Gregory C Beroza

List of Publications by Year
in descending order

113 papers	10,388 citations	44069 48 h-index	34986 98 g-index
123 all docs	123 docs citations	123 times ranked	4964 citing authors

#	Article	IF	Citations
1	Non-volcanic tremor and low-frequency earthquake swarms. Nature, 2007, 446, 305-307.	27.8	771
2	Low-frequency earthquakes in Shikoku, Japan, and their relationship to episodic tremor and slip. Nature, 2006, 442, 188-191.	27.8	695
3	Machine learning for data-driven discovery in solid Earth geoscience. Science, 2019, 363, .	12.6	563
4	A spatial random field model to characterize complexity in earthquake slip. Journal of Geophysical Research, 2002, 107, ESE 10-1-ESE 10-21.	3.3	446
5	Earthquake transformerâ€"an attentive deep-learning model for simultaneous earthquake detection and phase picking. Nature Communications, 2020, 11, 3952.	12.8	402
6	Does apparent stress vary with earthquake size?. Geophysical Research Letters, 2001, 28, 3349-3352.	4.0	396
7	Slow Earthquakes and Nonvolcanic Tremor. Annual Review of Earth and Planetary Sciences, 2011, 39, 271-296.	11.0	380
8	Mechanism of deep low frequency earthquakes: Further evidence that deep non-volcanic tremor is generated by shear slip on the plate interface. Geophysical Research Letters, 2007, 34, .	4.0	264
9	Seismic Signal Denoising and Decomposition Using Deep Neural Networks. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 9476-9488.	6.3	263
10	PhaseNet: A Deep-Neural-Network-Based Seismic Arrival Time Picking Method. Geophysical Journal International, 0, , .	2.4	260
11	Detailed observations of California foreshock sequences: Implications for the earthquake initiation process. Journal of Geophysical Research, 1996, 101, 22371-22392.	3.3	244
12	Apparent break in earthquake scaling due to path and site effects on deep borehole recordings. Journal of Geophysical Research, 2003, 108, .	3.3	224
13	Earthquake detection through computationally efficient similarity search. Science Advances, 2015, 1, e1501057.	10.3	219
14	CRED: A Deep Residual Network of Convolutional and Recurrent Units for Earthquake Signal Detection. Scientific Reports, 2019, 9, 10267.	3.3	198
15	Fullâ€3â€D tomography for crustal structure in Southern California based on the scatteringâ€integral and the adjointâ€wavefield methods. Journal of Geophysical Research: Solid Earth, 2014, 119, 6421-6451.	3.4	195
16	STanford EArthquake Dataset (STEAD): A Global Data Set of Seismic Signals for AI. IEEE Access, 2019, 7, 179464-179476.	4.2	191
17	Complex evolution of transient slip derived from precise tremor locations in western Shikoku, Japan. Geochemistry, Geophysics, Geosystems, 2007, 8, .	2.5	178
18	Foreshock sequence of the 1992 Landers, California, earthquake and its implications for earthquake nucleation. Journal of Geophysical Research, 1995, 100, 9865-9880.	3.3	175

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19	Coseismic and postseismic velocity changes measured by repeating earthquakes. Journal of Geophysical Research, 2004, 109, .	3.3	173
20	High-resolution image of Calaveras Fault seismicity. Journal of Geophysical Research, 2002, 107, ESE 5-1-ESE 5-16.	3.3	172
21	Deep lowâ€frequency earthquakes in tremor localize to the plate interface in multiple subduction zones. Geophysical Research Letters, 2009, 36, .	4.0	163
22	Postseismic response of repeating aftershocks. Geophysical Research Letters, 1998, 25, 4549-4552.	4.0	159
23	A Machineâ€Learning Approach for Earthquake Magnitude Estimation. Geophysical Research Letters, 2020, 47, e2019GL085976.	4.0	159
24	Variability in earthquake stress drop and apparent stress. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	149
25	Properties of the seismic nucleation phase. Tectonophysics, 1996, 261, 209-227.	2.2	134
26	Reverse time migration for microseismic sources using the geometric mean as an imaging condition. Geophysics, 2016, 81, KS51-KS60.	2.6	130
27	Rapid Earthquake Association and Location. Seismological Research Letters, 2019, 90, 2276-2284.	1.9	114
28	Aftershocks halted by static stress shadows. Nature Geoscience, 2012, 5, 410-413.	12.9	106
29	Unsupervised Clustering of Seismic Signals Using Deep Convolutional Autoencoders. IEEE Geoscience and Remote Sensing Letters, 2019, 16, 1693-1697.	3.1	103
30	Bridging the gap between seismically and geodetically detected slow earthquakes. Geophysical Research Letters, 2008, 35, .	4.0	99
31	An autocorrelation method to detect low frequency earthquakes within tremor. Geophysical Research Letters, 2008, 35, .	4.0	99
32	Stress drops of induced and tectonic earthquakes in the central United States are indistinguishable. Science Advances, 2017, 3, e1700772.	10.3	95
33	Depth constraints on nonlinear strong ground motion from the 2004 Parkfield earthquake. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	93
34	Seismic evidence for thermal runaway during intermediateâ€depth earthquake rupture. Geophysical Research Letters, 2013, 40, 6064-6068.	4.0	89
35	Stress drop estimates of potentially induced earthquakes in the Guyâ€Greenbrier sequence. Journal of Geophysical Research: Solid Earth, 2016, 121, 6597-6607.	3.4	85
36	Radiated seismic energy from coda measurements and no scaling in apparent stress with seismic moment. Journal of Geophysical Research, 2010, 115, .	3.3	83

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37	Characterizing and Responding to Seismic Risk Associated with Earthquakes Potentially Triggered by Fluid Disposal and Hydraulic Fracturing. Seismological Research Letters, 2015, 86, 1110-1118.	1.9	81
38	Urban Seismic Site Characterization by Fiberâ€Optic Seismology. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB018656.	3.4	77
39	Seismic velocity reductions caused by the 2003 Tokachi-Oki earthquake. Journal of Geophysical Research, 2007, 112, .	3.3	76
40	On amplitude information carried by the ambient seismic field. Comptes Rendus - Geoscience, 2011, 343, 600-614.	1.2	73
41	Using a Deep Neural Network and Transfer Learning to Bridge Scales for Seismic Phase Picking. Geophysical Research Letters, 2020, 47, e2020GL088651.	4.0	72
42	Machine-Learning-Based High-Resolution Earthquake Catalog Reveals How Complex Fault Structures Were Activated during the 2016â€"2017 Central Italy Sequence. The Seismic Record, 2021, 1, 11-19.	3.1	68
43	Earthquake ground motion prediction using the ambient seismic field. Geophysical Research Letters, 2008, 35, .	4.0	67
44	Seismicity During the Initial Stages of the Guyâ€Greenbrier, Arkansas, Earthquake Sequence. Journal of Geophysical Research: Solid Earth, 2017, 122, 9253-9274.	3.4	67
45	Bayesian-Deep-Learning Estimation of Earthquake Location From Single-Station Observations. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 8211-8224.	6.3	66
46	Machine learning and earthquake forecastingâ€"next steps. Nature Communications, 2021, 12, 4761.	12.8	60
47	Constraints on the source parameters of lowâ€frequency earthquakes on the San Andreas Fault. Geophysical Research Letters, 2016, 43, 1464-1471.	4.0	59
48	Temporal variation in the magnitudeâ€frequency distribution during the Guyâ€Greenbrier earthquake sequence. Geophysical Research Letters, 2015, 42, 6639-6646.	4.0	58
49	Foreshocks and Mainshock Nucleation of the 1999 <i>M</i>_{<i>w</i>} 7.1 Hector Mine, California, Earthquake. Journal of Geophysical Research: Solid Earth, 2019, 124, 1569-1582.	3.4	58
50	Laboratory earthquake forecasting: A machine learning competition. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	50
51	Long-period seismic amplification in the Kanto Basin from the ambient seismic field. Geophysical Research Letters, 2014, 41, 2319-2325.	4.0	48
52	Nonlinear strong ground motion in the ML5.4 Chittenden earthquake: Evidence that preexisting damage increases susceptibility to further damage. Geophysical Research Letters, 2004, 31, .	4.0	47
53	Stability of coda wave attenuation during the Loma Prieta, California, earthquake sequence. Journal of Geophysical Research, 1995, 100, 3977-3987.	3.3	46
54	Beyond basin resonance: characterizing wave propagation using a dense array and the ambient seismic field. Geophysical Journal International, 2016, 206, 1261-1272.	2.4	44

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55	Deep lowâ€frequency earthquakes in tectonic tremor along the Alaskaâ€Aleutian subduction zone. Journal of Geophysical Research: Solid Earth, 2013, 118, 1079-1090.	3.4	43
56	Source array analysis of coda waves near the 1989 Loma Prieta, California, mainshock: Implications for the mechanism of coseismic velocity changes. Journal of Geophysical Research, 1997, 102, 24437-24458.	3.3	41
57	Earthquake Phase Association Using a Bayesian Gaussian Mixture Model. Journal of Geophysical Research: Solid Earth, 2022, 127, .	3.4	40
58	High-resolution subduction zone seismicity and velocity structure beneath Ibaraki Prefecture, Japan. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	38
59	Deep Tremors and Slow Quakes. Science, 2009, 324, 1025-1026.	12.6	38
60	Seismic signal augmentation to improve generalization of deep neural networks. Advances in Geophysics, 2020, 61, 151-177.	2.8	37
61	Machineâ€Learningâ€Based Analysis of the Guyâ€Greenbrier, Arkansas Earthquakes: A Tale of Two Sequences. Geophysical Research Letters, 2020, 47, e2020GL087032.	4.0	37
62	Stochastic characterization of mesoscale seismic velocity heterogeneity in Long Beach, California. Geophysical Journal International, 2015, 203, 2049-2054.	2.4	36
63	Detecting earthquakes over a seismic network using single-station similarity measures. Geophysical Journal International, 2018, 213, 1984-1998.	2.4	35
64	Integrating deep neural networks with full-waveform inversion: Reparameterization, regularization, and uncertainty quantification. Geophysics, 2022, 87, R93-R109.	2.6	35
65	Measurements of spectral similarity for microearthquakes in western Nagano, Japan. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	31
66	An Endâ€Toâ€End Earthquake Detection Method for Joint Phase Picking and Association Using Deep Learning. Journal of Geophysical Research: Solid Earth, 2022, 127, .	3.4	30
67	Earthquake Fingerprints: Extracting Waveform Features for Similarity-Based Earthquake Detection. Pure and Applied Geophysics, 2019, 176, 1037-1059.	1.9	28
68	Site characterization at Groningen gas field area through joint surface-borehole H/V analysis. Geophysical Journal International, 2018, 212, 412-421.	2.4	27
69	Shallow VS Imaging of the Groningen Area from Joint Inversion of Multimode Surface Waves and H/V Spectral Ratios. Seismological Research Letters, 2018, 89, 1720-1729.	1.9	27
70	Ambientâ€field Green's functions from asynchronous seismic observations. Geophysical Research Letters, 2012, 39, .	4.0	26
71	A risk-based approach for managing hydraulic fracturingâ€"induced seismicity. Science, 2021, 372, 504-507.	12.6	24
72	The Ambient Seismic Field at Groningen Gas Field: An Overview from the Surface to Reservoir Depth. Seismological Research Letters, 2018, 89, 1450-1466.	1.9	23

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73	Lateral heterogeneity imaged by smallâ€aperture <i>ScS</i> retrieval from the ambient seismic field. Geophysical Research Letters, 2017, 44, 8276-8284.	4.0	21
74	Radiated Energy of Great Earthquakes from Teleseismic Empirical Greenâ€™s Function Deconvolution. Pure and Applied Geophysics, 2014, 171, 2841-2862.	1.9	20
75	How many great earthquakes should we expect?. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 651-652.	7.1	19
76	Toward improved urban earthquake monitoring through deep-learning-based noise suppression. Science Advances, 2022, 8, eabl3564.	10.3	19
77	MALMI: An Automated Earthquake Detection and Location Workflow Based on Machine Learning and Waveform Migration. Seismological Research Letters, 2022, 93, 2467-2483.	1.9	18
78	Statistical bounds on how induced seismicity stops. Scientific Reports, 2022, 12, 1184.	3.3	17
79	Seismology with Dark Data: Imageâ€Based Processing of Analog Records Using Machine Learning for the Rangely Earthquake Control Experiment. Seismological Research Letters, 2019, 90, 553-562.	1.9	16
80	On the Nature of Higherâ€Order Ambient Seismic Field Correlations. Journal of Geophysical Research: Solid Earth, 2018, 123, 7969-7982.	3.4	15
81	Strong Shaking Predicted in Tokyo From an Expected M7+ Itoigawaâ€Shizuoka Earthquake. Journal of Geophysical Research: Solid Earth, 2018, 123, 3968-3992.	3.4	14
82	Robust Stress Drop Estimates of Potentially Induced Earthquakes in Oklahoma: Evaluation of Empirical Green's Function. Journal of Geophysical Research: Solid Earth, 2019, 124, 5854-5866.	3.4	14
83	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
84	Full waveform earthquake location: Application to seismic streaks on the Calaveras Fault, California. Journal of Geophysical Research, 2007, 112, .	3.3	13
85	Depth Constraints on Coseismic Velocity Changes From Frequencyâ€Dependent Measurements of Repeating Earthquake Waveforms. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020421.	3.4	12
86	A Wrapper to Use a Machine-Learning-Based Algorithm for Earthquake Monitoring. Seismological Research Letters, 2022, 93, 1673-1682.	1.9	12
87	Waveform analysis of the 1999 Hector Mine foreshock sequence. Geophysical Research Letters, 2003, 30, .	4.0	11
88	A Strategy for Choosing Redâ€Light Thresholds to Manage Hydraulic Fracturing Induced Seismicity in North America. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022340.	3.4	11
89	A simple dynamic model for the 1995 Kobe, Japan earthquake. Geophysical Research Letters, 2004, 31, .	4.0	10
90	Groundâ€motion prediction from tremor. Geophysical Research Letters, 2013, 40, 6340-6345.	4.0	10

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91	Revisiting the Timpson Induced Earthquake Sequence: A System of Two Parallel Faults. Geophysical Research Letters, 2020, 47, e2020GL089192.	4.0	10
92	Ambient noise Love wave attenuation tomography for the LASSIE array across the Los Angeles basin. Science Advances, 2021, 7, .	10.3	10
93	Automatic detection for a comprehensive view of Mayotte seismicity. Comptes Rendus - Geoscience, 2022, 354, 153-170.	1.2	10
94	Dynamic highâ€speed rupture from the onset of the 2004 Parkfield, California, earthquake. Geophysical Research Letters, 2009, 36, .	4.0	9
95	Multicomponent C3 Greenâ€™s Functions for Improved Longâ€Period Groundâ€Motion Prediction. Bulletin of the Seismological Society of America, 2017, 107, 2836-2845.	2.3	9
96	Tectonic tremor and LFEs on a reverse fault in Taiwan. Geophysical Research Letters, 2017, 44, 6683-6691.	4.0	8
97	Evaluating the 2016 Oneâ€Year Seismic Hazard Model for the Central and Eastern United States Using Instrumental Groundâ€Motion Data. Seismological Research Letters, 2018, 89, 1185-1196.	1.9	8
98	Revisiting evidence for widespread seismicity in the upper mantle under Los Angeles. Science Advances, 2021, 7, .	10.3	8
99	Source Parameter Variability of Intermediateâ€Depth Earthquakes in Japanese Subduction Zones. Journal of Geophysical Research: Solid Earth, 2019, 124, 8704-8725.	3.4	7
100	Empirical and Synthetic Approaches to the Calibration of the Local Magnitude Scale, ML, in Southern Kansas. Bulletin of the Seismological Society of America, 2020, 110, 689-697.	2.3	7
101	Quantifying nuisance ground motion thresholds for induced earthquakes. Earthquake Spectra, 2021, 37, 789-802.	3.1	7
102	Isolating and Suppressing the Spurious Nonâ€Diffuse Contributions to Ambient Seismic Field Correlations. Journal of Geophysical Research: Solid Earth, 2019, 124, 9653-9663.	3.4	6
103	Towards structural imaging using seismic ambient field correlation artefacts. Geophysical Journal International, 2021, 225, 1453-1465.	2.4	6
104	Scalable Similarity Search in Seismology: A New Approach to Large-Scale Earthquake Detection. Lecture Notes in Computer Science, 2016, , 301-308.	1.3	6
105	A brief review of techniques used to estimate radiated seismic energy. Geophysical Monograph Series, 2006, , 15-24.	0.1	5
106	Network analysis of earthquake ground motion spatial correlation: a case study with the San Jacinto seismic nodal array. Geophysical Journal International, 2021, 225, 1704-1713.	2.4	5
107	Considering the third dimension in stress-triggering of aftershocks: 1993 Klamath Falls, Oregon, Earthquake Sequence. Geophysical Research Letters, 2001, 28, 2739-2742.	4.0	3
108	Variabilities in probabilistic seismic hazard maps for natural and induced seismicity in the central and eastern United States. The Leading Edge, 2018, 37, 141a1-141a9.	0.7	3

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109	Quantifying the Effects of Nondiffuse Noise on Ballistic and Coda Wave Amplitude From Variances of Seismic Noise Interferometry in Southern California. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB017617.	3.4	3
110	Relative earthquake location procedure for clustered seismicity with a single station. Geophysical Journal International, 2021, 225, 608-626.	2.4	3
111	DevelNet: Earthquake Detection on Develocorder Films with Deep Learning: Application to the Rangely Earthquake Control Experiment. Seismological Research Letters, 2022, 93, 2515-2528.	1.9	3
112	Prieto receives 2010 Keiiti Aki Young Scientist Award. Eos, 2011, 92, 198-198.	0.1	0
113	USGS scientists open to change. Science, 2016, 353, 998-998.	12.6	0