John B Rundle

List of Publications by Year
in descending order

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146	4,477	100601	145109
papers	citations	38 h-index	60 g-index

157	157	157	1795
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nowcasting Earthquakes by Visualizing the Earthquake Cycle with Machine Learning: A Comparison of Two Methods. Surveys in Geophysics, 2022, 43, 483-501.	2.1	30
2	Earthquake Nowcasting with Deep Learning. GeoHazards, 2022, 3, 199-226.	0.8	5
3	Natural Time Analysis and Nowcasting of Quasiâ€Periodic Collapse Events During the 2018 KÄ«lauea Volcano Eruptive Sequence. Earth and Space Science, 2022, 9, .	1.1	11
4	Universality class for loopless invasion percolation models and a percolation avalanche burst model for hydraulic fracturing. Physical Review E, 2021, 103, 012310.	0.8	0
5	The complex dynamics of earthquake fault systems: new approaches to forecasting and nowcasting of earthquakes. Reports on Progress in Physics, 2021, 84, 076801.	8.1	47
6	Nowcasting Earthquakes: Imaging the Earthquake Cycle in California With Machine Learning. Earth and Space Science, 2021, 8, e2021EA001757.	1.1	27
7	Multifractal Analysis of a Seismic Moment Distribution Obtained From InSAR Inversion. Earth and Space Science, 2021, 8, e2020EA001433.	1.1	1
8	Clustering Analysis Methods for GNSS Observations: A Dataâ€Driven Approach to Identifying California's Major Faults. Earth and Space Science, 2021, 8, e2021EA001680.	1.1	14
9	Nowcasting Great Global Earthquake and Tsunami Sources. Pure and Applied Geophysics, 2020, 177, 359-368.	0.8	41
10	Tsunami Squares simulation of megathrust-generated waves: Application to the 2011 Tohoku Tsunami. Progress in Disaster Science, 2020, 5, 100063.	1.4	3
11	Continental Earthquakes: Physics, Simulation, and Data Scienceâ€"Introduction. Pure and Applied Geophysics, 2020, 177, 1-8.	0.8	6
12	Nowcasting Earthquakes in Southern California With Machine Learning: Bursts, Swarms, and Aftershocks May Be Related to Levels of Regional Tectonic Stress. Earth and Space Science, 2020, 7, e2020EA001097.	1.1	36
13	Automated Estimation and Tools to Extract Positions, Velocities, Breaks, and Seasonal Terms From Daily GNSS Measurements: Illuminating Nonlinear Salton Trough Deformation. Earth and Space Science, 2020, 7, e2019EA000644.	1.1	32
14	Interevent Seismicity Statistics Associated With the 2018 Quasiperiodic Collapse Events at KÄ«lauea, HI, USA. Earth and Space Science, 2020, 7, e2019EA000766.	1.1	7
15	Constrained Invasion Percolation Model: Growth via Leath Bursts and the Origin of Seismic b-Value. Physical Review Letters, 2020, 124, 068501.	2.9	8
16	A History of the Nonlinear Geophysics Section of the American Geophysical Union. Earth and Space Science, 2019, 6, 1799-1804.	1.1	0
17	Global Seismic Nowcasting With Shannon Information Entropy. Earth and Space Science, 2019, 6, 191-197.	1.1	51
18	Statistical physics models for aftershocks and induced seismicity. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20170397.	1.6	15

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19	Natural Time and Nowcasting Earthquakes: Are Large Global Earthquakes Temporally Clustered?. Pageoph Topical Volumes, 2019, , 137-146.	0.2	6
20	Optimal Scaling of Aftershock Zones using Ground Motion Forecasts. Pure and Applied Geophysics, 2018, 175, 671-683.	0.8	0
21	Natural Time and Nowcasting Earthquakes: Are Large Global Earthquakes Temporally Clustered?. Pure and Applied Geophysics, 2018, 175, 661-670.	0.8	47
22	Nowcasting Earthquakes: A Comparison of Induced Earthquakes in Oklahoma and at the Geysers, California. Pure and Applied Geophysics, 2018, 175, 49-65.	0.8	66
23	Natural Time, Nowcasting and the Physics of Earthquakes: Estimation of Seismic Risk to Global Megacities. Pure and Applied Geophysics, 2018, 175, 647-660.	0.8	82
24	Fracture Advancing Step Tectonics Observed in the Yuha Desert and Ocotillo, CA, Following the 2010 M_w7.2 El Mayorâ€Cucapah Earthquake. Earth and Space Science, 2018, 5, 456-472.	1.1	7
25	Natural time and nowcasting induced seismicity at the Groningen gas field in the Netherlands. Geophysical Journal International, 2018, 215, 753-759.	1.0	34
26	Parametrizing Physics-Based Earthquake Simulations. Pageoph Topical Volumes, 2018, , 75-84.	0.2	1
27	Earthquakes and Multi-hazards around the Pacific Rim, Vol. 1: Introduction. Pageoph Topical Volumes, 2018, , 1-4.	0.2	0
28	Parametrizing Physics-Based Earthquake Simulations. Pure and Applied Geophysics, 2017, 174, 2269-2278.	0.8	11
29	Earthquakes and Multi-hazards around the Pacific Rim, Vol. 1: Introduction. Pure and Applied Geophysics, 2017, 174, 2195-2198.	0.8	1
30	Spatial Evaluation and Verification of Earthquake Simulators. Pure and Applied Geophysics, 2017, 174, 2279-2293.	0.8	5
31	Nowcasting earthquakes. Earth and Space Science, 2016, 3, 480-486.	1.1	95
32	Fracking in Tight Shales: What Is It, What Does It Accomplish, and What Are Its Consequences?. Annual Review of Earth and Planetary Sciences, 2016, 44, 321-351.	4.6	38
33	GeoGateway: A system for analysis of UAVSAR data products. , 2016, , .		1
34	Computing Earthquake Probabilities on Global Scales. Pure and Applied Geophysics, 2016, 173, 739-748.	0.8	24
35	Simulating Gravity Changes in Topologically Realistic Driven Earthquake Fault Systems: First Results. Pure and Applied Geophysics, 2016, 173, 827-838.	0.8	10
36	Virtual Quake: Statistics, Co-seismic Deformations and Gravity Changes for Driven Earthquake Fault Systems. International Association of Geodesy Symposia, 2015, , 29-37.	0.2	7

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37	Potential for a large earthquake near Los Angeles inferred from the 2014 La Habra earthquake. Earth and Space Science, 2015, 2, 378-385.	1.1	22
38	Accelerating earthquake simulations on generalâ€purpose graphics processors. Concurrency Computation Practice and Experience, 2015, 27, 5460-5471.	1.4	0
39	Record-Breaking Intervals: Detecting Trends in the Incidence of Self-Similar Earthquake Sequences. Pure and Applied Geophysics, 2015, 172, 2215-2235.	0.8	3
40	The Virtual Quake earthquake simulator: a simulation-based forecast of the El Mayor-Cucapah region and evidence of predictability in simulated earthquake sequences. Geophysical Journal International, 2015, 203, 1587-1604.	1.0	16
41	A damage model for fracking. International Journal of Damage Mechanics, 2015, 24, 1227-1238.	2.4	7
42	Critical parameter estimates for earthquake forecast using PI migration. Natural Hazards, 2015, 76, 1357-1371.	1.6	1
43	Anisotropy in Fracking: A Percolation Model for Observed Microseismicity. Pure and Applied Geophysics, 2015, 172, 7-21.	0.8	9
44	Near-Field ETAS Constraints and Applications to Seismic Hazard Assessment. Pure and Applied Geophysics, 2015, 172, 2277-2293.	0.8	8
45	Critical Jump Distance for Propagating Earthquake Ruptures Across Step-Overs. Pure and Applied Geophysics, 2015, 172, 2195-2201.	0.8	10
46	Confronting the Risk of Large Disasters in Nature. , 2015, , 499-502.		0
47	UAVSAR observations of triggered slip on the Imperial, Superstition Hills, and East Elmore Ranch Faults associated with the 2010 M 7.2 El Mayorâ€Cucapah earthquake. Geochemistry, Geophysics, Geosystems, 2014, 15, 815-829.	1.0	28
48	Loopless nontrapping invasion-percolation model for fracking. Physical Review E, 2014, 89, 022119.	0.8	17
49	Preface for â€œEarthquake Hazard Evaluationâ€• Pure and Applied Geophysics, 2013, 170, 1-2.	0.8	10
50	Statistical Variability and Tokunaga Branching of Aftershock Sequences Utilizing BASS Model Simulations. Pure and Applied Geophysics, 2013, 170, 155-171.	0.8	14
51	Aftershock Statistics of the 1999 Chiâ€“Chi, Taiwan Earthquake and the Concept of Omori Times. Pure and Applied Geophysics, 2013, 170, 221-228.	0.8	6
52	Regional Dependence of Seismic Migration Patterns. Terrestrial, Atmospheric and Oceanic Sciences, 2012, 23, 161.	0.3	1
53	Probabilities for large events in driven threshold systems. Physical Review E, 2012, 86, 021106.	0.8	38
54	Computational Earthquake Science. Computing in Science and Engineering, 2012, 14, 7-9.	1.2	1

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55	Earthquakes: Complexity and Extreme Events. Geophysical Monograph Series, 2012, , 17-26.	0.1	3
56	Generic Earthquake Simulator. Seismological Research Letters, 2012, 83, 959-963.	0.8	51
57	A possible mechanism for aftershocks: time-dependent stress relaxation in a slider-block model. Geophysical Journal International, 2012, 191, 459-466.	1.0	10
58	QuakeSim: Integrated modeling and analysis of geologic and remotely sensed data. , 2012, , .		3
59	Forecasting Earthquakes: The RELM Test. Computing in Science and Engineering, 2012, 14, 43-48.	1.2	4
60	Virtual California Earthquake Simulator. Seismological Research Letters, 2012, 83, 973-978.	0.8	34
61	A statistical damage model with implications for precursory seismicity. Acta Geophysica, 2012, 60, 638-663.	1.0	1
62	Black swans, power laws, and dragon-kings: Earthquakes, volcanic eruptions, landslides, wildfires, floods, and SOC models. European Physical Journal: Special Topics, 2012, 205, 167-182.	1.2	49
63	Precursory small earthquake migration patterns. Terra Nova, 2011, 23, 369-374.	0.9	10
64	Earthquake precursors: activation or quiescence?. Geophysical Journal International, 2011, 187, 225-236.	1.0	34
65	Results of the Regional Earthquake Likelihood Models (RELM) test of earthquake forecasts in California. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16533-16538.	3.3	37
66	A fault and seismicity based composite simulation in northern California. Nonlinear Processes in Geophysics, 2011, 18, 955-966.	0.6	9
67	Earthquake Forecasting and Verification. , 2011, , 218-229.		0
68	Largeâ€scale numerical simulations of earthquake fault systems: illuminating the role of dilatational gravity in earthquake nucleation. Concurrency Computation Practice and Experience, 2010, 22, 1644-1652.	1.4	2
69	Interactive editing of digital fault models. Concurrency Computation Practice and Experience, 2010, 22, 1720-1731.	1.4	2
70	Pattern informatics approach to earthquake forecasting in 3D. Concurrency Computation Practice and Experience, 2010, 22, 1569-1592.	1.4	13
71	Forecasting the Locations of Future Large Earthquakes: An Analysis and Verification. Pure and Applied Geophysics, 2010, 167, 743-749.	0.8	21
72	Ergodicity and Earthquake Catalogs: Forecast Testing and Resulting Implications. Pure and Applied Geophysics, 2010, 167, 763-782.	0.8	15

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73	Space- and Time-Dependent Probabilities for Earthquake Fault Systems from Numerical Simulations: Feasibility Study and First Results. Pure and Applied Geophysics, 2010, 167, 967-977.	0.8	7
74	Virtual California earthquake simulations: simple models and their application to an observed sequence of earthquakes. Geophysical Journal International, 2010, 180, 734-742.	1.0	17
75	Space- and Time-Dependent Probabilities for Earthquake Fault Systems from Numerical Simulations: Feasibility Study and First Results. , 2010, , 113-123.		1
76	Recurrent frequency-size distribution of characteristic events. Nonlinear Processes in Geophysics, 2009, 16, 333-350.	0.6	2
77	Implications of an inverse branching aftershock sequence model. Physical Review E, 2009, 79, 016101.	0.8	0
78	Geodetic and Structural Research in La Palma, Canary Islands, Spain: 1992â€“2007 Results. Pure and Applied Geophysics, 2009, 166, 1461-1484.	0.8	15
79	Structural results for La Palma island using 3â€D gravity inversion. Journal of Geophysical Research, 2009, 114, .	3.3	33
80	Understanding earthquake fault systems using QuakeSim analysis and data assimilation tools. , 2009, , .		1
81	On the Mathematical Analysis of an Elastic-gravitational Layered Earth Model for Magmatic Intrusion: The Stationary Case. Pure and Applied Geophysics, 2008, 165, 1465-1490.	0.8	2
82	The Stress Accumulation Method and the Pattern Informatics Index: Complementary Approaches to Earthquake Forecasting. Pure and Applied Geophysics, 2008, 165, 693-709.	0.8	9
83	Earthquakes: Recurrence and Interoccurrence Times. Pure and Applied Geophysics, 2008, 165, 777-795.	0.8	46
84	A Review of Earthquake Statistics: Fault and Seismicity-Based Models, ETAS and BASS. Pure and Applied Geophysics, 2008, 165, 1003-1024.	0.8	23
85	Self-similar branching of aftershock sequences. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 933-943.	1.2	26
86	A gravity gradient method for characterizing the post-seismic deformation field for a finite fault. Geophysical Journal International, 2008, 173, 802-805.	1.0	6
87	Detecting precursory earthquake migration patterns using the pattern informatics method. Geophysical Research Letters, 2008, 35, .	1.5	30
88	DInSAR, GPS and gravity observation results in La Palma, Canary islands. , 2008, , .		2
89	A Review of Earthquake Statistics: Fault and Seismicity-Based Models, ETAS and BASS. , 2008, , 1003-1024.		1
90	The Stress Accumulation Method and the Pattern Informatics Index: Complementary Approaches to Earthquake Forecasting. , 2008, , 693-709.		0

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91	A RELM Earthquake Forecast Based on Pattern Informatics. Seismological Research Letters, 2007, 78, 87-93.	0.8	85
92	QuakeSim: Enabling Model Interactions in Solid Earth Science Sensor Webs. , 2007, , .		6
93	Ergodicity in natural earthquake fault networks. Physical Review E, 2007, 75, 066107.	0.8	48
94	A feasibility study of data assimilation in numerical simulations of earthquake fault systems. Physics of the Earth and Planetary Interiors, 2007, 163, 149-162.	0.7	16
95	Structure of fluctuations near mean-field critical points and spinodals and its implication for physical processes. Physical Review E, 2007, 75, 031114.	0.8	40
96	[Comment on â€œExaggerated claims about earthquake predictions: Analysis of NASA's methodâ€¦ Pattern informatics and cellular seismology: A comparison of methods. Eos, 2007, 88, 254-254.	0.1	1
97	Correction to â€œCritical point theory of earthquakes: Observation of correlated and cooperative behavior on earthquake fault systemsâ€• Geophysical Research Letters, 2007, 34, .	1.5	0
98	BASS, an alternative to ETAS. Geophysical Research Letters, 2007, 34, .	1.5	73
99	Some Insights into Topographic, Elastic and Self-gravitation Interaction in Modelling Ground Deformation and Gravity Changes in Active Volcanic Areas. Pure and Applied Geophysics, 2007, 164, 865-878.	0.8	11
100	Nonlinear Dynamics of Natural Hazards. , 2007, , 557-580.		9
101	On the relative importance of self-gravitation and elasticity in modeling volcanic ground deformation and gravity changes. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	15
102	Gravity changes from a stress evolution earthquake simulation of California. Journal of Geophysical Research, 2006, 111, .	3.3	16
103	Correlations in aftershock and seismicity patterns. Tectonophysics, 2006, 413, 53-62.	0.9	16
104	Pattern dynamics, pattern hierarchies, and forecasting in complex multi-scale earth systems. Hydrology and Earth System Sciences, 2006, 10, 789-796.	1.9	4
105	Critical point theory of earthquakes: Observation of correlated and cooperative behavior on earthquake fault systems. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	15
106	Virtual California: Fault Model, Frictional Parameters, Applications. Pure and Applied Geophysics, 2006, 163, 1819-1846.	0.8	60
107	QuakeSim and the Solid Earth Research Virtual Observatory. Pure and Applied Geophysics, 2006, 163, 2263-2279.	0.8	4
108	Pattern Informatics and its Application for Optimal Forecasting of Large Earthquakes in Japan. Pure and Applied Geophysics, 2006, 163, 2417-2432.	0.8	34

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109	Systematic Procedural and Sensitivity Analysis of the Pattern Informatics Method for Forecasting Large (M > 5) Earthquake Events in Southern California. Pure and Applied Geophysics, 2006, 163, 2433-2454.	0.8	43
110	iSERVO: Implementing the International Solid Earth Research Virtual Observatory by Integrating Computational Grid and Geographical Information Web Services. Pure and Applied Geophysics, 2006, 163, 2281-2296.	0.8	33
111	Space-Time Clustering and Correlations of Major Earthquakes. Physical Review Letters, 2006, 97, 238501.	2.9	89
112	Model for the Distribution of Aftershock Interoccurrence Times. Physical Review Letters, 2005, 95, 218501.	2.9	99
113	Aftershock Statistics. Pure and Applied Geophysics, 2005, 162, 1051-1076.	0.8	116
114	Earthquake forecasting and its verification. Nonlinear Processes in Geophysics, 2005, 12, 965-977.	0.6	118
115	A simulation-based approach to forecasting the next great San Francisco earthquake. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 15363-15367.	3.3	46
116	Building Sensor Filter Grids: Information Architecture for the Data Deluge. , 2005, , .		2
117	The 1999 Chi-Chi, Taiwan, earthquake as a typical example of seismic activation and quiescence. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	65
118	Study of Volcanic Sources at Long Valley Caldera, California, Using Gravity Data and a Genetic Algorithm Inversion Technique. Pure and Applied Geophysics, 2004, 161, 1399-1413.	0.8	3
119	New Results at Mayon, Philippines, from a Joint Inversion of Gravity and Deformation Measurements. Pure and Applied Geophysics, 2004, 161, 1433-1452.	0.8	19
120	Methods for Evaluation of Geodetic Data and Seismicity Developed with Numerical Simulations: Review and Applications. Pure and Applied Geophysics, 2004, 161, 1489-1507.	0.8	2
121	Ergodicity in Natural Fault Systems. Pure and Applied Geophysics, 2004, 161, 1957.	0.8	6
122	Using Eigenpattern Analysis to Constrain Seasonal Signals in Southern California. Pure and Applied Geophysics, 2004, 161, 1991.	0.8	18
123	Gutenberg-Richter statistics in topologically realistic system-level earthquake stress-evolution simulations. Earth, Planets and Space, 2004, 56, 761-771.	0.9	46
124	Postseismic viscoelastic-gravitational half space computations: Problems and solutions. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	11
125	A generalized Omori's law for earthquake aftershock decay. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	150
126	Ergodic Dynamics in a Natural Threshold System. Physical Review Letters, 2003, 91, 238501.	2.9	44

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127	Statistical physics approach to understanding the multiscale dynamics of earthquake fault systems. Reviews of Geophysics, 2003, 41, .	9.0	353
128	Self-organization in leaky threshold systems: The influence of near-mean field dynamics and its implications for earthquakes, neurobiology, and forecasting. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 2514-2521.	3.3	161
129	Mean-field threshold systems and phase dynamics: An application to earthquake fault systems. Europhysics Letters, 2002, 60, 481-488.	0.7	115
130	Eigenpatterns in southern California seismicity. Journal of Geophysical Research, 2002, 107, ESE 8-1-ESE 8-17.	3.3	62
131	Parallelization of a large-scale computational earthquake simulation program. Concurrency Computation Practice and Experience, 2002, 14, 531-550.	1.4	3
132	GEM Plate Boundary Simulations for the Plate Boundary Observatory: A Program for Understanding the Physics of Earthquakes on Complex Fault Networks via Observations, Theory and Numerical Simulation. Pure and Applied Geophysics, 2002, 159, 2357-2381.	0.8	28
133	Pattern Dynamics and Forecast Methods in Seismically Active Regions. Pure and Applied Geophysics, 2002, 159, 2429-2467.	0.8	85
134	Nonlinear Network Dynamics on Earthquake Fault Systems. Physical Review Letters, 2001, 87, 148501.	2.9	39
135	Spinodals, scaling, and ergodicity in a threshold model with long-range stress transfer. Physical Review E, 1999, 60, 1359-1373.	0.8	46
136	Physical Basis for Statistical Patterns in Complex Earthquake Populations: Models, Predictions and Tests. Pure and Applied Geophysics, 1999, 155, 575-607.	0.8	71
137	A systematic test of time-to-failure analysis. Geophysical Journal International, 1998, 133, 57-64.	1.0	65
138	Scaling and Nucleation in Models of Earthquake Faults. Physical Review Letters, 1997, 78, 3793-3796.	2.9	73
139	Traveling density wave models for earthquakes and driven threshold systems. Physical Review E, 1997, 56, 293-307.	0.8	26
140	The statistical mechanics of earthquakes. Tectonophysics, 1997, 277, 147-164.	0.9	55
141	Dynamics of a Traveling Density Wave Model for Earthquakes. Physical Review Letters, 1996, 76, 4285-4288.	2.9	58
142	Boltzmann Fluctuations in Numerical Simulations of Nonequilibrium Lattice Threshold Systems. Physical Review Letters, 1995, 75, 1658-1661.	2.9	86
143	Scaling and critical phenomena in a cellular automaton slider-block model for earthquakes. Journal of Statistical Physics, 1993, 72, 405-412.	0.5	72
144	A physical model for earthquakes: 2. Application to southern California. Journal of Geophysical Research, 1988, 93, 6255-6274.	3.3	100

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145	Numerical simulation of earthquake sequences. Bulletin of the Seismological Society of America, 1977, 67, 1363-1377.	1.1	112
146	Improving access to geodetic imaging crustal deformation data using GeoGateway. Earth Science Informatics, 0, , 1.	1.6	3