

Richard Allen

List of Publications by Year in descending order

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Version: 2024-02-01

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	Global growth of earthquake early warning. <i>Science</i> , 2022, 375, 717-718.	12.6	28
2	Detecting damaged buildings using real-time crowdsourced images and transfer learning. <i>Scientific Reports</i> , 2022, 12, .	3.3	4
3	The development of seismic anisotropy below south-central Alaska: evidence from local earthquake shear wave splitting. <i>Geophysical Journal International</i> , 2021, 225, 548-554.	2.4	6
4	Earthquakes, Early and Strong Motion Warning. <i>Encyclopedia of Earth Sciences Series</i> , 2021, , 282-288.	0.1	1
5	The MyShake Platform: A Global Vision for Earthquake Early Warning. <i>Pure and Applied Geophysics</i> , 2020, 177, 1699-1712.	1.9	49
6	Toward Global Earthquake Early Warning with the MyShake Smartphone Seismic Network, Part 1: Simulation Platform and Detection Algorithm. <i>Seismological Research Letters</i> , 2020, 91, 2206-2217.	1.9	10
7	Toward Global Earthquake Early Warning with the MyShake Smartphone Seismic Network, Part 2: Understanding MyShake Performance around the World. <i>Seismological Research Letters</i> , 2020, 91, 2218-2233.	1.9	9
8	MyShake Citizen Seismologists Help Launch Dual-Use Seismic Network in California. <i>Frontiers in Communication</i> , 2020, 5, .	1.2	11
9	Earthquakes, Early and Strong Motion Warning. <i>Encyclopedia of Earth Sciences Series</i> , 2020, , 1-7.	0.1	0
10	The Fragmented Death of the Farallon Plate. <i>Geophysical Research Letters</i> , 2019, 46, 7386-7394.	4.0	30
11	Optimizing Earthquake Early Warning Performance: ElarmSâ€³. <i>Seismological Research Letters</i> , 2019, 90, 727-743.	1.9	71
12	Earthquake Early Warning: Advances, Scientific Challenges, and Societal Needs. <i>Annual Review of Earth and Planetary Sciences</i> , 2019, 47, 361-388.	11.0	206
13	Machine Learning Aspects of the MyShake Global Smartphone Seismic Network. <i>Seismological Research Letters</i> , 2019, 90, 546-552.	1.9	28
14	The Role of Variable Slab Dip in Driving Mantle Flow at the Eastern Edge of the Alaskan Subduction Margin: Insights From Shearâ€“Wave Splitting. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 2433-2448.	2.5	32
15	On the Feasibility of Using the Dense MyShake Smartphone Array for Earthquake Location. <i>Seismological Research Letters</i> , 2019, 90, 1209-1218.	1.9	14
16	A Global Database of Strongâ€“Motion Displacement GNSS Recordings and an Example Application to PGD Scaling. <i>Seismological Research Letters</i> , 2019, 90, 271-279.	1.9	55
17	MEMS Accelerometer Mini-Array (MAMA): A Low-Cost Implementation for Earthquake Early Warning Enhancement. <i>Earthquake Spectra</i> , 2019, 35, 21-38.	3.1	27
18	Earthquake Early Warning and Beyond. , 2019, , .		9

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19	Quantifying the Value of Real-time Geodetic Constraints for Earthquake Early Warning Using a Global Seismic and Geodetic Data Set. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 3819-3837.	3.4	31
20	Applying Movement Ecology to Marine Animals with Complex Life Cycles. <i>Annual Review of Marine Science</i> , 2018, 10, 19-42.	11.6	43
21	Structural Health Monitoring of Buildings Using Smartphone Sensors. <i>Seismological Research Letters</i> , 2018, 89, 594-602.	1.9	53
22	MyShake: Using Human-Centered Design Methods to Promote Engagement in a Smartphone-Based Global Seismic Network. <i>Frontiers in Earth Science</i> , 2018, 6, .	1.8	22
23	Geodetic Observations of Weak Determinism in Rupture Evolution of Large Earthquakes. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 9950-9962.	3.4	22
24	Seismic Imaging of the Alaska Subduction Zone: Implications for Slab Geometry and Volcanism. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 4541-4560.	2.5	52
25	Lessons from Mexico's Earthquake Early Warning System. <i>Eos</i> , 2018, 99, .	0.1	34
26	MyShake: Building a global smartphone earthquake early-warning system. , 2018, , .		1
27	Cascadia subduction slab heterogeneity revealed by three-dimensional receiver function Kirchhoff migration. <i>Geophysical Research Letters</i> , 2017, 44, 694-701.	4.0	17
28	Variation in dispersal and competitive ability mediate realized connectivity in two benthic marine invertebrates. <i>Marine Biology</i> , 2017, 164, 1.	1.5	2
29	The value of real-time GNSS to earthquake early warning. <i>Geophysical Research Letters</i> , 2017, 44, 8311-8319.	4.0	54
30	Quake warnings, seismic culture. <i>Science</i> , 2017, 358, 1111-1111.	12.6	32
31	Seismic Data from Smartphones: MyShake: Building a Global Smartphone Seismic Network. <i>Geo-strata</i> , 2017, 21, 44-53.	0.1	0
32	Subduction geometry beneath south central Alaska and its relationship to volcanism. <i>Geophysical Research Letters</i> , 2016, 43, 9509-9517.	4.0	44
33	Local tsunami warnings: Perspectives from recent large events. <i>Geophysical Research Letters</i> , 2016, 43, 1109-1117.	4.0	69
34	Benefits and Costs of Earthquake Early Warning. <i>Seismological Research Letters</i> , 2016, 87, 765-772.	1.9	91
35	MyShake: Initial observations from a global smartphone seismic network. <i>Geophysical Research Letters</i> , 2016, 43, 9588-9594.	4.0	40
36	Kinematic rupture scenarios and synthetic displacement data: An example application to the Cascadia subduction zone. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 6658-6674.	3.4	66

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37	Tomography reveals buoyant asthenosphere accumulating beneath the Juan de Fuca plate. <i>Science</i> , 2016, 353, 1406-1408.	12.6	58
38	Implementing the ElarmS Earthquake Early Warning Algorithm on the Israeli Seismic Network. <i>Bulletin of the Seismological Society of America</i> , 2016, 106, 2332-2344.	2.3	18
39	Slip segmentation and slow rupture to the trench during the 2015, <i>M_w</i> 8.3 Illapel, Chile earthquake. <i>Geophysical Research Letters</i> , 2016, 43, 961-966.	4.0	141
40	MyShake: A smartphone seismic network for earthquake early warning and beyond. <i>Science Advances</i> , 2016, 2, e1501055.	10.3	209
41	Three-dimensional pre-stack depth migration of receiver functions with the fast marching method: a Kirchhoff approach. <i>Geophysical Journal International</i> , 2016, 205, 819-829.	2.4	29
42	Automatic earthquake confirmation for early warning system. <i>Geophysical Research Letters</i> , 2015, 42, 5266-5273.	4.0	9
43	Earthquake magnitude calculation without saturation from the scaling of peak ground displacement. <i>Geophysical Research Letters</i> , 2015, 42, 5197-5205.	4.0	118
44	Seismogeodesy of the 2014 <i>M_w</i> 6.1 Napa earthquake, California: Rapid response and modeling of fast rupture on a dipping strike-slip fault. <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 5013-5033.	3.4	56
45	On the validation of seismic imaging methods: Finite frequency or ray theory?. <i>Geophysical Research Letters</i> , 2015, 42, 323-330.	4.0	23
46	The Mw 6.0 24 August 2014 South Napa Earthquake. <i>Seismological Research Letters</i> , 2015, 86, 309-326.	1.9	70
47	Mantle flow geometry from ridge to trench beneath the Gorda–Juan de Fuca plate system. <i>Nature Geoscience</i> , 2015, 8, 965-968.	12.9	45
48	Smartphone-based networks for earthquake detection. , 2015, , .		22
49	Automated detection and location of tectonic tremor along the entire Cascadia margin from 2005 to 2011. <i>Earth and Planetary Science Letters</i> , 2015, 430, 160-170.	4.4	17
50	The Cascadia Initiative: A Sea Change In Seismological Studies of Subduction Zones. <i>Oceanography</i> , 2014, 27, 138-150.	1.0	106
51	Rapid Earthquake Characterization Using MEMS Accelerometers and Volunteer Hosts Following the M 7.2 Darfield, New Zealand, Earthquake. <i>Bulletin of the Seismological Society of America</i> , 2014, 104, 184-192.	2.3	42
52	Designing a Network-Based Earthquake Early Warning Algorithm for California: ElarmS-2. <i>Bulletin of the Seismological Society of America</i> , 2014, 104, 162-173.	2.3	92
53	The 2014 <i>M_w</i> 6.0 Napa earthquake, California: Observations from real-time GPS-enhanced earthquake early warning. <i>Geophysical Research Letters</i> , 2014, 41, 8269-8276.	4.0	39
54	Adaptive maternal and paternal effects: gamete plasticity in response to parental stress. <i>Functional Ecology</i> , 2014, 28, 724-733.	3.6	63

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55	Application of Seismic Array Processing to Earthquake Early Warning. Bulletin of the Seismological Society of America, 2014, 104, 2553-2561.	2.3	24
56	Performance of Several Low-Cost Accelerometers. Seismological Research Letters, 2014, 85, 147-158.	1.9	89
57	Seismic imaging east of the Rocky Mountains with USArray. Earth and Planetary Science Letters, 2014, 402, 16-25.	4.4	93
58	Operational real-time GPS-enhanced earthquake early warning. Journal of Geophysical Research: Solid Earth, 2014, 119, 7944-7965.	3.4	100
59	Phenotypic links among life-history stages are complex and context-dependent in a marine invertebrate: interactions among offspring size, larval nutrition and postmetamorphic density. Functional Ecology, 2013, 27, 1358-1366.	3.6	18
60	Optimal Seismic Network Density for Earthquake Early Warning: A Case Study from California. Seismological Research Letters, 2013, 84, 946-954.	1.9	63
61	A global approach to provide magnitude estimates for earthquake early warning alerts. Geophysical Research Letters, 2013, 40, 6329-6333.	4.0	66
62	Application of real-time GPS to earthquake early warning in subduction and strike-slip environments. Journal of Geophysical Research: Solid Earth, 2013, 118, 3448-3461.	3.4	81
63	Seismic hazards: Seconds count. Nature, 2013, 502, 29-31.	27.8	10
64	Transforming Earthquake Detection?. Science, 2012, 335, 297-298.	12.6	28
65	Asthenospheric flow and lithospheric evolution near the Mendocino Triple Junction. Earth and Planetary Science Letters, 2012, 323-324, 60-71.	4.4	41
66	Shear wave tomography of China using joint inversion of body and surface wave constraints. Journal of Geophysical Research, 2012, 117, .	3.3	51
67	High-resolution body wave tomography models of the upper mantle beneath eastern China and the adjacent areas. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	105
68	Application of real-time GPS to earthquake early warning. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	127
69	Investigation of Cascadia segmentation with ambient noise tomography. Earth and Planetary Science Letters, 2011, 309, 67-76.	4.4	76
70	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
71	Seconds Before the Big One. Scientific American, 2011, 304, 74-79.	1.0	15
72	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

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73	Earthquakes, Early and Strong Motion Warning. Encyclopedia of Earth Sciences Series, 2011, , 226-233.	0.1	7
74	Slab-plume interaction beneath the Pacific Northwest. Geophysical Research Letters, 2010, 37, .	4.0	163
75	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
76	Slab morphology in the Cascadia fore arc and its relation to episodic tremor and slip. Journal of Geophysical Research, 2010, 115, .	3.3	116
77	Mantle structure beneath the western United States and its implications for convection processes. Journal of Geophysical Research, 2010, 115, .	3.3	47
78	Testing ElarmS in Japan. Seismological Research Letters, 2009, 80, 727-739.	1.9	31
79	The Status of Earthquake Early Warning around the World: An Introductory Overview. Seismological Research Letters, 2009, 80, 682-693.	1.9	283
80	Reactivation of an Archean craton: Constraints from P- and S-wave tomography in North China. Geophysical Research Letters, 2009, 36, .	4.0	90
81	Real-time earthquake detection and hazard assessment by ElarmS across California. Geophysical Research Letters, 2009, 36, .	4.0	110
82	A comparison of $\langle i \rangle_{c}$ and $\langle i \rangle_{p}^{\max}$ for magnitude estimation in earthquake early warning. Geophysical Research Letters, 2008, 35, .	4.0	43
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	Segmentation in episodic tremor and slip all along Cascadia. Geology, 2007, 35, 907.	4.4	210
85	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
86	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
87	Mantle plume tomography. Chemical Geology, 2007, 241, 248-263.	3.3	69
88	Toward earthquake early warning in northern California. Journal of Geophysical Research, 2007, 112, .	3.3	90
89	Magnitude scaling relations from P-waves in southern California. Geophysical Research Letters, 2007, 34, .	4.0	21
90	Determination of earthquake early warning parameters, $\langle i \rangle_{c}$ and $\langle i \rangle_{p}^{\max}$, for southern California. Geophysical Journal International, 2007, 170, 711-717.	2.4	143

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91	The AlarmS Earthquake Early Warning Methodology and Application across California. , 2007, , 21-43.		53
92	Is earthquake rupture deterministic? (Reply). Nature, 2006, 442, E6-E6.	27.8	17
93	VPandVSstructure of the Yellowstone hot spot from teleseismic tomography: Evidence for an upper mantle plume. Journal of Geophysical Research, 2006, 111, .	3.3	74
94	Origin of the Newberry Hotspot Track: Evidence from shear-wave splitting. Earth and Planetary Science Letters, 2006, 244, 315-322.	4.4	24
95	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
96	Probabilistic Warning Times for Earthquake Ground Shaking in the San Francisco Bay Area. Seismological Research Letters, 2006, 77, 371-376.	1.9	22
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	Revised ML Determination for Crustal Earthquakes in Taiwan. Bulletin of the Seismological Society of America, 2005, 95, 2517-2524.	2.3	40
99	Resolution of regional seismic models: Squeezing the Iceland anomaly. Geophysical Journal International, 2005, 161, 373-386.	2.4	24
100	The deterministic nature of earthquake rupture. Nature, 2005, 438, 212-215.	27.8	238
101	Single-Station Earthquake Characterization for Early Warning. Bulletin of the Seismological Society of America, 2005, 95, 2029-2039.	2.3	59
102	Asthenospheric channeling of the Icelandic upwelling: Evidence from seismic anisotropy. Earth and Planetary Science Letters, 2005, 235, 167-182.	4.4	29
103	The elusive mantle plume. Earth and Planetary Science Letters, 2003, 207, 1-12.	4.4	175
104	The Potential for Earthquake Early Warning in Southern California. Science, 2003, 300, 786-789.	12.6	478
105	Plume-driven plumbing and crustal formation in Iceland. Journal of Geophysical Research, 2002, 107, ESE 4-1.	3.3	116
106	Imaging the mantle beneath Iceland using integrated seismological techniques. Journal of Geophysical Research, 2002, 107, ESE 3-1-ESE 3-16.	3.3	144
107	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
108	Crustal structure beneath western and eastern Iceland from surface waves and receiver functions. Geophysical Journal International, 2002, 149, 349-363.	2.4	40

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109	Seismic tomography shows that upwelling beneath Iceland is confined to the upper mantle. <i>Geophysical Journal International</i> , 2001, 146, 504-530.	2.4	118
110	The seismic anomaly beneath Iceland extends down to the mantle transition zone and no deeper. <i>Geophysical Journal International</i> , 2000, 142, F1-F5.	2.4	95
111	Seismic phenomena associated with the 1996 Vatnajökull eruption, central Iceland. <i>Journal of Volcanology and Geothermal Research</i> , 2000, 102, 169-187.	2.1	11
112	The thin hot plume beneath Iceland. <i>Geophysical Journal International</i> , 1999, 137, 51-63.	2.4	80
113	Assessing the Sensitivity and Accuracy of the MyShake Smartphone Seismic Network to Detect and Characterize Earthquakes. <i>Seismological Research Letters</i> , 0, , .	1.9	7