Geoffrey A Abers

List of Publications by Citations

76 papers	6,571 citations	39 h-index	81 g-index
86 ext. papers	7,414 ext. citations	5.6 avg, IF	6.07 L-index

#	Paper	IF	Citations
76	The global range of subduction zone thermal models. *Physics of the Earth and Planetary Interiors*, **2010**, 183, 73-90	2.3	1044
75	Subduction factory 2. Are intermediate-depth earthquakes in subducting slabs linked to metamorphic dehydration reactions?. *Journal of Geophysical Research*, **2003**, 108,		619
74	Subduction factory 1. Theoretical mineralogy, densities, seismic wave speeds, and H2O contents. *Journal of Geophysical Research*, **2003**, 108,		591
73	Global compilation of variations in slab depth beneath arc volcanoes and implications. *Geochemistry, Geophysics, Geosystems*, **2006**, 7, n/a-n/a	3.6	403
72	Subduction Factory 3: An Excel worksheet and macro for calculating the densities, seismic wave speeds, and H2O contents of minerals and rocks at pressure and temperature. *Geochemistry, Geophysics, Geosystems*, **2004**, 5, n/a-n/a	3.6	215
71	Imaging the transition from Aleutian subduction to Yakutat collision in central Alaska, with local earthquakes and active source data. *Journal of Geophysical Research*, **2006**, 111, n/a-n/a		189
70	High resolution image of the subducted Pacific (?) plate beneath central Alaska, 50–150 km depth. *Earth and Planetary Science Letters*, **2003**, 214, 575-588	5.3	186
69	The thermal structure of subduction zones constrained by seismic imaging: Implications for slab dehydration and wedge flow. *Earth and Planetary Science Letters*, **2006**, 241, 387-397	5.3	182
68	Seismic imaging of subduction zone metamorphism. *Geology*, **2008**, 36, 275	5	153
67	Seismic low-velocity layer at the top of subducting slabs: observations, predictions, and systematics. *Physics of the Earth and Planetary Interiors*, **2005**, 149, 7-29	2.3	147
66	Determination of surface-wave phase velocities across USArray from noise and Aki's spectral formulation. *Geophysical Research Letters*, **2009**, 36,	4.9	140
65	Thermal structure of the Costa Rica–Nicaragua subduction zone. *Physics of the Earth and Planetary Interiors*, **2005**, 149, 187-200	2.3	132
64	Seismic attenuation and mantle wedge temperatures in the Alaska subduction zone. *Journal of Geophysical Research*, **2004**, 109,		127
63	Deep structure of an arc-continent collision: Earthquake relocation and inversion for upper mantle P and S wave velocities beneath Papua New Guinea. *Journal of Geophysical Research*, **1991**, 96, 6379-6401		116
62	Crustal thickness variations across the Colorado Rocky Mountains from teleseismic receiver functions. *Journal of Geophysical Research*, **1995**, 100, 20391-20404		114
61	Thermal–petrological controls on the location of earthquakes within subducting plates. *Earth and Planetary Science Letters*, **2013**, 369-370, 178-187	5.3	111
60	Shallow dips of normal faults during rapid extension: Earthquakes in the Woodlark-D'Entrecasteaux rift system, Papua New Guinea. *Journal of Geophysical Research*, **1997**, 102, 15301-15317		107

59	Imaging the source region of Cascadia tremor and intermediate-depth earthquakes. *Geology*, **2009**, 37, 1119-1122	5	98
58	Link between plate fabric, hydration and subduction zone seismicity in Alaska. *Nature Geoscience*, **2015**, 8, 961-964	18.3	95
57	Possible seismogenic shallow-dipping normal faults in the Woodlark-D'Entrecasteaux extensional province, Papua New Guinea. *Geology*, **1991**, 19, 1205	5	94
56	The cold and relatively dry nature of mantle forearcs in subduction zones. *Nature Geoscience*, **2017**, 10, 333-337	18.3	93
55	Seismic anisotropy beneath the Shumagin Islands segment of the Aleutian-Alaska subduction zone. *Journal of Geophysical Research*, **1995**, 100, 18165-18177		84
54	Strong along-arc variations in attenuation in the mantle wedge beneath Costa Rica and Nicaragua. *Geochemistry, Geophysics, Geosystems*, **2008**, 9, n/a-n/a	3.6	79
53	Seismic tomography and earthquake locations in the Nicaraguan and Costa Rican upper mantle. *Geochemistry, Geophysics, Geosystems*, **2008**, 9, n/a-n/a	3.6	77
52	A MATLAB toolbox and Excel workbook for calculating the densities, seismic wave speeds, and major element composition of minerals and rocks at pressure and temperature. *Geochemistry, Geophysics, Geosystems*, **2016**, 17, 616-624	3.6	77
51	Unusual mantle Poisson's ratio, subduction, and crustal structure in central Alaska. *Journal of Geophysical Research*, **2006**, 111,		65
50	Mantle compensation of active metamorphic core complexes at Woodlark rift in Papua New Guinea. *Nature*, **2002**, 418, 862-5	50.4	65
49	Reconciling mantle attenuation-temperature relationships from seismology, petrology, and laboratory measurements. *Geochemistry, Geophysics, Geosystems*, **2014**, 15, 3521-3542	3.6	53
48	New geophysical insight into the origin of the Denali volcanic gap. *Geophysical Journal International* , **2010**, 182, 613-630	2.6	52
47	Phase velocities from seismic noise using beamforming and cross correlation in Costa Rica and Nicaragua. *Geophysical Research Letters*, **2008**, 35,	4.9	50
46	Crustal thickness variation in south-central Alaska. *Geology*, **2006**, 34, 781	5	47
45	Slab low-velocity layer in the eastern Aleutian subduction zone. *Geophysical Journal International*, **1997**, 130, 640-648	2.6	46
44	Mafic High-Pressure Rocks Are Preferentially Exhumed From Warm Subduction Settings. *Geochemistry, Geophysics, Geosystems*, **2018**, 19, 2934-2961	3.6	45
43	Shear wave anisotropy beneath Nicaragua and Costa Rica: Implications for flow in the mantle wedge. *Geochemistry, Geophysics, Geosystems*, **2009**, 10, n/a-n/a	3.6	44
42	Alaska Megathrust 2: Imaging the megathrust zone and Yakutat/Pacific plate interface in the Alaska subduction zone. *Journal of Geophysical Research: Solid Earth*, **2014**, 119, 1924-1941	3.6	43

41	Tsunamigenic structures in a creeping section of the Alaska subduction zone. *Nature Geoscience*, **2017**, 10, 609-613	18.3	42
40	High seismic attenuation at a mid-ocean ridge reveals the distribution of deep melt. *Science Advances*, **2017**, 3, e1602829	14.3	41
39	Seismic evidence for a cold serpentinized mantle wedge beneath Mount St Helens. *Nature Communications*, **2016**, 7, 13242	17.4	39
38	Seismic anisotropy under central Alaska from SKS splitting observations. *Journal of Geophysical Research*, **2010**, 115,		39
37	Crustal structure along the Aleutian island arc: New insights from receiver functions constrained by active-source data. *Geochemistry, Geophysics, Geosystems*, **2013**, 14, 2977-2992	3.6	38
36	Crustal structure across the transition from rifting to spreading: the Woodlark rift system of Papua New Guinea. *Geophysical Journal International*, **2006**, 166, 622-634	2.6	37
35	Physical state of Himalayan crust and uppermost mantle: Constraints from seismic attenuation and velocity tomography. *Journal of Geophysical Research: Solid Earth*, **2014**, 119, 567-580	3.6	33
34	Imaging the Plate Interface in the Cascadia Seismogenic Zone: New Constraints from Offshore Receiver Functions. *Seismological Research Letters*, **2015**, 86, 1261-1269	3	31
33	Subduction Factory 5: Unusually low Poisson's ratios in subduction zones from elastic anisotropy of peridotite. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		31
32	Shallow structure of the Cascadia subduction zone beneath western Washington from spectral ambient noise correlation. *Journal of Geophysical Research*, **2011**, 116,		30
31	Source scaling of earthquakes in the shumagin region, Alaska: time-domain inversions of regional waveforms. *Geophysical Journal International*, **1995**, 123, 41-58	2.6	30
30	Southeast Papuan crustal tectonics: Imaging extension and buoyancy of an active rift. *Journal of Geophysical Research: Solid Earth*, **2016**, 121, 951-971	3.6	29
29	Alaska megathrust 1: Seismicity 43 years after the great 1964 Alaska megathrust earthquake. *Journal of Geophysical Research: Solid Earth*, **2013**, 118, 4861-4871	3.6	29
28	Predicted velocity and density structure of the exhuming Papua New Guinea ultrahigh-pressure terrane. *Journal of Geophysical Research*, **2011**, 116,		29
27	Imaging a steeply dipping subducting slab in Southern Central America. *Earth and Planetary Science Letters*, **2010**, 296, 459-468	5.3	28
26	Evidence for seismogenic normal faults at shallow dips in continental rifts. *Geological Society Special Publication*, **2001**, 187, 305-318	1.7	26
25	Amphibious surface-wave phase-velocity measurements of the Cascadia subduction zone. *Geophysical Journal International*, **2019**, 217, 1929-1948	2.6	25
24	Connections between subducted sediment, pore-fluid pressure, and earthquake behavior along the Alaska megathrust. *Geology*, **2018**, 46, 299-302	5	25

23	Imaging continental breakup using teleseismic body waves: The Woodlark Rift, Papua New Guinea. *Geochemistry, Geophysics, Geosystems*, **2015**, 16, 2529-2548	3.6	23
22	The causes of spatiotemporal variations in erupted fluxes and compositions along a volcanic arc. *Nature Communications*, **2019**, 10, 1350	17.4	20
21	Anisotropy beneath a highly extended continental rift. *Geochemistry, Geophysics, Geosystems*, **2014**, 15, 545-564	3.6	20
20	Enhanced Resolution of the Subducting Plate Interface in Central Alaska From Autocorrelation of Local Earthquake Coda. *Journal of Geophysical Research: Solid Earth*, **2019**, 124, 1583-1600	3.6	15
19	Local Source Vp and Vs Tomography in the Mount St. Helens Region With the iMUSH Broadband Array. *Geochemistry, Geophysics, Geosystems*, **2020**, 21, e2019GC008888	3.6	13
18	Thermal Structure of the Forearc in Subduction Zones: A Comparison of Methodologies. *Geochemistry, Geophysics, Geosystems*, **2019**, 20, 3268-3288	3.6	11
17	Imaging Subduction Beneath Mount St. Helens: Implications for Slab Dehydration and Magma Transport. *Geophysical Research Letters*, **2019**, 46, 3163-3171	4.9	10
16	Shear Wave Splitting and Mantle Flow Beneath Alaska. *Journal of Geophysical Research: Solid Earth*, **2020**, 125, e2019JB018329	3.6	10
15	Insights into mantle structure and flow beneath Alaska based on a decade of observations of shear wave splitting. *Journal of Geophysical Research: Solid Earth*, **2014**, 119, 8366-8377	3.6	10
14	Magmatic arc structure around Mount Rainier, WA, from the joint inversion of receiver functions and surface wave dispersion. *Geochemistry, Geophysics, Geosystems*, **2015**, 16, 178-194	3.6	9
13	Deep decoupling in subduction zones: Observations and temperature limits **2020**, 16, 1408-1424		9
12	3D Seismic Velocity Models for Alaska from Joint Tomographic Inversion of Body-Wave and Surface-Wave Data. *Seismological Research Letters*, **2020**, 91, 3106-3119	3	9
11	First-Order Mantle Subduction-Zone Structure Effects on Ground Motion: The 2016 Mw 7.1 Iniskin and 2018 Mw 7.1 Anchorage Earthquakes. *Seismological Research Letters*, **2020**, 91, 85-93	3	8
10	Shear Velocity Structure From Ambient Noise and Teleseismic Surface Wave Tomography in the Cascades Around Mount St. Helens. *Journal of Geophysical Research: Solid Earth*, **2019**, 124, 8358-8375	3.6	7
9	The Alaska Amphibious Community Seismic Experiment. *Seismological Research Letters*, **2020**, 91, 3054-3063	3	6
8	A joint inversion for shear velocity and anisotropy: the Woodlark Rift, Papua New Guinea. *Geophysical Journal International*, **2016**, 206, 807-824	2.6	6
7	Subduction of an Oceanic Plateau Across Southcentral Alaska: Scattered-Wave Imaging. *Journal of Geophysical Research: Solid Earth*, **2022**, 127,	3.6	5
6	Subduction of an Oceanic Plateau Across Southcentral Alaska: High-Resolution Seismicity. *Journal of Geophysical Research: Solid Earth*, **2021**, 126, e2021JB022809	3.6	5

5	SKS Splitting Beneath Mount St. Helens: Constraints on Subslab Mantle Entrainment. *Geochemistry, Geophysics, Geosystems*, **2019**, 20, 4202-4217	3.6	4
4	Teleseismic Attenuation, Temperature, and Melt of the Upper Mantle in the Alaska Subduction Zone. *Journal of Geophysical Research: Solid Earth*, **2021**, 126, e2021JB021653	3.6	3
3	P- and S-Wave Velocities of Exhumed Metasediments From the Alaskan Subduction Zone: Implications for the In Situ Conditions Along the Megathrust. *Geophysical Research Letters*, **2021**, 48, e2021GL094511	4.9	1
2	Anisotropy Variations in the Alaska Subduction Zone Based on Shear-Wave Splitting From Intraslab Earthquakes. *Geochemistry, Geophysics, Geosystems*, **2021**, 22, e2020GC009558	3.6	1
1	Shallow Slow Earthquake Episodes Near the Trench Axis off Costa Rica. *Journal of Geophysical Research: Solid Earth*, **2021**, 126, e2021JB021706	3.6	1