Robert W Clayton

List of Publications by Year
in descending order

86 papers	5,241 citations	126907 33 h-index	85541 71 g-index
89 all docs	89 docs citations	89 times ranked	3209 citing authors

#	Article	IF	Citations
1	Spatial Variation and Frequency Dependence of Lg Wave Attenuation With Site Response Correction Along the CCSE Array in Central California, US. Geochemistry, Geophysics, Geosystems, 2022, 23, .	2.5	0
2	Parsimonious Velocity Inversion Applied to the Los Angeles Basin, CA. Journal of Geophysical Research: Solid Earth, 2022, 127, .	3.4	4
3	Ground motions in urban Los Angeles from the 2019 Ridgecrest earthquake sequence. Earthquake Spectra, 2021, 37, 2493-2522.	3.1	7
4	Determination of Near Surface Shearâ€Wave Velocities in the Central Los Angeles Basin With Dense Arrays. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021369.	3.4	16
5	Southern California Earthquake Data Now Available in the AWS Cloud. Seismological Research Letters, 2021, 92, 3238-3247.	1.9	5
6	Urban Basin Structure Imaging Based on Dense Arrays and Bayesian Arrayâ€Based Coherent Receiver Functions. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022279.	3.4	11
7	Seismic Wave Propagation and Inversion with Neural Operators. The Seismic Record, 2021, 1, 126-134.	3.1	19
8	The Fineâ€Scale Structure of Long Beach, California, and Its Impact on Ground Motion Acceleration. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022462.	3.4	11
9	Shear wave structure of a transect of the Los Angeles basin from multimode surface waves and H/V spectral ratio analysis. Geophysical Journal International, 2020, 220, 415-427.	2.4	14
10	CSN-LAUSD Network: A Dense Accelerometer Network in Los Angeles Schools. Seismological Research Letters, 2020, 91, 622-630.	1.9	15
11	2019 Ridgecrest Earthquake Reveals Areas of Los Angeles That Amplify Shaking of High-Rises. Seismological Research Letters, 2020, 91, 3370-3380.	1.9	11
12	Seismic anisotropy reveals crustal flow driven by mantle vertical loading in the Pacific NW. Science Advances, 2020, 6, eabb0476.	10.3	11
13	Extracting Dispersion Curves From Ambient Noise Correlations Using Deep Learning. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 8932-8939.	6.3	30
14	A detailed image of the continent-borderland transition beneath Long Beach, California. Geophysical Journal International, 2020, 222, 2102-2107.	2.4	2
15	Imaging the Subsurface with Ambient Noise Autocorrelations. Seismological Research Letters, 2020, 91, 930-935.	1.9	20
16	Using a Timeâ€Based Subarray Method to Extract and Invert Noiseâ€Derived Body Waves at Long Beach, California. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB018855.	3.4	23
17	Seismic evidence for a fossil slab origin for the Isabella anomaly. Geophysical Journal International, 2020, 224, 1188-1196.	2.4	6
18	Crustal structure variations in south-central Mexico from receiver functions. Geophysical Journal International, 2019, 219, 2174-2186.	2.4	13

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19	Seismic attenuation structure of southern Peruvian subduction system. Tectonophysics, 2019, 771, 228203.	2.2	7
20	Exposing Los Angelesâ€™s Shaky Geologic Underbelly. Eos, 2019, 100, .	0.1	8
21	Rayleigh and S wave tomography constraints on subduction termination and lithospheric foundering in central California. Earth and Planetary Science Letters, 2018, 488, 14-26.	4.4	35
22	Structure of the Northern Los Angeles Basins Revealed in Teleseismic Receiver Functions from Shortâ€Term Nodal Seismic Arrays. Seismological Research Letters, 2018, 89, 1680-1689.	1.9	32
23	Damage Detection by Template Matching of Scattered Waves. Bulletin of the Seismological Society of America, 2018, 108, 2556-2564.	2.3	4
24	Imaging the Eastern Transâ€Mexican Volcanic Belt With Ambient Seismic Noise: Evidence for a Slab Tear. Journal of Geophysical Research: Solid Earth, 2018, 123, 7741-7759.	3.4	35
25	Seismicity and structure of Nazca Plate subduction zone in southern Peru. Earth and Planetary Science Letters, 2018, 498, 334-347.	4.4	10
26	An Anisotropic Contrast in the Lithosphere Across the Central San Andreas Fault. Geophysical Research Letters, 2018, 45, 3967-3975.	4.0	5
27	Imaging the subsurface with ambient noise autocorrelations. , 2018, , .		6
28	Downtown Los Angeles 52-Story High-Rise and Free-Field Response to an Oil Refinery Explosion. Earthquake Spectra, 2016, 32, 1793-1820.	3.1	13
29	Structure of the Los Angeles Basin from ambient noise and receiver functions. Geophysical Journal International, 2016, 206, 1645-1651.	2.4	30
30	Localized seismic deformation in the upper mantle revealed by dense seismic arrays. Science, 2016, 354, 88-92.	12.6	78
31	Higher-mode ambient-noise Rayleigh waves in sedimentary basins. Geophysical Journal International, 2016, 206, 1634-1644.	2.4	25
32	Imaging widespread seismicity at midlower crustal depths beneath Long Beach, CA, with a dense seismic array: Evidence for a depthâ€dependent earthquake size distribution. Geophysical Research Letters, 2015, 42, 6314-6323.	4.0	40
33	Rayleigh wave dispersion measurements reveal lowâ€velocity zones beneath the new crust in the Gulf of California. Geophysical Research Letters, 2015, 42, 1766-1774.	4.0	13
34	Flat slab deformation caused by interplate suction force. Geophysical Research Letters, 2015, 42, 7064-7072.	4.0	17
35	Community Seismic Network: A Dense Array to Sense Earthquake Strong Motion. Seismological Research Letters, 2015, 86, 1354-1363.	1.9	63
36	Seismic properties of the Nazca oceanic crust in southern Peruvian subduction system. Earth and Planetary Science Letters, 2015, 429, 110-121.	4.4	15

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37	Structure of the subduction transition region from seismic array data in southern Peru. Geophysical Journal International, 2014, 196, 1889-1905.	2.4	29
38	Global synthetic seismograms using a 2-D finite-difference method. Geophysical Journal International, 2014, 197, 1166-1183.	2.4	65
39	The crust and uppermost mantle structure of Southern Peru from ambient noise and earthquake surface wave analysis. Earth and Planetary Science Letters, 2014, 395, 61-70.	4.4	33
40	Seismicity and structure in central Mexico: Evidence for a possible slab tear in the South Cocos plate. Journal of Geophysical Research: Solid Earth, 2014, 119, 3424-3447.	3.4	35
41	Evidence of an upper mantle seismic anomaly opposing the <scp>C</scp>ocos slab beneath the <scp>I</scp>sthmus of <scp>T</scp>ehuantepec, <scp>M</scp>exico. Geochemistry, Geophysics, Geosystems, 2014, 15, 3021-3034.	2.5	3
42	Community sense and response systems. Communications of the ACM, 2014, 57, 66-75.	4.5	44
43	The lack of correlation between flat slabs and bathymetric impactors in South America. Earth and Planetary Science Letters, 2013, 371-372, 1-5.	4.4	45
44	Generation of talc in the mantle wedge and its role in subduction dynamics in central Mexico. Earth and Planetary Science Letters, 2013, 384, 81-87.	4.4	46
45	Rolling hills on the coreâ€“mantle boundary. Earth and Planetary Science Letters, 2013, 361, 333-342.	4.4	37
46	Spurious velocity changes caused by temporal variations in ambient noise frequency content. Geophysical Journal International, 2013, 194, 1574-1581.	2.4	97
47	High-resolution 3D shallow crustal structure in Long Beach, California: Application of ambient noise tomography on a dense seismic array. Geophysics, 2013, 78, Q45-Q56.	2.6	333
48	Locating a scatterer in the active volcanic area of Southern Peru from ambient noise cross-correlation. Geophysical Journal International, 2013, 192, 1332-1341.	2.4	22
49	Analysis of teleseismic <i>P</i> waves with a 5200â€station array in Long Beach, California: Evidence for an abrupt boundary to Inner Borderland rifting. Journal of Geophysical Research: Solid Earth, 2013, 118, 5320-5338.	3.4	61
50	Structure of the subduction system in southern Peru from seismic array data. Journal of Geophysical Research, 2012, 117, .	3.3	26
51	Distribution of hydrous minerals in the subduction system beneath Mexico. Earth and Planetary Science Letters, 2012, 341-344, 58-67.	4.4	13
52	Seismic structure in central Mexico: Implications for fragmentation of the subducted Cocos plate. Journal of Geophysical Research, 2012, 117, .	3.3	33
53	Seismic imaging of the Cocos plate subduction zone system in central Mexico. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	47
54	The relationship between upper mantle anisotropic structures beneath California, transpression, and absolute plate motions. Journal of Geophysical Research, 2011, 116, .	3.3	13

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55	Evidence of a collision between the YucatÃ¡n Block and Mexico in the Miocene. Geophysical Journal International, 2011, 187, 989-1000.	2.4	41
56	An Evaluation of Proposed Mechanisms of Slab Flattening in Central Mexico. Pure and Applied Geophysics, 2011, 168, 1461-1474.	1.9	35
57	The 2006 slow slip event and nonvolcanic tremor in the Mexican subduction zone. Geophysical Research Letters, 2010, 37, .	4.0	88
58	Subducting Slab Ultra-Slow Velocity Layer Coincident with Silent Earthquakes in Southern Mexico. Science, 2009, 324, 502-506.	12.6	166
59	Seismic attenuation structure in central Mexico: Image of a focused highâ€attenuation zone in the mantle wedge. Journal of Geophysical Research, 2009, 114, .	3.3	30
60	Vertical tectonics of the High Plateau region, Manihiki Plateau, Western Pacific, from seismic stratigraphy. Marine Geophysical Researches, 2008, 29, 13-26.	1.2	11
61	Horizontal subduction and truncation of the Cocos Plate beneath central Mexico. Geophysical Research Letters, 2008, 35, .	4.0	241
62	A notch structure on the Moho beneath the Eastern San Gabriel Mountains. Earth and Planetary Science Letters, 2007, 260, 570-581.	4.4	14
63	Crustal thickness variations in the margins of the Gulf of California from receiver functions. Geophysical Journal International, 2007, 170, 687-699.	2.4	63
64	Seismic refraction evidence for steep faults cutting highly attenuated continental basement in the central Transverse ranges, California. Geophysical Journal International, 2005, 160, 651-666.	2.4	25
65	Crustal structure of the Borderland-Continent Transition Zone of southern California adjacent to Los Angeles. Journal of Geophysical Research, 2003, 108, .	3.3	18
66	Fault systems of the 1971 San Fernando and 1994 Northridge earthquakes, southern California: Relocated aftershocks and seismic images from LARSE II. Geology, 2003, 31, 171.	4.4	68
67	Mid-Cretaceous tectonic evolution of the Tongareva triple junction in the southwestern Pacific Basin. Geology, 2002, 30, 67.	4.4	64
68	Resolution of tomographic models of the mantle beneath Iceland. Geophysical Research Letters, 2000, 27, 3993-3996.	4.0	29
69	Using constraints to address the instabilities of automated prestack velocity analysis. Geophysics, 1992, 57, 404-419.	2.6	38
70	Modeling path effects in three-dimensional basin structures. Bulletin of the Seismological Society of America, 1992, 82, 81-103.	2.3	20
71	A 2-D synthetic study of global traveltime tomography. Geophysical Journal International, 1991, 106, 53-65.	2.4	12
72	Threeâ€dimensional imaging of steeply dipping structure near the San Andreas fault, Parkfield, California. Geophysics, 1988, 53, 176-185.	2.6	40

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73	An iterative inversion of backâ€scattered acoustic waves. Geophysics, 1988, 53, 501-508.	2.6	51
74	The nature of deep crustal structures in the Mojave Desert, California. Geophysical Journal International, 1987, 89, 125-132.	2.4	20
75	A stable freeâ€surface boundary condition for twoâ€dimensional elastic finiteâ€difference wave simulation. Geophysics, 1986, 51, 2247-2249.	2.6	51
76	Lateral velocity variations in Southern California. II. Results for the lower crust from <i>Pn</i> waves. Bulletin of the Seismological Society of America, 1986, 76, 511-520.	2.3	115
77	Lower mantle heterogeneity, dynamic topography and the geoid. Nature, 1985, 313, 541-545.	27.8	722
78	GEC Hirst Research Centre. Physics in Technology, 1985, 16, 76-84.	0.2	3
79	A tomographic image of mantle structure beneath Southern California. Geophysical Research Letters, 1984, 11, 625-627.	4.0	149
80	Analysis of upper mantle structure using wave field continuation of P waves. Bulletin of the Seismological Society of America, 1984, 74, 1703-1719.	2.3	9
81	Tomographic reconstruction of velocity anomalies. Bulletin of the Seismological Society of America, 1984, 74, 2201-2219.	2.3	22
82	Inversion of refraction data by wave field continuation. Geophysics, 1981, 46, 860-868.	2.6	94
83	A Bornâ€WKBJ inversion method for acoustic reflection data. Geophysics, 1981, 46, 1559-1567.	2.6	274
84	Absorbing boundary conditions for waveâ€equation migration. Geophysics, 1980, 45, 895-904.	2.6	117
85	Absorbing boundary conditions for acoustic and elastic wave equations. Bulletin of the Seismological Society of America, 1977, 67, 1529-1540.	2.3	973
86	Evidence of Mantleâ€Based Deformation Across the Western US. Geophysical Research Letters, 0, , .	4.0	0