

# Karen Fischer

## List of Publications by Year in descending order

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53  
papers

3,766  
citations

147801

31  
h-index

175258

52  
g-index

57  
all docs

57  
docs citations

57  
times ranked

2148  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Lithosphere-Asthenosphere Boundary. Annual Review of Earth and Planetary Sciences, 2010, 38, 551-575.	11.0	349
2	A Complex Pattern of Mantle Flow in the Lau Backarc. Science, 2001, 292, 713-716.	12.6	248
3	North American lithospheric discontinuity structure imaged by <i>Ps</i> and <i>Sp</i> receiver functions. Journal of Geophysical Research, 2010, 115, .	3.3	233
4	Shear wave splitting, continental keels, and patterns of mantle flow. Journal of Geophysical Research, 2000, 105, 6255-6275.	3.3	219
5	Arc-parallel flow in the mantle wedge beneath Costa Rica and Nicaragua. Nature, 2008, 451, 1094-1097.	27.8	201
6	Mantle anisotropy beneath northwest Pacific subduction zones. Journal of Geophysical Research, 1996, 101, 15987-16002.	3.3	175
7	The lithosphereâ€asthenosphere boundary and cratonic lithospheric layering beneath Australia from <i>Sp</i> wave imaging. Earth and Planetary Science Letters, 2010, 300, 299-310.	4.4	158
8	<i>P</i> â€toâ€ <i>S</i> and <i>S</i> â€toâ€ <i>P</i> imaging of a sharp lithosphereâ€asthenosphere boundary beneath eastern North America. Journal of Geophysical Research, 2007, 112, .	3.3	151
9	The influence of plate motions on three-dimensional back arc mantle flow and shear wave splitting. Journal of Geophysical Research, 2000, 105, 28009-28033.	3.3	146
10	3-D shear wave radially and azimuthally anisotropic velocity model of the North American upper mantle. Geophysical Journal International, 2011, 184, 1237-1260.	2.4	136
11	Shear velocity structure and azimuthal anisotropy beneath eastern North America from Rayleigh wave inversion. Journal of Geophysical Research, 2003, 108, .	3.3	125
12	Waning buoyancy in the crustal roots of old mountains. Nature, 2002, 417, 933-936.	27.8	109
13	Lithospheric Thinning Beneath Rifted Regions of Southern California. Science, 2011, 334, 783-787.	12.6	107
14	Modeling anisotropy and plate-driven flow in the Tonga subduction zone back arc. Journal of Geophysical Research, 2000, 105, 16181-16191.	3.3	92
15	Seismic anisotropy beneath the Shumagin Islands segment of the Aleutian-Alaska subduction zone. Journal of Geophysical Research, 1995, 100, 18165-18177.	3.3	88
16	The lithosphereâ€asthenosphere boundary and the tectonic and magmatic history of the northwestern United States. Earth and Planetary Science Letters, 2014, 402, 69-81.	4.4	77
17	Contrasting lithospheric signatures across the western United States revealed by <i>Sp</i> receiver functions. Earth and Planetary Science Letters, 2014, 402, 90-98.	4.4	76
18	Reconciling mantle attenuation-temperature relationships from seismology, petrology, and laboratory measurements. Geochemistry, Geophysics, Geosystems, 2014, 15, 3521-3542.	2.5	71

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19	Anisotropy and Flow in Pacific Subduction Zone Back-arcs. <i>Pure and Applied Geophysics</i> , 1998, 151, 463-475.	1.9	70
20	Resolving three-dimensional anisotropic structure with shear wave splitting tomography. <i>Geophysical Journal International</i> , 2008, 173, 859-886.	2.4	65
21	Relationship between observed upper mantle structures and recent tectonic activity across the Southeastern United States. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 3393-3414.	3.4	64
22	The meaning of midlithospheric discontinuities: A case study in the northern U.S. craton. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 4057-4083.	2.5	60
23	Shear wave anisotropy beneath Nicaragua and Costa Rica: Implications for flow in the mantle wedge. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	2.5	52
24	A mechanism for low- $\alpha$ extent melts at the lithosphere-asthenosphere boundary. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	2.5	52
25	Reconstructing the end of the Appalachian orogeny. <i>Geology</i> , 2017, 45, 15-18.	4.4	45
26	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. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 2593-2614.	2.5	44
27	Constraints on upper mantle anisotropy surrounding the Cocos slab from $K$ - $S$ splitting. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	39
28	A Visual Survey of Global Slab Geometries With ShowEarthModel and Implications for a Three-Dimensional Subduction Paradigm. <i>Earth and Space Science</i> , 2018, 5, 240-257.	2.6	38
29	Localized shear in the deep lithosphere beneath the San Andreas fault system. <i>Geology</i> , 2014, 42, 295-298.	4.4	36
30	Interpreting spatially stacked Sp receiver functions. <i>Geophysical Journal International</i> , 2017, 210, 874-886.	2.4	36
31	The relative roles of inheritance and long-term passive margin lithospheric evolution on the modern structure and tectonic activity in the southeastern United States. , 2018, 14, 1385-1410.		35
32	Crustal evolution across the southern Appalachians: Initial results from the SESAME broadband array. <i>Geophysical Research Letters</i> , 2013, 40, 3853-3857.	4.0	34
33	Multichannel inversion of scattered teleseismic body waves: Practical considerations and applicability. <i>Geophysical Monograph Series</i> , 2005, , 187-203.	0.1	33
34	Crustal structure beneath the Florida-Edmonton broadband seismometer array. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	31
35	The impact of slab dip variations, gaps and rollback on mantle wedge flow: insights from fluids experiments. <i>Geophysical Journal International</i> , 2014, 197, 705-730.	2.4	26
36	An adaptive Bayesian inversion for upper-mantle structure using surface waves and scattered body waves. <i>Geophysical Journal International</i> , 2018, 214, 232-253.	2.4	24

#	ARTICLE	IF	CITATIONS
37	Assessing the presence of volatile-bearing mineral phases in the cratonic mantle as a possible cause of mid-lithospheric discontinuities. <i>Earth and Planetary Science Letters</i> , 2021, 553, 116602.	4.4	24
38	How Sharp Is the Cratonic Lithosphereâ€”Asthenosphere Transition?. <i>Geophysical Research Letters</i> , 2017, 44, 10,189.	4.0	23
39	Seismic anisotropy above and below the subducting Nazca lithosphere in southern South America. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	22
40	A comparison of oceanic and continental mantle lithosphere. <i>Physics of the Earth and Planetary Interiors</i> , 2020, 309, 106600.	1.9	20
41	Global Patterns in Cratonic Midâ€”Lithospheric Discontinuities From Sp Receiver Functions. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009819.	2.5	19
42	Constraining lithologic variability along the Alleghanian detachment in the southern Appalachians using passive-source seismology. <i>Geology</i> , 2015, 43, 431-434.	4.4	15
43	Imaging crustal structure beneath the southern Appalachians with wavefield migration. <i>Geophysical Research Letters</i> , 2016, 43, 12,054.	4.0	13
44	The zone of influence of the subducting slab in the asthenospheric mantle. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 6599-6624.	3.4	13
45	Shallow mantle velocities beneath the southern Appalachians from <i>Pn</i> phases. <i>Geophysical Research Letters</i> , 2015, 42, 339-345.	4.0	11
46	The lithosphereâ€”asthenosphere boundary beneath the South Island of New Zealand. <i>Earth and Planetary Science Letters</i> , 2018, 484, 92-102.	4.4	11
47	Shear wave splitting and shear wave splitting tomography of the southern Puna plateau. <i>Geophysical Journal International</i> , 2014, 199, 688-699.	2.4	10
48	Imaging with pre-stack migration based on Sp scattering kernels. <i>Geophysical Journal International</i> , 2020, 220, 428-449.	2.4	10
49	Hotspot signatures at the North American passive margin. <i>Geology</i> , 2021, 49, 525-530.	4.4	9
50	The spatial sensitivity of Sp converted wavesâ€”scattered-wave kernels and their applications to receiver-function migration and inversion. <i>Geophysical Journal International</i> , 2018, 212, 1722-1735.	2.4	8
51	New Approaches to Multifrequency <i>Sp</i> Stacking Tested in the Anatolian Region. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2020JB020313.	3.4	8
52	New Insights Into Lithospheric Structure and Melting Beneath the Colorado Plateau. <i>Geochemistry, Geophysics, Geosystems</i> , 2022, 23, .	2.5	3
53	Multiâ€”Layer Seismic Anisotropy Beneath Greenland. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009512.	2.5	2