Schnerr\*, Spring 2015 – Fall 2015: After graduating from the University of Maryland, College Park, Julie is now a Ph.D. student at the University of Hawaii, Manoa.
14. Liam Shaughnessy\*, Spring 2016 – Fall 2016: After gaining experience in seismological research in my lab, Liam pursued other applications of seismology, and is currently working on implementing acoustic mode velocimetry (technique developed as part of a collaboration with Prof. Lathrop and colleagues at Grenoble to image flow within rotating spherical containers) in water as part of an on-going collaboration with Prof. Lathrop.
15. Kendall Price – Summer 2016 high school intern from the Montgomery Blair High School.
16. Andrew Will, Fall 2012 – Spring 2013
17. Brittany Washington, Summer 2017: Incorporated Research Institutions for Seismology summer intern from University of New Jersey at Newark. Brittany is studying seismic signals from a high frequency ocean bottom array in Bransfield Strait, Antarctica, and is co-mentored by Prof. Schmerr.
18. Anant Hariharan, Summer 2017: Incorporated Research Institutions for Seismology summer intern from Cornell University. Anant is applying spherical wavelet analysis to multi-scale tomographic model comparison with the goal of identifying lengthscale(s) at which structures imaged by high-frequency travel-time P-wave tomography (which has variable resolution) are compatible with global long period S-wave tomography. He is co-mentored by Dr. Moulik, who is a postdoctoral researcher in my lab. He has been admitted to 6 Ph.D. programs, including the University of Maryland, where he was awarded a Flagship Fellowship. He has also received an NSF Graduate Research Fellowship.
19. Logan Edwards, Summer 2018: SeismoABCs intern working on detecting anomalous structures in the core-mantle boundary region through the analysis of core-diffracted waves.

### III.C.2 Master's

#### Member of Master's Committees

Zachary Reeves	(M.S.) Qualifying Exam 2013
Zachary Reeves	(M.S.) Thesis Defence 2014
Anthony Mautino	(M.S.) Qualifying Exam 2016
Anthony Mautino	(M.S.) Thesis Defence 2016
Phillip Goodling	(M.S.) Qualifying Exam 2018



Primary research advisor to Mr. Zachary Reeves (graduated 2014), who is now employed by the United States Geological Survey National Earthquake Information Center.

Primary research advisor to Mr. Anthony Mautino (graduated 2016), who was offered a technical software development positions at NASA Goddard.

Research co-advisor to Mr. Phillip Goodling (M.S.)

### **III.C.3 Doctoral**

Primary research advisor to Ms. Erin Cunningham (Ph.D.), Mr. Chao Gao (Ph.D.), and Ms. Karen Pearson (Ph.D.), and co-advisor to Ms. Kristel Izquierdo (Ph.D.)

#### **Member of PhD Committees**

Chao Gao (Ph.D.) Qualifying Exam 2016

Erin Cunningham (Ph.D.) Qualifying Exam 2016

Karen Pearson (Ph.D.) Qualifying Exam 2018

Kristel Izquierdo (Ph.D.) Qualifying Exam 2018

### **III.C.4 Post-Doctoral**

I currently mentor and supervise three postdoctoral researchers:

- Scott Burdick (started Sept. 2014), who will be starting as an Asst. Prof. at Wayne State University in August;
- Tolulope Olugboji (started Oct. 2014), who will be starting as an Asst. Prof. at the University of Rochester in August, 2018;
- Raj Moulik (started Oct. 2015), who is working on the Reference Earth Model project and is pursuing a job in academia.

### **III.E Advising: Other than Research Direction**

#### **III.E.2 Master's**

#### **Member of Master's Committees**

Jodi Gaeman (M.S.) Qualifying Exam 2011

Jeremy Banker (M.S.) Qualifying Exam 2014

Anna Statkiewicz (M.S.) Qualifying Exam 2014

Anna Statkiewicz (M.S.) Thesis Defence 2014

William Kibikas (M.S.) Qualifying Exam 2016

Meng Guo (M.S.) Qualifying Exam 2017

Jonathan Guandique (M.S.) Qualifying Exam 2018

Meng Guo (M.S.) Thesis Defence 2018

### III.E.2 Doctor's

#### **Member of Doctoral Committees**

Kevin J. Miller	(Ph.D.) Qualifying Exam 2012
Stephanie Johnston	(Ph.D.) Qualifying Exam 2012
Hailong Bai	(Ph.D.) Qualifying Exam 2013
Lisa S. Walsh	(Ph.D.) Thesis Defence 2013
Kevin J. Miller	(Ph.D.) Thesis Defence 2015
Stephanie Johnston	(Ph.D.) Thesis Defence 2015
Carolyn Planck	(Ph.D.) Qualifying Exam 2015
Scott Whipperfurth	(Ph.D.) Qualifying Exam 2016
Quancheng Huang	(Ph.D.) Qualifying Exam 2017
Angela Marusiak	(Ph.D.) Qualifying Exam 2017
Ernie Bell	(Ph.D.) Qualifying Exam 2017
Hailong Bai	(Ph.D.) Thesis Defence 2017
Samuel Crossley	(Ph.D.) Qualifying Exam 2018
James Dottin	(Ph.D.) Qualifying Exam 2018

## IV. SERVICE

### IV.A. Editorships, Editorial Boards, and Reviewing Activities

Guest editor for Tectonics special issue on the continental crust (2017)

#### IV.A.3 Reviewing Activities for Journals and Presses

*Science, Nature Geoscience, Nature Communications, Geophysical Journal International, Geophysical Research Letters, Physics of Earth and Planetary Interiors, Journal of Geophysical Research, Geochemistry, Geophysics, Geosystems, Earth and Planetary Science Letters, Eos, Precambrian Research, Seismological Research Letters, Journal of Seismology.*

#### IV.A.4 Reviewing Activities for Agencies and Foundations

National Science Foundation, Division of Earth Sciences (EAR): Geophysics Program, EarthScope Program, Education and Human Resources Program, Geoinformatics Program.

National Science Foundation, Division of Earth Sciences (EAR), Geophysics Program Review Panel Member, Spring 2015.

National Science Foundation, Division of Ocean Sciences (OCE): Marine Geology and Geophysics Program.

National Science Foundation, Faculty Early Career Development Program (CAREER).

Swiss National Science Foundation, Division of Mathematics, Physical and Engineering Sciences.

European Research Council, Starting Grant program

Academia Sinica (Taiwan), Career Development Award

Natural Sciences and Engineering Research Council of Canada

## **IV.B. Committees, Professional & Campus Service**

### **IV.B.1 Campus Service – Department**

Graduate Admissions Committee (2012-2013)

Search Committee for Assistant Professor in Geophysics (2013-2014)

Faculty Merit Review Committee (2013, 2014, 2015)

Geology Curriculum Review Committee (2015)

Search Committee for Department Chair (2015)

Departmental Colloquium Sole Organizer (Fall 2014, Spring 2015, Fall 2015, Spring 2016)

Search Committee for Assistant Professor in Geophysics (2015-2016)

Ad Hoc Award Committee (2012-present)

### **IV.B.2 Campus Service – College**

Member Representative of the University of Maryland, College Park to the Incorporated Research Institutions for Seismology Consortium (2012 – present)

### **IV.B.3 Campus Service – University**

Member of Review Panel for Packard Foundation – Fellowships for Science and Engineering (2015, 2016)

Member of Advisory Board for the Office of Postdoctoral Affairs – starting in January 2017 – which advises on matters of advocacy and on the development of policies to recommend to the provost and campus, serves as a sounding board for innovative programs and professional development opportunities, brings forward faculty perspectives and concerns regarding current issues confronting post-docs, and identifies networking strategies for post-docs, mentors, and potential employers, both academic and otherwise.

### **IV.B.7 Offices and Committee Memberships**

2018                      Chair of the Quality Assurance Advisory Committee of the Incorporated Research Institutions of Seismology

- 2018 Chair of Seismological Society of America Richter Award subcommittee of the Seismological Society of America
- 2016-present Incorporated Research Institutions of Seismology Instrumentation Services Standing Committee
- 2016-present Seismological Society of America Honors Selection Committee: Frank Press Award subcommittee.
- 2017 Computational Infrastructure for Geodynamics, Nominating Committee
- 2016-2018 Seismological Society of America Honors Selection Committee: Richter Award subcommittee
- 2014 Incorporated Research Institutions of Seismology Undergraduate Internship Program Selection Committee
- 2014-2015 Councilmember at Large, Geological Society of Washington
- 2014-2015 Membership Committee, Geological Society of Washington
- 2013-2015 Incorporated Research Institutions of Seismology Standing Committee on the Global Seismic Network.
- 2013 Seismology Section Program Committee chair for the American Geophysical Union Fall Meeting
- 2012 Seismology Section Program Committee co-chair for the American Geophysical Union Fall Meeting

#### **IV.F Community and Other Service**

Prince George's County Regional Science Fair judge (Spring 2014)

Washington, DC annual Science, Technology, and Engineering Fair special judge for the Geological Society of Washington (Spring 2017)

### **V. AWARDS, HONORS AND RECOGNITION**

#### **V.1 Research Fellowships, Prizes and Awards**

- 2016 Kavli Foundation Fellow
- 2015 Board of Visitors Distinguished Junior Faculty Award
- 2014-2015 EarthScope Speaker Series Speaker [Website with more information](#)
- 2014-2019 Packard Foundation Fellowship for Science and Engineering [Website with more information.](#)
- 2014-2019 National Science Foundation CAREER Award [Website with more information.](#)
- 2013 Charles F. Richter Award, Seismological Society of America [Website with more information.](#)
- 2001-2002 John Harvard Scholarship, Harvard University [Website with more information.](#)
- 2001 Detur Prize, Harvard University [Website with more information.](#)