Richard Allen

List of Publications by Year
in descending order

113 papers	7,291 citations	38742 50 h-index	60623 81 g-index
117 all docs	117 docs citations	117 times ranked	4160 citing authors

#	Article	IF	Citations
1	The Potential for Earthquake Early Warning in Southern California. Science, 2003, 300, 786-789.	12.6	478
2	The Status of Earthquake Early Warning around the World: An Introductory Overview. Seismological Research Letters, 2009, 80, 682-693.	1.9	283
3	The deterministic nature of earthquake rupture. Nature, 2005, 438, 212-215.	27.8	238
4	Segmentation in episodic tremor and slip all along Cascadia. Geology, 2007, 35, 907.	4.4	210
5	MyShake: A smartphone seismic network for earthquake early warning and beyond. Science Advances, 2016, 2, e1501055.	10.3	209
6	Earthquake Early Warning: Advances, Scientific Challenges, and Societal Needs. Annual Review of Earth and Planetary Sciences, 2019, 47, 361-388.	11.0	206
7	The elusive mantle plume. Earth and Planetary Science Letters, 2003, 207, 1-12.	4.4	175
8	Slabâ€plume interaction beneath the Pacific Northwest. Geophysical Research Letters, 2010, 37, .	4.0	163
9	Lithosphere-asthenosphere interaction beneath the western United States from the joint inversion of body-wave traveltimes and surface-wave phase velocities. Geophysical Journal International, 2011, 185, 1003-1021.	2.4	160
10	Imaging the mantle beneath Iceland using integrated seismological techniques. Journal of Geophysical Research, 2002, 107, ESE 3-1-ESE 3-16.	3.3	144
11	Determination of earthquake early warning parameters, Ï„candPd, for southern California. Geophysical Journal International, 2007, 170, 711-717.	2.4	143
12	Slip segmentation and slow rupture to the trench during the 2015, <i>M_w</i>8.3 Illapel, Chile earthquake. Geophysical Research Letters, 2016, 43, 961-966.	4.0	141
13	Application of real-time GPS to earthquake early warning. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	127
14	Seismic tomography shows that upwelling beneath Iceland is confined to the upper mantle. Geophysical Journal International, 2001, 146, 504-530.	2.4	118
15	Earthquake magnitude calculation without saturation from the scaling of peak ground displacement. Geophysical Research Letters, 2015, 42, 5197-5205.	4.0	118
16	Plume-driven plumbing and crustal formation in Iceland. Journal of Geophysical Research, 2002, 107, ESE 4-1.	3.3	116
17	Slab morphology in the Cascadia fore arc and its relation to episodic tremor and slip. Journal of Geophysical Research, 2010, 115, .	3.3	116
18	Realâ€time earthquake detection and hazard assessment by ElarmS across California. Geophysical Research Letters, 2009, 36, .	4.0	110

#	Article	IF	Citations
19	The Cascadia Initiative: A Sea Change In Seismological Studies of Subduction Zones. Oceanography, 2014, 27, 138-150.	1.0	106
20	Highâ€resolution body wave tomography models of the upper mantle beneath eastern China and the adjacent areas. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	105
21	Operational realâ€time GPSâ€enhanced earthquake early warning. Journal of Geophysical Research: Solid Earth, 2014, 119, 7944-7965.	3.4	100
22	The seismic anomaly beneath Iceland extends down to the mantle transition zone and no deeper. Geophysical Journal International, 2000, 142, F1-F5.	2.4	95
23	Seismic imaging east of the Rocky Mountains with USArray. Earth and Planetary Science Letters, 2014, 402, 16-25.	4.4	93
24	Designing a Network-Based Earthquake Early Warning Algorithm for California: ElarmS-2. Bulletin of the Seismological Society of America, 2014, 104, 162-173.	2.3	92
25	Benefits and Costs of Earthquake Early Warning. Seismological Research Letters, 2016, 87, 765-772.	1.9	91
26	Toward earthquake early warning in northern California. Journal of Geophysical Research, 2007, 112, .	3.3	90
27	Reactivation of an Archean craton: Constraints from Pâ€and Sâ€wave tomography in North China. Geophysical Research Letters, 2009, 36, .	4.0	90
28	Performance of Several Low-Cost Accelerometers. Seismological Research Letters, 2014, 85, 147-158.	1.9	89
29	Application of realâ€time GPS to earthquake early warning in subduction and strikeâ€slip environments. Journal of Geophysical Research: Solid Earth, 2013, 118, 3448-3461.	3.4	81
30	The thin hot plume beneath Iceland. Geophysical Journal International, 1999, 137, 51-63.	2.4	80
31	Seismic evidence for a tilted mantle plume and northâ€"south mantle flow beneath Iceland. Earth and Planetary Science Letters, 2002, 197, 261-272.	4.4	76
32	Investigation of Cascadia segmentation with ambient noise tomography. Earth and Planetary Science Letters, 2011, 309, 67-76.	4.4	76
33	VPandVSstructure of the Yellowstone hot spot from teleseismic tomography: Evidence for an upper mantle plume. Journal of Geophysical Research, 2006, 111, .	3.3	74
34	Optimizing Earthquake Early Warning Performance: ElarmSâ€3. Seismological Research Letters, 2019, 90, 727-743.	1.9	71
35	The Mw 6.0 24 August 2014 South Napa Earthquake. Seismological Research Letters, 2015, 86, 309-326.	1.9	70
36	Mantle plume tomography. Chemical Geology, 2007, 241, 248-263.	3.3	69

#	Article	IF	Citations
37	Local tsunami warnings: Perspectives from recent large events. Geophysical Research Letters, 2016, 43, 1109-1117.	4.0	69
38	The fate of the Juan de Fuca plate: Implications for a Yellowstone plume head. Earth and Planetary Science Letters, 2007, 264, 266-276.	4.4	68
39	Seismic anisotropy beneath Cascadia and the Mendocino triple junction: Interaction of the subducting slab with mantle flow. Earth and Planetary Science Letters, 2010, 297, 627-632.	4.4	67
40	A global approach to provide magnitude estimates for earthquake early warning alerts. Geophysical Research Letters, 2013, 40, 6329-6333.	4.0	66
41	Kinematic rupture scenarios and synthetic displacement data: An example application to the Cascadia subduction zone. Journal of Geophysical Research: Solid Earth, 2016, 121, 6658-6674.	3.4	66
42	Development of the ElarmS methodology for earthquake early warning: Realtime application in California and offline testing in Japan. Soil Dynamics and Earthquake Engineering, 2011, 31, 188-200.	3.8	63
43	Optimal Seismic Network Density for Earthquake Early Warning: A Case Study from California. Seismological Research Letters, 2013, 84, 946-954.	1.9	63
44	Adaptive maternal and paternal effects: gamete plasticity in response to parental stress. Functional Ecology, 2014, 28, 724-733.	3.6	63
45	Single-Station Earthquake Characterization for Early Warning. Bulletin of the Seismological Society of America, 2005, 95, 2029-2039.	2.3	59
46	Tomography reveals buoyant asthenosphere accumulating beneath the Juan de Fuca plate. Science, 2016, 353, 1406-1408.	12.6	58
47	Seismogeodesy of the 2014 <i>M_w</i>6.1 Napa earthquake, California: Rapid response and modeling of fast rupture on a dipping strikeâ€slip fault. Journal of Geophysical Research: Solid Earth, 2015, 120, 5013-5033.	3.4	56
48	Automatic detection and rapid determination of earthquake magnitude by wavelet multiscale analysis of the primary arrival. Earth and Planetary Science Letters, 2006, 250, 214-223.	4.4	55
49	A Global Database of Strongâ€Motion Displacement GNSS Recordings and an Example Application to PGD Scaling. Seismological Research Letters, 2019, 90, 271-279.	1.9	55
50	The value of realâ€time GNSS to earthquake early warning. Geophysical Research Letters, 2017, 44, 8311-8319.	4.0	54
51	Structural Health Monitoring of Buildings Using Smartphone Sensors. Seismological Research Letters, 2018, 89, 594-602.	1.9	53
52	The ElarmS Earthquake Early Warning Methodology and Application across California. , 2007, , 21-43.		53
53	Seismic Imaging of the Alaska Subduction Zone: Implications for Slab Geometry and Volcanism. Geochemistry, Geophysics, Geosystems, 2018, 19, 4541-4560.	2.5	52
54	Shear wave tomography of China using joint inversion of body and surface wave constraints. Journal of Geophysical Research, 2012, 117, .	3.3	51

#	Article	IF	Citations
55	The MyShake Platform: A Global Vision for Earthquake Early Warning. Pure and Applied Geophysics, 2020, 177, 1699-1712.	1.9	49
56	Mantle structure beneath the western United States and its implications for convection processes. Journal of Geophysical Research, 2010, 115, .	3.3	47
57	Mantle flow geometry from ridge to trench beneath the Gordaâ€“Juan de Fuca plate system. Nature Geoscience, 2015, 8, 965-968.	12.9	45
58	Subduction geometry beneath south central Alaska and its relationship to volcanism. Geophysical Research Letters, 2016, 43, 9509-9517.	4.0	44
59	A comparison of <i>Ï„</i>_{<i>c</i>} and <i>Ï„</i>_p^{max} for magnitude estimation in earthquake early warning. Geophysical Research Letters, 2008, 35, .	4.0	43
60	Applying Movement Ecology to Marine Animals with Complex Life Cycles. Annual Review of Marine Science, 2018, 10, 19-42.	11.6	43
61	Rapid Earthquake Characterization Using MEMS Accelerometers and Volunteer Hosts Following the M 7.2 Darfield, New Zealand, Earthquake. Bulletin of the Seismological Society of America, 2014, 104, 184-192.	2.3	42
62	Asthenospheric flow and lithospheric evolution near the Mendocino Triple Junction. Earth and Planetary Science Letters, 2012, 323-324, 60-71.	4.4	41
63	Crustal structure beneath western and eastern Iceland from surface waves and receiver functions. Geophysical Journal International, 2002, 149, 349-363.	2.4	40
64	Revised ML Determination for Crustal Earthquakes in Taiwan. Bulletin of the Seismological Society of America, 2005, 95, 2517-2524.	2.3	40
65	MyShake: Initial observations from a global smartphone seismic network. Geophysical Research Letters, 2016, 43, 9588-9594.	4.0	40
66	The 2014 <i>M</i>_{<i>w</i>} 6.0 Napa earthquake, California: Observations from realâ€time GPSâ€enhanced earthquake early warning. Geophysical Research Letters, 2014, 41, 8269-8276.	4.0	39
67	Lessons from Mexicoâ€™s Earthquake Early Warning System. Eos, 2018, 99, .	0.1	34
68	Quake warnings, seismic culture. Science, 2017, 358, 1111-1111.	12.6	32
69	The Role of Variable Slab Dip in Driving Mantle Flow at the Eastern Edge of the Alaskan Subduction Margin: Insights From Shearâ€Wave Splitting. Geochemistry, Geophysics, Geosystems, 2019, 20, 2433-2448.	2.5	32
70	Testing ElarmS in Japan. Seismological Research Letters, 2009, 80, 727-739.	1.9	31
71	Quantifying the Value of Realâ€Time Geodetic Constraints for Earthquake Early Warning Using a Global Seismic and Geodetic Data Set. Journal of Geophysical Research: Solid Earth, 2019, 124, 3819-3837.	3.4	31
72	The Fragmented Death of the Farallon Plate. Geophysical Research Letters, 2019, 46, 7386-7394.	4.0	30

#	Article	IF	Citations
73	Asthenospheric channeling of the Icelandic upwelling: Evidence from seismic anisotropy. Earth and Planetary Science Letters, 2005, 235, 167-182.	4.4	29
74	Three-dimensional pre-stack depth migration of receiver functions with the fast marching method: a Kirchhoff approach. Geophysical Journal International, 2016, 205, 819-829.	2.4	29
75	Transforming Earthquake Detection?. Science, 2012, 335, 297-298.	12.6	28
76	Machine Learning Aspects of the MyShake Global Smartphone Seismic Network. Seismological Research Letters, 2019, 90, 546-552.	1.9	28
77	Global growth of earthquake early warning. Science, 2022, 375, 717-718.	12.6	28
78	MEMS Accelerometer Mini-Array (MAMA): A Low-Cost Implementation for Earthquake Early Warning Enhancement. Earthquake Spectra, 2019, 35, 21-38.	3.1	27
79	Resolution of regional seismic models: Squeezing the Iceland anomaly. Geophysical Journal International, 2005, 161, 373-386.	2.4	24
80	Origin of the Newberry Hotspot Track: Evidence from shear-wave splitting. Earth and Planetary Science Letters, 2006, 244, 315-322.	4.4	24
81	Application of Seismic Array Processing to Earthquake Early Warning. Bulletin of the Seismological Society of America, 2014, 104, 2553-2561.	2.3	24
82	Magnitude-Period Scaling Relations for Japan and the Pacific Northwest: Implications for Earthquake Early Warning. Bulletin of the Seismological Society of America, 2007, 97, 140-150.	2.3	23
83	The Potential for Earthquake Early Warning in Italy Using ElarmS. Bulletin of the Seismological Society of America, 2008, 98, 495-503.	2.3	23
84	On the validation of seismic imaging methods: Finite frequency or ray theory?. Geophysical Research Letters, 2015, 42, 323-330.	4.0	23
85	Probabilistic Warning Times for Earthquake Ground Shaking in the San Francisco Bay Area. Seismological Research Letters, 2006, 77, 371-376.	1.9	22
86	Smartphone-based networks for earthquake detection. , 2015, , .		22
87	MyShake: Using Human-Centered Design Methods to Promote Engagement in a Smartphone-Based Global Seismic Network. Frontiers in Earth Science, 2018, 6, .	1.8	22
88	Geodetic Observations of Weak Determinism in Rupture Evolution of Large Earthquakes. Journal of Geophysical Research: Solid Earth, 2018, 123, 9950-9962.	3.4	22
89	Magnitude scaling relations from P-waves in southern California. Geophysical Research Letters, 2007, 34, .	4.0	21
90	Phenotypic links among lifeâ€history stages are complex and contextâ€dependent in a marine invertebrate: interactions among offspring size, larval nutrition and postmetamorphic density. Functional Ecology, 2013, 27, 1358-1366.	3.6	18

#	Article	IF	Citations
91	Implementing the ElarmS Earthquake Early Warning Algorithm on the Israeli Seismic Network. Bulletin of the Seismological Society of America, 2016, 106, 2332-2344.	2.3	18
92	Is earthquake rupture deterministic? (Reply). Nature, 2006, 442, E6-E6.	27.8	17
93	Automated detection and location of tectonic tremor along the entire Cascadia margin from 2005 to 2011. Earth and Planetary Science Letters, 2015, 430, 160-170.	4.4	17
94	Cascadia subduction slab heterogeneity revealed by threeâ€dimensional receiver function Kirchhoff migration. Geophysical Research Letters, 2017, 44, 694-701.	4.0	17
95	Seconds Before the Big One. Scientific American, 2011, 304, 74-79.	1.0	15
96	On the Feasibility of Using the Dense MyShake Smartphone Array for Earthquake Location. Seismological Research Letters, 2019, 90, 1209-1218.	1.9	14
97	Probabilistic Warning Times for Earthquake Ground Shaking in the San Francisco Bay Area. Seismological Research Letters, 2006, 77, 374-379.	1.9	12
98	Seismic phenomena associated with the 1996 VatnajÃ¶kull eruption, central Iceland. Journal of Volcanology and Geothermal Research, 2000, 102, 169-187.	2.1	11
99	MyShake Citizen Seismologists Help Launch Dual-Use Seismic Network in California. Frontiers in Communication, 2020, 5, .	1.2	11
100	Seismic hazards: Seconds count. Nature, 2013, 502, 29-31.	27.8	10
101	Toward Global Earthquake Early Warning with the MyShake Smartphone Seismic Network, Part 1: Simulation Platform and Detection Algorithm. Seismological Research Letters, 2020, 91, 2206-2217.	1.9	10
102	Automatic earthquake confirmation for early warning system. Geophysical Research Letters, 2015, 42, 5266-5273.	4.0	9
103	Earthquake Early Warning and Beyond. , 2019, , .		9
104	Toward Global Earthquake Early Warning with the MyShake Smartphone Seismic Network, Part 2: Understanding MyShake Performance around the World. Seismological Research Letters, 2020, 91, 2218-2233.	1.9	9
105	Assessing the Sensitivity and Accuracy of the MyShake Smartphone Seismic Network to Detect and Characterize Earthquakes. Seismological Research Letters, 0, , .	1.9	7
106	Earthquakes, Early and Strong Motion Warning. Encyclopedia of Earth Sciences Series, 2011, , 226-233.	0.1	7
107	The development of seismic anisotropy below south-central Alaska: evidence from local earthquake shear wave splitting. Geophysical Journal International, 2021, 225, 548-554.	2.4	6
108	Detecting damaged buildings using real-time crowdsourced images and transfer learning. Scientific Reports, 2022, 12, .	3.3	4

#	Article	IF	Citations
109	Variation in dispersal and competitive ability mediate realized connectivity in two benthic marine invertebrates. Marine Biology, 2017, 164, 1.	1.5	2
110	Earthquakes, Early and Strong Motion Warning. Encyclopedia of Earth Sciences Series, 2021, , 282-288.	0.1	1
111	MyShake: Building a global smartphone earthquake early-warning system. , 2018, , .		1
112	Earthquakes, Early and Strong Motion Warning. Encyclopedia of Earth Sciences Series, 2020, , 1-7.	0.1	0
113	Seismic Data from Smartphones: MyShake: Building a Global Smartphone Seismic Network. Geo-strata, 2017, 21, 44-53.	0.1	0