Stephen S Gao

List of Publications by Citations

109 papers	2,710 citations	31 h-index	48 g-index
135 ext. papers	3,090 ext. citations	4.7 avg, IF	5.27 L-index

#	Paper	IF	Citations
109	SKS splitting beneath continental rift zones. *Journal of Geophysical Research*, **1997**, 102, 22781-22797		134
108	Southern African crustal evolution and composition: Constraints from receiver function studies. *Journal of Geophysical Research*, **2006**, 111, n/a-n/a		120
107	Temporal variation of seismic b-values beneath northeastern Japan island arc. *Geophysical Research Letters*, **2002**, 29, 48-1-48-3	4.9	111
106	Seismic anisotropy and mantle flow beneath the Baikal rift zone. *Nature*, **1994**, 371, 149-151	50.4	107
105	Mantle deformation beneath southern Africa. *Geophysical Research Letters*, **2001**, 28, 2493-2496	4.9	95
104	Deep structure and origin of the Baikal rift zone. *Earth and Planetary Science Letters*, **2006**, 243, 681-691	5.3	88
103	Upper mantle structure of the Saharan Metacraton. *Journal of African Earth Sciences*, **2011**, 60, 328-336	2.2	70
102	Shear wave splitting and mantle flow associated with the deflected Pacific slab beneath northeast Asia. *Journal of Geophysical Research*, **2008**, 113,		70
101	Low seismic velocity layers in the Earth's crust beneath Eastern Siberia (Russia) and Central Mongolia: receiver function data and their possible geological implication. *Tectonophysics*, **2002**, 359, 307-327	3.1	69
100	Asymmetric upwarp of the asthenosphere beneath the Baikal rift zone, Siberia. *Journal of Geophysical Research*, **1994**, 99, 15319		67
99	Northridge earthquake damage caused by geologic focusing of seismic waves. *Science*, **2000**, 289, 1746-50	33.3	66
98	Mantle transition zone discontinuities beneath the contiguous United States. *Journal of Geophysical Research: Solid Earth*, **2014**, 119, 6452-6468	3.6	61
97	Seismic anisotropy, mantle fabric, and the magmatic evolution of Precambrian southern Africa. *South African Journal of Geology*, **2004**, 107, 45-58	1.6	57
96	Determining crustal structure beneath seismic stations overlying a low-velocity sedimentary layer using receiver functions. *Journal of Geophysical Research: Solid Earth*, **2015**, 120, 3208-3218	3.6	56
95	Evidence for small-scale mantle convection in the upper mantle beneath the Baikal rift zone. *Journal of Geophysical Research*, **2003**, 108,		56
94	Annual modulation of triggered seismicity following the 1992 Landers earthquake in California. *Nature*, **2000**, 406, 500-4	50.4	52
93	Seismic anisotropy beneath the Afar Depression and adjacent areas: Implications for mantle flow. *Journal of Geophysical Research*, **2010**, 115,		49

92	Mantle layering across central South America. *Journal of Geophysical Research*, **2003**, 108,		48
91	Mantle discontinuities beneath Southern Africa. *Geophysical Research Letters*, **2002**, 29, 129-1-129-4	4.9	48
90	Making Reliable Shear-Wave Splitting Measurements. *Bulletin of the Seismological Society of America*, **2013**, 103, 2680-2693	2.3	47
89	Significant seismic anisotropy beneath the southern Lhasa Terrane, Tibetan Plateau. *Geochemistry, Geophysics, Geosystems*, **2009**, 10, n/a-n/a	3.6	47
88	Crustal anisotropy and ductile flow beneath the eastern Tibetan Plateau and adjacent areas. *Earth and Planetary Science Letters*, **2016**, 442, 72-79	5.3	45
87	Spatial variations of crustal characteristics beneath the Hoggar swell, Algeria, revealed by systematic analyses of receiver functions from a single seismic station. *Geochemistry, Geophysics, Geosystems*, **2010**, 11, n/a-n/a	3.6	44
86	Magnetic stripes of a transitional continental rift in Afar. *Geology*, **2012**, 40, 203-206	5	41
85	Spatial variation of seismic b-values beneath Makushin Volcano, Unalaska Island, Alaska. *Earth and Planetary Science Letters*, **2006**, 245, 408-415	5.3	41
84	SKS splitting beneath southern California. *Geophysical Research Letters*, **1995**, 22, 767-770	4.9	40
83	Significant crustal thinning beneath the Baikal rift zone: New constraints from receiver function analysis. *Geophysical Research Letters*, **2004**, 31,	4.9	39
82	Complex seismic anisotropy beneath western Tibet and its geodynamic implications. *Earth and Planetary Science Letters*, **2015**, 413, 167-175	5.3	36
81	Seismic azimuthal anisotropy beneath the eastern United States and its geodynamic implications. *Geophysical Research Letters*, **2017**, 44, 2670-2678	4.9	35
80	Imaging mantle discontinuities using multiply-reflected P-to-S conversions. *Earth and Planetary Science Letters*, **2014**, 402, 99-106	5.3	34
79	A uniform database of teleseismic shear wave splitting measurements for the western and central United States. *Geochemistry, Geophysics, Geosystems*, **2014**, 15, 2075-2085	3.6	34
78	Receiver function constraints on crustal seismic velocities and partial melting beneath the Red Sea rift and adjacent regions, Afar Depression. *Journal of Geophysical Research: Solid Earth*, **2014**, 119, 2138-2152	3.6	30
77	Formation of the Cameroon Volcanic Line by lithospheric basal erosion: Insight from mantle seismic anisotropy. *Journal of African Earth Sciences*, **2014**, 100, 96-108	2.2	29
76	Apparent Weekly and Daily Earthquake Periodicities in the Western United States. *Bulletin of the Seismological Society of America*, **2009**, 99, 2273-2279	2.3	29
75	Mantle flow and lithosphere–asthenosphere coupling beneath the southwestern edge of the North American craton: Constraints from shear-wave splitting measurements. *Earth and Planetary Science Letters*, **2014**, 402, 209-220	5.3	28

74	Analysis of deformation data at Parkfield, California: Detection of a long-term strain transient. *Journal of Geophysical Research*, **2000**, 105, 2955-2967		28
73	Estimation of the Depth of Anisotropy Using Spatial Coherency of Shear-Wave Splitting Parameters. *Bulletin of the Seismological Society of America*, **2011**, 101, 2153-2161	2.3	26
72	Lithospheric layering beneath the contiguous United States constrained by S-to-P receiver functions. *Earth and Planetary Science Letters*, **2018**, 495, 79-86	5.3	26
71	Seismic anisotropy and mantle flow beneath the northern Great Plains of North America. *Journal of Geophysical Research: Solid Earth*, **2014**, 119, 1971-1985	3.6	23
70	Crustal structure and evolution beneath the Colorado Plateau and the southern Basin and Range Province: Results from receiver function and gravity studies. *Geochemistry, Geophysics, Geosystems*, **2011**, 12, n/a-n/a	3.6	23
69	Seismic anisotropy of the uppermost mantle beneath the Rio Grande rift: Evidence from Kilbourne Hole peridotite xenoliths, New Mexico. *Earth and Planetary Science Letters*, **2011**, 311, 172-181	5.3	22
68	Mantle transition zone discontinuities beneath the Baikal rift and adjacent areas. *Journal of Geophysical Research*, **2006**, 111, n/a-n/a		22
67	Mantle transition zone discontinuities beneath the Indochina Peninsula: Implications for slab subduction and mantle upwelling. *Geophysical Research Letters*, **2017**, 44, 7159-7167	4.9	21
66	Seismic anisotropy beneath the incipient Okavango rift: Implications for rifting initiation. *Earth and Planetary Science Letters*, **2015**, 430, 1-8	5.3	19
65	Shear wave splitting analyses in Tian Shan: Geodynamic implications of complex seismic anisotropy. *Geochemistry, Geophysics, Geosystems*, **2016**, 17, 1975-1989	3.6	19
64	No thermal anomalies in the mantle transition zone beneath an incipient continental rift: evidence from the first receiver function study across the Okavango Rift Zone, Botswana. *Geophysical Journal International*, **2015**, 202, 1407-1418	2.6	19
63	A joint receiver function and gravity study of crustal structure beneath the incipient Okavango Rift, Botswana. *Geophysical Research Letters*, **2015**, 42, 8398-8405	4.9	19
62	Characteristics of mantle fabrics beneath the south-central United States: Constraints from shear-wave splitting measurements **2008**, 4, 411		19
61	Crustal Azimuthal Anisotropy Beneath the Southeastern Tibetan Plateau and its Geodynamic Implications. *Journal of Geophysical Research: Solid Earth*, **2018**, 123, 9733-9749	3.6	19
60	Seismic anisotropy and subduction-induced mantle fabrics beneath the Arabian and Nubian Plates adjacent to the Red Sea. *Geophysical Research Letters*, **2014**, 41, 2376-2381	4.9	18
59	AnisDep: A FORTRAN program for the estimation of the depth of anisotropy using spatial coherency of shear-wave splitting parameters. *Computers and Geosciences*, **2012**, 49, 330-333	4.5	18
58	Seismic imaging of mantle transition zone discontinuities beneath the northern Red Sea and adjacent areas. *Geophysical Journal International*, **2014**, 199, 648-657	2.6	17
57	Seismic Arrays to Study African Rift Initiation. *Eos*, **2013**, 94, 213-214	1.5	17

56	Seismic anisotropy and mantle dynamics beneath the Malawi Rift Zone, East Africa. *Tectonics*, **2017**, 36, 1338-1351	4.3	16
55	Azimuthal anisotropy and mantle flow underneath the southeastern Tibetan Plateau and northern Indochina Peninsula revealed by shear wave splitting analyses. *Tectonophysics*, **2018**, 747-748, 68-78	3.1	16
54	Evolution of the broadly rifted zone in southern Ethiopia through gravitational collapse and extension of dynamic topography. *Tectonophysics*, **2017**, 699, 213-226	3.1	15
53	Passive rifting of thick lithosphere in the southern East African Rift: Evidence from mantle transition zone discontinuity topography. *Journal of Geophysical Research: Solid Earth*, **2016**, 121, 8068-8079	3.6	15
52	The mantle transition zone beneath the Afar Depression and adjacent regions: implications for mantle plumes and hydration. *Geophysical Journal International*, **2016**, 205, 1756-1766	2.6	15
51	Mantle structure beneath the incipient Okavango rift zone in southern Africa **2017**, 13, 102-111		14
50	Receiver function and gravity constraints on crustal structure and vertical movements of the Upper Mississippi Embayment and Ozark Uplift. *Journal of Geophysical Research: Solid Earth*, **2017**, 122, 4572-4583	3.6	13
49	A Uniform Database of Teleseismic Shear-Wave Splitting Measurements for the Western and Central United States: December 2014 Update. *Seismological Research Letters*, **2016**, 87, 295-300	3	13
48	Topography of the Mantle Transition Zone Discontinuities Beneath Alaska and Its Geodynamic Implications: Constraints From Receiver Function Stacking. *Journal of Geophysical Research: Solid Earth*, **2017**, 122, 10,352-10,363	3.6	12
47	Characteristics of the Mantle Flow System Beneath the Indochina Peninsula Revealed by Teleseismic Shear Wave Splitting Analysis. *Geochemistry, Geophysics, Geosystems*, **2018**, 19, 1519-1532	3.6	11
46	Crustal structure beneath the Malawi and Luangwa Rift Zones and adjacent areas from ambient noise tomography. *Gondwana Research*, **2019**, 67, 187-198	5.1	11
45	Toroidal Mantle Flow Induced by Slab Subduction and Rollback Beneath the Eastern Himalayan Syntaxis and Adjacent Areas. *Geophysical Research Letters*, **2019**, 46, 11080-11090	4.9	10
44	Azimuthal anisotropy beneath north central Africa from shear wave splitting analyses. *Geochemistry, Geophysics, Geosystems*, **2015**, 16, 1105-1114	3.6	10
43	Crustal thickness and Moho sharpness beneath the Midcontinent rift from receiver functions. *Research in Geophysics*, **2013**, 3, 1		10
42	Absence of thermal influence from the African Superswell and cratonic keels on the mantle transition zone beneath southern Africa: Evidence from receiver function imaging. *Earth and Planetary Science Letters*, **2018**, 503, 108-117	5.3	10
41	Seismic Anisotropy and Mantle Flow in the Sumatra Subduction Zone Constrained by Shear Wave Splitting and Receiver Function Analyses. *Geochemistry, Geophysics, Geosystems*, **2020**, 21, e2019GC008766	3.6	8
40	Applicability of the Multiple-Event Stacking Technique for Shear-Wave Splitting Analysis. *Bulletin of the Seismological Society of America*, **2015**, 105, 3156-3166	2.3	8
39	Lateral variations of crustal structure beneath the Indochina Peninsula. *Tectonophysics*, **2017**, 712-713, 193-199	3.1	7

38	A Systematic Comparison of the Transverse Energy Minimization and Splitting Intensity Techniques for Measuring Shear-Wave Splitting Parameters. *Bulletin of the Seismological Society of America*, **2015**, 105, 230-239	2.3	7
37	Low-coherent WDM reflectometry for accurate fiber length monitoring. *IEEE Photonics Technology Letters*, **2003**, 15, 96-98	2.2	7
36	Reply [to "Comment on 'SKS splitting beneath continental rifts' by Gao et al."] *Journal of Geophysical Research*, **1999**, 104, 10791-10794		7
35	Upper mantle and mantle transition zone thermal and water content anomalies beneath NE Asia: Constraints from receiver function imaging of the 410 and 660 km discontinuities. *Earth and Planetary Science Letters*, **2020**, 532, 116040	5.3	7
34	Slab Dehydration and Mantle Upwelling in the Vicinity of the Sumatra Subduction Zone: Evidence from Receiver Function Imaging of Mantle Transition Zone Discontinuities. *Journal of Geophysical Research: Solid Earth*, **2020**, 125, e2020JB019381	3.6	7
33	Receiver Function Imaging of Mantle Transition Zone Discontinuities Beneath the Tanzania Craton and Adjacent Segments of the East African Rift System. *Geophysical Research Letters*, **2017**, 44, 12,116	4.9	6
32	Foundered lithospheric segments dropped into the mantle transition zone beneath southern California, USA. *Geology*, **2020**, 48, 200-204	5	5
31	Crustal Azimuthal Anisotropy Beneath the Central North China Craton Revealed by Receiver Functions. *Geochemistry, Geophysics, Geosystems*, **2019**, 20, 2235	3.6	4
30	Mantle Structure and Flow Beneath an Early-Stage Continental Rift: Constraints From P Wave Anisotropic Tomography. *Tectonics*, **2020**, 39, e2019TC005590	4.3	4
29	Crustal modifications beneath the central Sunda plate associated with the Indo-Australian subduction and the evolution of the South China Sea. *Physics of the Earth and Planetary Interiors*, **2020**, 306, 106539	2.3	3
28	Lithospheric Structure and Evolution of Southern Africa: Constraints From Joint Inversion of Rayleigh Wave Dispersion and Receiver Functions. *Geochemistry, Geophysics, Geosystems*, **2019**, 20, 3311-3327	3.6	3
27	Spatial Variations of Upper Crustal Anisotropy Along the San Jacinto Fault Zone in Southern California: Constraints From Shear Wave Splitting Analysis. *Journal of Geophysical Research: Solid Earth*, **2021**, 126, e2020JB020876	3.6	3
26	A Database of Shear-Wave Splitting Measurements for the Arabian Plate. *Seismological Research Letters*, **2018**, 89, 2294-2298	3	3
25	Characterization of a Continuous, Very Narrowband Seismic Signal near 2.08 Hz. *Bulletin of the Seismological Society of America*, **2001**, 91, 1910-1916	2.3	2
24	Seismic Anisotropy and Mantle Deformation Beneath the Central Sunda Plate. *Journal of Geophysical Research: Solid Earth*, **2021**, 126, e2020JB021259	3.6	2
23	Crustal structure beneath the Ethiopian Plateau and adjacent areas from receiver functions: Implications for partial melting and magmatic underplating. *Tectonophysics*, **2021**, 809, 228857	3.1	2
22	A systematic investigation of piercing-point-dependent seismic azimuthal anisotropy. *Geophysical Journal International*, **2021**, 227, 1496-1511	2.6	2
21	Integrated geologic, geophysical, and petrophysical data to construct full field geologic model of Cambrian-Ordovician and Upper Cretaceous reservoir formations, Central Western Sirte Basin, Libya. *Interpretation*, **2019**, 7, T21-T37	1.4	2

20	Receiver function investigation of crustal structure in the Malawi and Luangwa rift zones and adjacent areas. *Gondwana Research*, **2021**, 89, 168-176	5.1	2
19	Receiver Function Investigations of Seismic Anisotropy Layering Beneath Southern California. *Journal of Geophysical Research: Solid Earth*, **2018**, 123, 10,672	3.6	2
18	Mantle Flow in the Vicinity of the Eastern Edge of the Pacific-Yakutat Slab: Constraints From Shear Wave Splitting Analyses. *Journal of Geophysical Research: Solid Earth*, **2021**, 126, e2021JB022354	3.6	2
17	Crustal azimuthal anisotropy and deformation beneath the northeastern Tibetan Plateau and adjacent areas: Insights from receiver function analysis. *Tectonophysics*, **2021**, 816, 229014	3.1	2
16	Fault visualization enhancement using ant tracking technique and its application in the Taranaki basin, new Zealand **2017**,		1
15	Seismic attributes aided fault detection and enhancement in the Sirte Basin, Libya **2017**,		1
14	High-accuracy practical spline-based 3D and 2D integral transformations in potential-field geophysics. *Geophysical Prospecting*, **2012**, 60, 1001-1016	1.9	1
13	Seafloor asymmetry in the Atlantic Ocean. *Journal of Ocean University of China*, **2004**, 3, 191-194	1	1
12	Receiver function imaging of the 410 and 660□km discontinuities beneath the Australian continent. *Geophysical Journal International*, **2020**, 220, 1481-1490	2.6	1
11	Prestack simultaneous inversion for delineation of the Lower Wilcox erosional remnant sandstone beneath the Texas Gulf Coastal Plain: A case study. *Interpretation*, **2020**, 8, T991-T1005	1.4	1
10	Teleseismic P-Wave Attenuation Beneath the Southeastern United States. *Geochemistry, Geophysics, Geosystems*, **2021**, 22, e2021GC009715	3.6	1
9	A full field static model of the RG-oil field, central Sirte Basin, Libya **2016**,		1
8	Seismic Anisotropy and Mantle Flow Constrained by Shear Wave Splitting in Central Myanmar. *Journal of Geophysical Research: Solid Earth*, **2021**, 126, e2021JB022144	3.6	1
7	Layered mantle heterogeneities associated with post-subducted slab segments. *Earth and Planetary Science Letters*, **2021**, 571, 117115	5.3	1
6	Continental Break-Up Under a Convergent Setting: Insights From P Wave Radial Anisotropy Tomography of the Woodlark Rift in Papua New Guinea. *Geophysical Research Letters*, **2022**, 49,	4.9	1
5	Topography of the 410 and 660□km Discontinuities Beneath the Cenozoic Okavango Rift Zone and Adjacent Precambrian Provinces. *Journal of Geophysical Research: Solid Earth*, **2020**, 125, e2019JB019290	3.6	0
4	Crustal P-wave velocity structure and earthquake distribution in the Jiaodong Peninsula, China. *Tectonophysics*, **2021**, 814, 228973	3.1	0
3	Tectonics of the incipient continental rifting. *Acta Geologica Sinica*, **2019**, 93, 99-100	0.7	

2	Rationale for a Permanent Seismic Network in the U.S. Central Plains Utilizing USArray. *Eos*, **2008**, 89, 85-85	1.5
1	Crustal and Upper Mantle Structure Beneath the Southeastern United States from Joint Inversion of Receiver Functions and Rayleigh Wave Dispersion. *Journal of Geophysical Research: Solid Earth*,e2021JB021846	3.6