

Richard Aster

List of Publications by Year in descending order

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127
papers

6,330
citations

47006

47
h-index

74163

75
g-index

132
all docs

132
docs citations

132
times ranked

4977
citing authors

#	ARTICLE	IF	CITATIONS
1	A comparison of select trigger algorithms for automated global seismic phase and event detection. <i>Bulletin of the Seismological Society of America</i> , 1998, 88, 95-106.	2.3	412
2	Episodic zircon age spectra of orogenic granitoids: The supercontinent connection and continental growth. <i>Precambrian Research</i> , 2010, 180, 227-236.	2.7	398
3	Evidence and implications for a widespread magmatic shutdown for 250 My on Earth. <i>Earth and Planetary Science Letters</i> , 2009, 282, 294-298.	4.4	252
4	Episodic zircon ages, Hf isotopic composition, and the preservation rate of continental crust. <i>Bulletin of the Geological Society of America</i> , 2011, 123, 951-957.	3.3	214
5	Small-scale convection at the edge of the Colorado Plateau: Implications for topography, magmatism, and evolution of Proterozoic lithosphere. <i>Geology</i> , 2010, 38, 611-614.	4.4	149
6	Quantitative measurements of shear wave polarizations at the Anza Seismic Network, southern California: Implications for shear wave splitting and earthquake prediction. <i>Journal of Geophysical Research</i> , 1990, 95, 12449-12473.	3.3	147
7	Observed rapid bedrock uplift in Amundsen Sea Embayment promotes ice-sheet stability. <i>Science</i> , 2018, 360, 1335-1339.	12.6	147
8	A great thermal divergence in the mantle beginning 2.5 Ga: Geochemical constraints from greenstone basalts and komatiites. <i>Geoscience Frontiers</i> , 2016, 7, 543-553.	8.4	137
9	High-frequency analysis of seismic background noise as a function of wind speed and shallow depth. <i>Bulletin of the Seismological Society of America</i> , 1996, 86, 1507-1515.	2.3	137
10	Multidecadal Climate-induced Variability in Microseisms. <i>Seismological Research Letters</i> , 2008, 79, 194-202.	1.9	121
11	Seismic and acoustic observations at Mount Erebus Volcano, Ross Island, Antarctica, 1994-1998. <i>Journal of Volcanology and Geothermal Research</i> , 2000, 101, 105-128.	2.1	105
12	The crustal thickness of West Antarctica. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 378-395.	3.4	103
13	Volcanic eruptions observed with infrasound. <i>Geophysical Research Letters</i> , 2004, 31, .	4.0	101
14	Transoceanic wave propagation links iceberg calving margins of Antarctica with storms in tropics and Northern Hemisphere. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	101
15	Relative partitioning of acoustic and seismic energy during Strombolian eruptions. <i>Journal of Volcanology and Geothermal Research</i> , 2005, 148, 334-354.	2.1	99
16	Broadband recording of Strombolian explosions and associated very-long-period seismic signals on Mount Erebus Volcano, Ross Island, Antarctica. <i>Geophysical Research Letters</i> , 1998, 25, 2297-2300.	4.0	98
17	Monitoring rapid temporal change in a volcano with coda wave interferometry. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	98
18	Multiple fluvial processes detected by riverside seismic and infrasound monitoring of a controlled flood in the Grand Canyon. <i>Geophysical Research Letters</i> , 2013, 40, 4858-4863.	4.0	90

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19	Upper mantle convection beneath the central Rio Grande rift imaged by PandSwave tomography. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	87
20	Upper mantle structure of central and West Antarctica from array analysis of Rayleigh wave phase velocities. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 1758-1775.	3.4	84
21	Comprehensive characterization of waveform similarity in microearthquake data sets. <i>Bulletin of the Seismological Society of America</i> , 1993, 83, 1307-1314.	2.3	84
22	Crust and upper mantle shear wave structure of the southwest United States: Implications for rifting and support for high elevation. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	80
23	Imaging the seismic structure of the crust and upper mantle beneath the Great Plains, Rio Grande Rift, and Colorado Plateau using receiver functions. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	80
24	Using Automated, High-precision Repicking to Improve Delineation of Microseismic Structures at the Sultz Geothermal Reservoir. , 2002, 159, 563-596.		78
25	Lithospheric structure of the Rio Grande rift. <i>Nature</i> , 2005, 433, 851-855.	27.8	78
26	The Crust and Upper Mantle Structure of Central and West Antarctica From Bayesian Inversion of Rayleigh Wave and Receiver Functions. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 7824-7849.	3.4	78
27	Interpretation and utility of infrasonic records from erupting volcanoes. <i>Journal of Volcanology and Geothermal Research</i> , 2003, 121, 15-63.	2.1	77
28	Imaging the Antarctic mantle using adaptively parameterized P-wave tomography: Evidence for heterogeneous structure beneath West Antarctica. <i>Earth and Planetary Science Letters</i> , 2014, 408, 66-78.	4.4	76
29	Refinement of the supercontinent cycle with Hf, Nd and Sr isotopes. <i>Geoscience Frontiers</i> , 2013, 4, 667-680.	8.4	75
30	Seismic and hydroacoustic tremor generated by colliding icebergs. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	74
31	High-frequency borehole seismograms recorded in the San Jcinto Fault zone, Southern California Part 2. Attenuation and site effects. <i>Bulletin of the Seismological Society of America</i> , 1991, 81, 1081-1100.	2.3	74
32	Acoustic source characterization of impulsive Strombolian eruptions from the Mount Erebus lava lake. <i>Journal of Volcanology and Geothermal Research</i> , 2008, 177, 673-686.	2.1	73
33	Shear-wave anisotropy of active tectonic regions via automated S-wave polarization analysis. <i>Tectonophysics</i> , 1989, 165, 279-292.	2.2	70
34	Glacial seismology. <i>Reports on Progress in Physics</i> , 2017, 80, 126801.	20.1	66
35	A rootless rockiesâ€™ Support and lithospheric structure of the Colorado Rocky Mountains inferred from CREST and TA seismic data. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 2670-2695.	2.5	65
36	Upstairs-downstairs: supercontinents and large igneous provinces, are they related?. <i>International Geology Review</i> , 2015, 57, 1341-1348.	2.1	64

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37	Reactivated faulting near Cushing, Oklahoma: Increased potential for a triggered earthquake in an area of United States strategic infrastructure. <i>Geophysical Research Letters</i> , 2015, 42, 8328-8332.	4.0	59
38	Seismic Structure of the Antarctic Upper Mantle Imaged with Adjoint Tomography. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, .	3.4	59
39	Seismic observations of glaciogenic ocean waves (micro-tsunamis) on icebergs and ice shelves. <i>Journal of Glaciology</i> , 2009, 55, 193-206.	2.2	58
40	Seismic detection of an active subglacial magmatic complex in Marie Byrd Land, Antarctica. <i>Nature Geoscience</i> , 2013, 6, 1031-1035.	12.9	55
41	The first second of volcanic eruptions from the Erebus volcano lava lake, Antarcticaâ€”Energies, pressures, seismology, and infrasound. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 3318-3340.	3.4	55
42	A seismic transect across West Antarctica: Evidence for mantle thermal anomalies beneath the Bentley Subglacial Trench and the Marie Byrd Land Dome. <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 8439-8460.	3.4	54
43	Nonlinear Inverse Problems. , 2019, , 257-278.		53
44	Moment tensor inversion of very long period seismic signals from Strombolian eruptions of Erebus Volcano. <i>Journal of Volcanology and Geothermal Research</i> , 2008, 177, 635-647.	2.1	52
45	Global trends in extremal microseism intensity. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	52
46	Ross ice shelf vibrations. <i>Geophysical Research Letters</i> , 2015, 42, 7589-7597.	4.0	52
47	Infrasonic tracking of large bubble bursts and ash venting at Erebus Volcano, Antarctica. <i>Journal of Volcanology and Geothermal Research</i> , 2008, 177, 661-672.	2.1	50
48	The Seismic Noise Environment of Antarctica. <i>Seismological Research Letters</i> , 2015, 86, 89-100.	1.9	50
49	Seismic imaging of the crust and upper mantle using regularized joint receiver functions, frequencyâ€”wave number filtering, and multimode Kirchhoff migration. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	49
50	Hundreds of Earthquakes per Day: The 2014 Guthrie, Oklahoma, Earthquake Sequence. <i>Seismological Research Letters</i> , 2015, 86, 1318-1325.	1.9	49
51	Initial shear wave particle motions and stress constraints at the Anza Seismic Network. <i>Geophysical Journal International</i> , 1992, 108, 740-748.	2.4	47
52	Antarctic icequakes triggered by the 2010 Maule earthquake in Chile. <i>Nature Geoscience</i> , 2014, 7, 677-681.	12.9	44
53	Seismic evidence for lithospheric foundering beneath the southern Transantarctic Mountains, Antarctica. <i>Geology</i> , 2018, 46, 71-74.	4.4	44
54	The nature and evolution of mantle upwelling at Ross Island, Antarctica, with implications for the source of HIMU lavas. <i>Earth and Planetary Science Letters</i> , 2018, 498, 38-53.	4.4	42

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55	Ice shelf structure derived from dispersion curve analysis of ambient seismic noise, Ross Ice Shelf, Antarctica. <i>Geophysical Journal International</i> , 2016, 205, 785-795.	2.4	40
56	Zircon Age Episodicity and Growth of Continental Crust. <i>Eos</i> , 2009, 90, 364-364.	0.1	38
57	The mantle transition zone beneath West Antarctica: Seismic evidence for hydration and thermal upwellings. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 40-58.	2.5	38
58	Crustal and upper-mantle structure beneath ice-covered regions in Antarctica from S-wave receiver functions and implications for heat flow. <i>Geophysical Journal International</i> , 2016, 204, 1636-1648.	2.4	36
59	Tsunami and infragravity waves impacting Antarctica ice shelves. <i>Journal of Geophysical Research: Oceans</i> , 2017, 122, 5786-5801.	2.6	35
60	A lower crustal extension to a midcrustal magma body in the Rio Grande Rift, New Mexico. <i>Journal of Geophysical Research</i> , 1996, 101, 25283-25291.	3.3	33
61	Kinematic and seismic analysis of giant tabular iceberg breakup at Cape Adare, Antarctica. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	32
62	Efficient stochastic estimation of the model resolution matrix diagonal and generalized cross-validation for large geophysical inverse problems. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	32
63	Internal structure of Erebus volcano, Antarctica imaged by high-resolution active-source seismic tomography and coda interferometry. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 1067-1078.	3.4	30
64	The uppermost mantle seismic velocity and viscosity structure of central West Antarctica. <i>Earth and Planetary Science Letters</i> , 2017, 472, 38-49.	4.4	29
65	Tidal and Thermal Stresses Drive Seismicity Along a Major Ross Ice Shelf Rift. <i>Geophysical Research Letters</i> , 2019, 46, 6644-6652.	4.0	29
66	Upper mantle seismic anisotropy beneath the West Antarctic Rift System and surrounding region from shear wave splitting analysis. <i>Geophysical Journal International</i> , 2014, 198, 414-429.	2.4	27
67	Current status of seismic and borehole measurements for HDR/HWR development. <i>Geothermics</i> , 1999, 28, 475-490.	3.4	25
68	Ross Ice Shelf Icequakes Associated With Ocean Gravity Wave Activity. <i>Geophysical Research Letters</i> , 2019, 46, 8893-8902.	4.0	25
69	Imaging of Erebus volcano using body wave seismic interferometry of Strombolian eruption coda. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	24
70	Small-scale stress heterogeneity in the Anza seismic gap, southern California. <i>Journal of Geophysical Research</i> , 1994, 99, 6801.	3.3	23
71	Multiple scattering from icequakes at Erebus volcano, Antarctica: Implications for imaging at glaciated volcanoes. <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 1129-1141.	3.4	23
72	Crustal structure of the Transantarctic Mountains, Ellsworth Mountains and Marie Byrd Land, Antarctica: constraints on shear wave velocities, Poisson's ratios and Moho depths. <i>Geophysical Journal International</i> , 2017, 211, 1328-1340.	2.4	23

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73	Heterogeneous upper mantle structure beneath the Ross Sea Embayment and Marie Byrd Land, West Antarctica, revealed by P-wave tomography. <i>Earth and Planetary Science Letters</i> , 2019, 513, 40-50.	4.4	23
74	Shear wave splitting and mantle flow beneath LA RISTRA. <i>Geophysical Research Letters</i> , 2003, 30, .	4.0	22
75	Automatic Phase Pick Refinement and Similar Event Association in Large Seismic Datasets. <i>Modern Approaches in Geophysics</i> , 2000, , 231-263.	0.1	22
76	Near-surface Environmentally Forced Changes in the Ross Ice Shelf Observed With Ambient Seismic Noise. <i>Geophysical Research Letters</i> , 2018, 45, 11,187.	4.0	21
77	Multi-scale reasonable attenuation tomography analysis (MuRAT): An imaging algorithm designed for volcanic regions. <i>Journal of Volcanology and Geothermal Research</i> , 2014, 277, 22-35.	2.1	20
78	Measuring Mountain River Discharge Using Seismographs Emplaced Within the Hyporheic Zone. <i>Journal of Geophysical Research F: Earth Surface</i> , 2018, 123, 210-228.	2.8	20
79	Characteristics of the October 2005 Microearthquake Swarm and Reactivation of Similar Event Seismic Swarms over Decadal Time Periods near Socorro, New Mexico. <i>Bulletin of the Seismological Society of America</i> , 2008, 98, 93-105.	2.3	19
80	Data Quality of Collocated Portable Broadband Seismometers Using Direct Burial and Vault Emplacement. <i>Bulletin of the Seismological Society of America</i> , 2015, 105, 2420-2432.	2.3	19
81	Links between atmosphere, ocean, and cryosphere from two decades of microseism observations on the Antarctic Peninsula. <i>Journal of Geophysical Research F: Earth Surface</i> , 2017, 122, 153-166.	2.8	18
82	The uppermost mantle seismic velocity structure of West Antarctica from Rayleigh wave tomography: Insights into tectonic structure and geothermal heat flow. <i>Earth and Planetary Science Letters</i> , 2019, 522, 219-233.	4.4	18
83	Spatiotemporal evolution of the 2011 Prague, Oklahoma, aftershock sequence revealed using subspace detection and relocation. <i>Geophysical Research Letters</i> , 2017, 44, 7149-7158.	4.0	17
84	Patients treated with oxaliplatin are at risk for thrombocytopenia caused by multiple drug-dependent antibodies. <i>Blood</i> , 2018, 131, 1486-1489.	1.4	17
85	The Upper Mantle Structure of Northwestern Canada From Teleseismic Body Wave Tomography. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB018837.	3.4	17
86	Strong seismic scatterers near the core-mantle boundary north of the Pacific Anomaly. <i>Physics of the Earth and Planetary Interiors</i> , 2016, 253, 21-30.	1.9	16
87	High-resolution receiver function imaging reveals Colorado Plateau lithospheric architecture and mantle-supported topography. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	15
88	Ocean-excited plate waves in the Ross and Pine Island Glacier ice shelves. <i>Journal of Glaciology</i> , 2018, 64, 730-744.	2.2	15
89	P- and S-wave velocity structure of central West Antarctica: Implications for the tectonic evolution of the West Antarctic Rift System. <i>Earth and Planetary Science Letters</i> , 2020, 546, 116437.	4.4	15
90	Chapter 7.2 of Mount Erebus. <i>Geological Society Memoir</i> , 2021, 55, 695-739.	1.7	15

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91	Grand Challenges for Seismology. <i>Eos</i> , 2009, 90, 361-362.	0.1	14
92	Swell-Triggered Seismicity at the Near-Front Damage Zone of the Ross Ice Shelf. <i>Seismological Research Letters</i> , 2021, 92, 2768-2792.	1.9	14
93	Seismic tomography of the Colorado Rocky Mountains upper mantle from CREST: Lithosphereâ€asthenosphere interactions and mantle support of topography. <i>Earth and Planetary Science Letters</i> , 2014, 402, 107-119.	4.4	13
94	Surfaceâ€Wave Tomography of the Northern Canadian Cordillera Using Earthquake Rayleigh Wave Group Velocities. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2021JB021960.	3.4	13
95	Multiyear Shallow Conduit Changes Observed With Lava Lake Eruption Seismograms at Erebus Volcano, Antarctica. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 3178-3196.	3.4	12
96	Upperâ€Crustal Shearâ€Wave Velocity Structure of the Southâ€Central Rio Grande Rift above the Socorro Magma Body Imaged with Ambient Noise by the Largeâ€N Sevilleta Seismic Array. <i>Seismological Research Letters</i> , 2018, 89, 1708-1719.	1.9	12
97	Seasonal and spatial variations in the ocean-coupled ambient wavefield of the Ross Ice Shelf. <i>Journal of Glaciology</i> , 2019, 65, 912-925.	2.2	12
98	Glacial Earthquakes and Precursory Seismicity Associated With Thwaites Glacier Calving. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086178.	4.0	12
99	Seismic evidence for craton chiseling and displacement of lithospheric mantle by the Tintina fault in the northern Canadian Cordillera. <i>Geology</i> , 2020, 48, 1120-1125.	4.4	11
100	Moho Variations across the Northern Canadian Cordillera. <i>Seismological Research Letters</i> , 2020, 91, 3076-3085.	1.9	11
101	A joint inversion of receiver function and Rayleigh wave phase velocity dispersion data to estimate crustal structure in West Antarctica. <i>Geophysical Journal International</i> , 2020, 223, 1644-1657.	2.4	11
102	Mapping Crustal Shear Wave Velocity Structure and Radial Anisotropy Beneath West Antarctica Using Seismic Ambient Noise. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 5014-5037.	2.5	10
103	The Mackenzie Mountains EarthScope Project: Studying Active Deformation in the Northern North American Cordillera from Margin to Craton. <i>Seismological Research Letters</i> , 2020, 91, 521-532.	1.9	10
104	Expecting the Unexpected: Black Swans and Seismology. <i>Seismological Research Letters</i> , 2012, 83, 5-6.	1.9	9
105	Teleseismic Scatteredâ€Wave Imaging Using a Largeâ€N Array in the Albuquerque Basin, New Mexico. <i>Seismological Research Letters</i> , 2020, 91, 287-303.	1.9	7
106	Seismicity and Pn Velocity Structure of Central West Antarctica. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009471.	2.5	7
107	Projected Seismic Activity at the Tiger Stripe Fractures on Enceladus, Saturn, From an Analog Study of Tidally Modulated Icequakes Within the Ross Ice Shelf, Antarctica. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2021JE006862.	3.6	7
108	Radial Anisotropy and Sediment Thickness of West and Central Antarctica Estimated From Rayleigh and Love Wave Velocities. <i>Journal of Geophysical Research: Solid Earth</i> , 2022, 127, .	3.4	7

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109	Spatiotemporal Analysis of the Foreshockâ€“Mainshockâ€“Aftershock Sequence of the 6 July 2017 Mw 5.8 Lincoln, Montana, Earthquake. <i>Seismological Research Letters</i> , 2019, 90, 131-139.	1.9	6
110	Remote Triggering of Icequakes at Mt. Erebus, Antarctica by Large Teleseismic Earthquakes. <i>Seismological Research Letters</i> , 2021, 92, 2866-2875.	1.9	6
111	Seismic Tomography of Erebus Volcano, Antarctica. <i>Eos</i> , 2010, 91, 53-55.	0.1	5
112	Interrogating a Surging Glacier With Seismic Interferometry. <i>Geophysical Research Letters</i> , 2019, 46, 8162-8165.	4.0	5
113	Prominent thermal anomalies in the mantle transition zone beneath the Transantarctic Mountains. <i>Geology</i> , 2020, 48, 748-752.	4.4	5
114	Bayesian Methods. , 2019, , 279-306.		4
115	Teleseismic earthquake wavefields observed on the Ross Ice Shelf. <i>Journal of Glaciology</i> , 2021, 67, 58-74.	2.2	4
116	The 2015 Sevilleta Socorro Magma Body Mixedâ€“Mode Seismic Experiment. <i>Seismological Research Letters</i> , 2018, 89, 1916-1922.	1.9	3
117	Rank Deficiency and Ill-Conditioning. , 2019, , 55-91.		3
118	Tikhonov Regularization. , 2019, , 93-134.		3
119	Evidence for asthenospheric flow rotation in northwest Canada: insights from shear wave splitting. <i>Geophysical Journal International</i> , 2021, 228, 1780-1792.	2.4	3
120	Shear Wave Splitting Across Antarctica: Implications for Upper Mantle Seismic Anisotropy. <i>Journal of Geophysical Research: Solid Earth</i> , 2022, 127, .	3.4	3
121	Iterative Methods. , 2019, , 151-179.		2
122	Using Automated, High-precision Repicking to Improve Delineation of Microseismic Structures at the Soutz Geothermal Reservoir. , 2002, , 563-596.		2
123	The Seismic Noise Environment of Antarctica. <i>Seismological Research Letters</i> , 2015, 86, 431-431.	1.9	1
124	Sparsity Regularization and Total Variation Techniques. , 2019, , 181-209.		1
125	Nonlinear Regression. , 2019, , 235-256.		1
126	Discretizing Inverse Problems Using Basis Functions. , 2019, , 135-149.		0

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127	Fourier Techniques. , 2019, , 211-233.		0