Robert J Geller

List of Publications by Year
in descending order

115 papers	4,603 citations	126907 33 h-index	106344 65 g-index
117 all docs	117 docs citations	117 times ranked	2673 citing authors

#	Article	IF	Citations
1	Imaging paleoslabs and inferring the Clapeyron slope in Dâ€³ beneath the northern Pacific based on high-resolution inversion of seismic waveforms for 3-D transversely isotropic structure. Physics of the Earth and Planetary Interiors, 2021, 321, 106751.	1.9	5
2	ANISOtime: Traveltime Computation Software for Laterally Homogeneous, Transversely Isotropic, Spherical Media. Seismological Research Letters, 2021, 92, 3811-3820.	1.9	0
3	Toward global standardization of conducting fair investigations of allegations of research misconduct. Accountability in Research, 2020, 27, 327-346.	2.4	6
4	High-resolution 3-D S-velocity structure in the Dâ€³ region at the western margin of the Pacific LLSVP: Evidence for small-scale plumes and paleoslabs. Physics of the Earth and Planetary Interiors, 2020, 307, 106544.	1.9	5
5	ThreeâEDimensional S Velocity Structure of the Mantle Transition Zone Beneath Central America and the Gulf of Mexico Inferred Using Waveform Inversion. Journal of Geophysical Research: Solid Earth, 2019, 124, 9664-9681.	3.4	9
6	Reply to comments by Console et al.. Physics of the Earth and Planetary Interiors, 2018, 274, 216-217.	1.9	0
7	Scientific principles and public policy. Earth-Science Reviews, 2018, 176, 214-221.	9.1	5
8	Effects of redetermination of source time functions on the 3-D velocity structure inferred by waveform inversion. Physics of the Earth and Planetary Interiors, 2018, 282, 117-143.	1.9	4
9	Seismology: Japan must admit it can't predict quakes. Nature, 2017, 545, 289-289.	27.8	1
10	Why is Probabilistic Seismic Hazard Analysis (PSHA) still used?. Physics of the Earth and Planetary Interiors, 2017, 264, 63-75.	1.9	121
11	Imaging paleoslabs in the Dâ€³ layer beneath Central America and the Caribbean using seismic waveform inversion. Science Advances, 2017, 3, e1602700.	10.3	18
12	Finite frequency effects on apparentS-wave splitting in the Dâ€³ layer: comparison between ray theory and full-wave synthetics. Geophysical Journal International, 2016, 207, 12-28.	2.4	15
13	Waveform inversion for 3-D S-velocity structure of Dâ€²â€² beneath the Northern Pacific: possible evidence for a remnant slab and a passive plume. Earth, Planets and Space, 2016, 68, .	2.5	14
14	An error analysis of higher-order finite-element methods: effect of degenerate coupling on simulation of elastic wave propagation. Geophysical Journal International, 2016, 205, 1532-1547.	2.4	0
15	Geoethics, Risk-Communication, and Scientific Issues in Earthquake Science. , 2015, , 263-272.		6
16	Methods for inversion of body-wave waveforms for localized three-dimensional seismic structure and an application to Dâ€²â€² structure beneath Central America. Geophysical Journal International, 2014, 197, 495-524.	2.4	17
17	Waveform inversion for localized three-dimensional seismic velocity structure in the lowermost mantle beneath the Western Pacific. Geophysical Journal International, 2014, 199, 1245-1267.	2.4	16
18	Japan's nuclear dilemma. New Scientist, 2014, 224, 28-29.	0.0	0

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19	Did a submarine landslide contribute to the 2011 Tohoku tsunami?. Marine Geology, 2014, 357, 344-361.	2.1	223
20	Reply to comment by Arthur Frankel on â€œWhy Earthquake Hazard Maps Often Fail and What to do About Itâ€. Tectonophysics, 2013, 592, 207-209.	2.2	19
21	Fukushima--Two Years Later. Seismological Research Letters, 2013, 84, 1-3.	1.9	13
22	Dispersion analysis of an optimally accurate 3-D finite difference scheme for the elastic case. , 2013, , .		0
23	Growing Understanding of Subduction Dynamics Indicates Need to Rethink Seismic Hazards. Eos, 2013, 94, 125-126.	0.1	4
24	Communicating uncertainties in natural hazard forecasts. Eos, 2012, 93, 361-362.	0.1	18
25	Characteristic Earthquake Model, 1884-2011, R.I.P.. Seismological Research Letters, 2012, 83, 951-953.	1.9	81
26	Waveform inversion of broad-band body wave data for the S-velocity structure in the lowermost mantle beneath the Indian subcontinent and Tibetan Plateau. Geophysical Journal International, 2012, 191, 305-316.	2.4	4
27	Why earthquake hazard maps often fail and what to do about it. Tectonophysics, 2012, 562-563, 1-25.	2.2	212
28	Existence of a second island of stability of predictor-corrector schemes for calculating synthetic seismograms. Geophysical Journal International, 2012, 188, 253-262.	2.4	4
29	Finite-frequency structural sensitivities of short-period compressional body waves. Geophysical Journal International, 2012, 190, 522-540.	2.4	17
30	Shake-up time for Japanese seismology. Nature, 2011, 472, 407-409.	27.8	174
31	Bad Assumptions or Bad Luck: Why Earthquake Hazard Maps Need Objective Testing. Seismological Research Letters, 2011, 82, 623-626.	1.9	83
32	Fukushima: The myth of safety, the reality of geoscience. Bulletin of the Atomic Scientists, 2011, 67, 37-46.	0.6	77
33	Waveform inversion for localized seismic structure and an application to Dâ€³ structure beneath the Pacific. Journal of Geophysical Research, 2010, 115, .	3.3	33
34	Waveform inversion for Sâ€wave structure in the lowermost mantle beneath the Arctic: Implications for mineralogy and chemical composition. Geophysical Research Letters, 2010, 37, .	4.0	3
35	The vertical flow in the lowermost mantle beneath the Pacific from inversion of seismic waveforms for anisotropic structure. Earth and Planetary Science Letters, 2010, 297, 190-198.	4.4	25
36	A methodology for inversion of broadband seismic waveforms for elastic and anelastic structure and its application to the mantle transition zone beneath the Northwestern Pacific. Physics of the Earth and Planetary Interiors, 2010, 180, 118-137.	1.9	24

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37	Inversion of seismic waveforms for shear wave velocity structure in the lowermost mantle beneath the Hawaiian hotspot. Physics of the Earth and Planetary Interiors, 2010, 183, 136-142.	1.9	4
38	MORB in the lowermost mantle beneath the western Pacific: Evidence from waveform inversion. Earth and Planetary Science Letters, 2009, 278, 219-225.	4.4	36
39	Waveform inversion for Dâ€³ structure beneath northern Asia using Hiâ€net tiltmeter data. Geophysical Research Letters, 2009, 36, .	4.0	14
40	Possible evidence for a double crossing phase transition in Dâ€³ beneath Central America from inversion of seismic waveforms. Geophysical Research Letters, 2007, 34, .	4.0	35
41	Dâ€³ beneath the Arctic from inversion of shear waveforms. Geophysical Research Letters, 2007, 34, .	4.0	20
42	Inversion for laterally heterogeneous earth structure using a laterally heterogeneous starting model: preliminary results. Geophysical Journal International, 2007, 104, 523-540.	2.4	32
43	Complete synthetic seismograms up to 2 Hz for transversely isotropic spherically symmetric media. Geophysical Journal International, 2006, 164, 411-424.	2.4	100
44	Geophysical aspects of very long baseline neutrino experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 503, 187-191.	1.6	36
45	Accurate numerical methods for solving the elastic equation of motion for arbitrary source locations. Geophysical Journal International, 2003, 154, 852-866.	2.4	11
46	Modeling earthquakes. , 2003, , 1-19.		0
47	Earthquake prediction and public policy. , 2003, , 284-329.		2
48	The classical view of earthquakes. , 2003, , 20-101.		0
49	Methods for Computing Synthetic Seismograms and Estimating Their Computational Error. , 2003, , 754-758.		0
50	Comment on â€œSignature of pending earthquake from electromagnetic anomaliesâ€•by K. Eftaxias et al.. Geophysical Research Letters, 2002, 29, 18-1-18-2.	4.0	16
51	Simultaneous waveform inversion for three-dimensional Earth structure and earthquake source parameters considering a wide range of modal coupling. Geophysical Journal International, 2000, 142, 539-550.	2.4	8
52	The COSY Project: verification of global seismic modeling algorithms. Physics of the Earth and Planetary Interiors, 2000, 119, 3-23.	1.9	38
53	Complete synthetic seismograms for 3-D heterogeneous Earth models computed using modified DSM operators and their applicability to inversion for Earth structure. Physics of the Earth and Planetary Interiors, 2000, 119, 25-36.	1.9	48
54	Comparison of Accuracy and Efficiency of Time-domain Schemes for Calculating Synthetic Seismograms. Physics of the Earth and Planetary Interiors, 2000, 119, 75-97.	1.9	27

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55	Optimally accurate second order time-domain finite difference scheme for computing synthetic seismograms in 2-D and 3-D media. Physics of the Earth and Planetary Interiors, 2000, 119, 99-131.	1.9	90
56	Earthquake prediction: is this debate necessary?. Nature, 1999, , .	27.8	5
57	Earthquake Prediction: What should we be debating?. Nature, 1999, , .	27.8	1
58	Without progress no funding. Nature, 1999, , .	27.8	1
59	Reply: U.N. should have sought expert advice. Eos, 1999, 80, 231.	0.1	1
60	Optimally accurate second-order time-domain finite difference scheme for the elastic equation of motion: one-dimensional case. Geophysical Journal International, 1998, 135, 48-62.	2.4	75
61	Dim prospects for earthquake prediction. Eos, 1998, 79, 497-497.	0.1	1
62	Predictable publicity. Astronomy and Geophysics, 1997, 38, 16-18.	0.2	4
63	Earthquakes: Thinking about the unpredictable. Eos, 1997, 78, 63.	0.1	12
64	Earthquakes Cannot Be Predicted. Science, 1997, 275, 1616-1616.	12.6	626
65	Computation of complete synthetic seismograms for laterally heterogeneous models using the Direct Solution Method. Geophysical Journal International, 1997, 130, 1-16.	2.4	55
66	Earthquake prediction: a critical review. Geophysical Journal International, 1997, 131, 425-450.	2.4	427
67	Debate on evaluation of the VAN Method: Editor's introduction. Geophysical Research Letters, 1996, 23, 1291-1293.	4.0	76
68	Highly accurate P-SV complete synthetic seismograms using modified DSM operators. Geophysical Research Letters, 1996, 23, 1175-1178.	4.0	56
69	VAN: A CRITICAL EVALUATION. , 1996, , 155-238.		18
70	Waveform Inversion for Earth Structure.. Journal of Geography (Chigaku Zasshi), 1995, 104, 972-983.	0.3	0
71	Determining 3-D Earth Structure Using the Direct Solution Method. Zisin (Journal of the) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	0.2	0
72	DSM synthetic seismograms using analytic trial functions: planelayered, isotropic, case. Geophysical Journal International, 1995, 120, 163-172.	2.4	8

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73	A new method for computing highly accurate DSM synthetic seismograms. Geophysical Journal International, 1995, 123, 449-470.	2.4	94
74	The role of seismology. Nature, 1995, 373, 554-554.	27.8	1
75	Computation of synthetic seismograms and their partial derivatives for heterogeneous media with arbitrary natural boundary conditions using the Direct Solution Method. Geophysical Journal International, 1994, 116, 421-446.	2.4	152
76	The geological origin of long wavelength lateral heterogeneity at depths of 300-400km. Geophysical Research Letters, 1994, 21, 907-910.	4.0	6
77	DSM complete synthetic seismograms: P-SV, spherically symmetric, case. Geophysical Research Letters, 1994, 21, 1663-1666.	4.0	38
78	DSM complete synthetic seismograms: SH, spherically symmetric, case. Geophysical Research Letters, 1994, 21, 533-536.	4.0	41
79	Inversion for laterally heterogeneous upper mantle S-wave velocity structure using iterative waveform inversion. Geophysical Journal International, 1993, 115, 667-698.	2.4	40
80	Two efficient algorithms for iterative linearized inversion of seismic waveform data. Geophysical Journal International, 1993, 115, 699-710.	2.4	78
81	Laterally Heterogeneous Upper Mantle S-wave Velocity Structure Obtained by Iterative Linearized Waveform Inversion.. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 1992, 68, 155-160.	3.8	3
82	Shake-up for earthquake prediction. Nature, 1991, 352, 275-276.	27.8	36
83	Unpredictable earthquakes. Nature, 1991, 353, 612-612.	27.8	6
84	Comment on â€˜The gravito-elastodynamics of a pre-stressed elastic earthâ€™ by L. L. A. Vermeersen and N. J. Vlaar. Geophysical Journal International, 1991, 106, 499-503.	2.4	1
85	Comment on “Is the Number of independent elastic constants of a Hookean elastic material 21 or 36?” by Y. Suzuki. Zisin (Journal of the Seismological Society of Japan 2nd Ser), 1990, 43, 133-135.	0.2	0
86	On the equivalence of two methods for computing partial derivatives of seismic waveforms-II. Laterally homogeneous initial model. Geophysical Journal International, 1990, 102, 499-502.	2.4	7
87	On the Equivalence of Two Methods For Computing Partial Derivatives of Seismic Waveforms. Geophysical Journal International, 1990, 100, 153-156.	2.4	11
88	Problems of tenure in Japan. Nature, 1990, 345, 380-380.	27.8	1
89	Metastable phases confirmed. Nature, 1990, 347, 620-621.	27.8	11
90	Reply to Comment by Y. Suzuki. Journal of Physics of the Earth, 1990, 38, 187-188.	1.4	0

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91	Coupling between the multiplets of laterally heterogeneous earth models. Geophysical Journal International, 1989, 96, 371-379.	2.4	17
92	Calculating synthetic seismograms for vertically heterogeneous elastic media using the method of weighted residuals. , 1989, , .		0
93	Elastodynamics in a laterally heterogeneous, self-gravitating body. Geophysical Journal International, 1988, 94, 271-283.	2.4	11
94	On the derivation of the elastic equation of motion.. Journal of Physics of the Earth, 1988, 36, 201-228.	1.4	4
95	Partial derivatives of synthetic seismograms for a laterally heterogeneous Earth model. Geophysical Research Letters, 1987, 14, 832-835.	4.0	9
96	Variational free oscillation computations for three laterally heterogeneous Earth models. Physics of the Earth and Planetary Interiors, 1987, 47, 288-318.	1.9	22
97	Normal mode solutions for absorbing boundary conditions. Geophysical Research Letters, 1985, 12, 145-148.	4.0	6
98	Partial derivatives of the eigenfrequencies of a laterally heterogeneous Earth model. Geophysical Research Letters, 1985, 12, 817-820.	4.0	17
99	Linear moment tensor inversion for shallow thrust earthquakes combining firstâ€motion and surface wave data. Journal of Geophysical Research, 1984, 89, 1889-1897.	3.3	12
100	Seismic strain release along the Middle America Trench, Mexico. Geophysical Research Letters, 1982, 9, 182-185.	4.0	25
101	A direct measurement of the distance between a hypocenter in a Benioffâ€Wadati Zone and the Slabâ€Asthenosphere contact. Journal of Geophysical Research, 1982, 87, 323-328.	3.3	15
102	Toroidal modes of a simple laterally heterogeneous sphere. Bulletin of the Seismological Society of America, 1982, 72, 1155-1166.	2.3	13
103	A new iterative method for finding the normal modes of a laterally heterogeneous body. Geophysical Research Letters, 1981, 8, 1195-1197.	4.0	6
104	Qâ^'1 models from data space inversion of fundamental spheroidal mode attenuation measurements. Geodynamic Series, 1981, , 39-53.	0.1	9
105	Four similar earthquakes in central California. Geophysical Research Letters, 1980, 7, 821-824.	4.0	252
106	Comment on â€œthe use of the minimum-dissipation principle in tectonophysicsâ€•by P. Bird and D.A. Yuen. Earth and Planetary Science Letters, 1979, 45, 218-220.	4.4	18
107	On the observability of isotropic seismic sources: The July 31, 1970 Colombian earthquake. Physics of the Earth and Planetary Interiors, 1979, 18, 176-196.	1.9	46
108	An intraplate thrust earthquake in the South China Sea. Journal of Geophysical Research, 1979, 84, 5627-5631.	3.3	25

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109	Earthquakes along the passive margin of eastern Canada. Geophysical Research Letters, 1979, 6, 537-540.	4.0	130
110	Dynamic finite element modeling of dislocations in a laterally heterogeneous crust.. Journal of Physics of the Earth, 1979, 27, 395-407.	1.4	5
111	Use of a bubble tiltmeter as a horizontal seismometer. Geophysical Journal International, 1978, 54, 661-668.	2.4	12
112	Magnitudes of great shallow earthquakes from 1904 to 1952. Bulletin of the Seismological Society of America, 1977, 67, 587-598.	2.3	137
113	Body force equivalents for stress-drop seismic sources. Bulletin of the Seismological Society of America, 1976, 66, 1801-1804.	2.3	120
114	Representation Theorems for an Infinite Shear Fault. Geophysical Journal International, 1974, 39, 123-131.	2.4	6
115	Evidence of precursive compression for two deep earthquakes. Nature, 1974, 252, 28-29.	27.8	10