Kazuro Hirahara

List of Publications by Year
in descending order

65 papers	2,311 citations	257450 24 h-index	214800 47 g-index
65 all docs	65 docs citations	65 times ranked	1769 citing authors

#	Article	IF	Citations
1	Adjoint-based direct data assimilation of GNSS time series for optimizing frictional parameters and predicting postseismic deformation following the 2003 Tokachi-oki earthquake. Earth, Planets and Space, 2020, 72, .	2.5	4
2	Estimation of frictional properties and slip evolution on a long-term slow slip event fault with the ensemble Kalman filter: numerical experiments. Geophysical Journal International, 2019, 219, 2074-2096.	2.4	8
3	An adjoint-based simultaneous estimation method of the asthenosphere's viscosity and afterslip using a fast and scalable finite-element adjoint solver. Geophysical Journal International, 2018, 213, 461-474.	2.4	12
4	Lowâ€velocity zones in the crust beneath Aso caldera, Kyushu, Japan, derived from receiver function analyses. Journal of Geophysical Research: Solid Earth, 2017, 122, 2013-2033.	3.4	17
5	An elastic/viscoelastic finite element analysis method for crustal deformation using a 3-D island-scale high-fidelity model. Geophysical Journal International, 2016, 206, 114-129.	2.4	28
6	Robust and portable capacity computing method for many finite element analyses of a high-fidelity crustal structure model aimed for coseismic slip estimation. Computers and Geosciences, 2016, 94, 121-130.	4.2	8
7	Numerical Verification Criteria for Coseismic and Postseismic Crustal Deformation Analysis with Large-scale High-fidelity Model. Procedia Computer Science, 2015, 51, 1534-1544.	2.0	3
8	Afterslip and viscoelastic relaxation following the 2011 Tohoku-oki earthquake (<i>M_w</i>9.0) inferred from inland GPS and seafloor GPS/Acoustic data. Geophysical Research Letters, 2015, 42, 66-73.	4.0	97
9	Effect of the Earth's surface topography on quasi-dynamic earthquake cycles. Geophysical Journal International, 2015, 203, 384-398.	2.4	8
10	Real data assimilation for optimization of frictional parameters and prediction of afterslip in the 2003 Tokachi-oki earthquake inferred from slip velocity by an adjoint method. Geophysical Journal International, 2015, 203, 646-663.	2.4	23
11	Several Hundred Finite Element Analyses of an Inversion of Earthquake Fault Slip Distribution using a High-fidelity Model of the Crustal Structure. Procedia Computer Science, 2014, 29, 877-887.	2.0	3
12	Observed change in plate coupling close to the rupture initiation area before the occurrence of the 2011 Tohoku earthquake: Implications from an earthquake cycle model. Geophysical Research Letters, 2014, 41, 1899-1906.	4.0	27
13	Longâ€term changes in the Coulomb failure function on inland active faults in southwest Japan due to eastâ€west compression and interplate earthquakes. Journal of Geophysical Research: Solid Earth, 2014, 119, 502-518.	3.4	14
14	Fast numerical simulation of crustal deformation using a three-dimensional high-fidelity model. Geophysical Journal International, 2013, 195, 1730-1744.	2.4	19
15	Alongâ€arc variation in water distribution in the uppermost mantle beneath Kyushu, Japan, as derived from receiver function analyses. Journal of Geophysical Research: Solid Earth, 2013, 118, 3540-3556.	3.4	22
16	An adjoint data assimilation method for optimizing frictional parameters on the afterslip area. Earth, Planets and Space, 2013, 65, 1575-1580.	2.5	11
17	Megaquake cycle at the Tohoku subduction zone with thermal fluid pressurization near the surface. Earth and Planetary Science Letters, 2012, 325-326, 21-26.	4.4	31
18	Fault instability on a finite and planar fault related to early phase of nucleation. Journal of Geophysical Research, 2011, 116, .	3.3	16

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19	Common-conversion-point stacking of receiver functions for estimating the geometry of dipping interfaces. Geophysical Journal International, 2011, 185, 1305-1311.	2.4	11
20	Crustal structure beneath Aso Caldera, Southwest Japan, as derived from receiver function analysis. Journal of Volcanology and Geothermal Research, 2010, 195, 1-12.	2.1	32
21	Estimation of Frictional Parameters and Initial Values of Simulation Variables Using an Adjoint Data Assimilation Method with Synthetic Afterslip Data. Zisin (Journal of the Seismological Society of) Tj ETQq1 1 0.784314 rgBT /Overlock	0.2	3
22	Interseismic pore compaction suppresses earthquake occurrence and causes faster apparent fault loading. Geophysical Research Letters, 2009, 36, .	4.0	2
23	Coseismic thermal pressurization can notably prolong earthquake recurrence intervals on weak rate and state friction faults: Numerical experiments using different constitutive equations. Journal of Geophysical Research, 2009, 114, .	3.3	23
24	Toward Advanced Earthquake Cycle Simulation. Journal of Disaster Research, 2009, 4, 99-105.	0.7	0
25	Long-term slow slip events are not necessarily caused by high pore fluid pressure at the plate interface: an implication from two-dimensional model calculations. Geophysical Journal International, 2008, 174, 331-335.	2.4	9
26	Water flow to the mantle transition zone inferred from a receiver function image of the Pacific slab. Earth and Planetary Science Letters, 2008, 274, 346-354.	4.4	289
27	Upper mantle imaging beneath the Japan Islands by Hi-net tiltmeter recordings. Earth, Planets and Space, 2006, 58, 1007-1012.	2.5	21
28	Lower slab boundary in the Japan subduction zone. Earth and Planetary Science Letters, 2006, 247, 101-107.	4.4	19
29	High-resolution receiver function imaging of velocity discontinuities in the crust and the upper mantle beneath the Japan Islands. , 2006, , .		1
30	Detailed structure of the upper mantle discontinuities around the Japan subduction zone imaged by receiver function analyses. Earth, Planets and Space, 2005, 57, 5-14.	2.5	29
31	Time-Height Distribution of Water Vapor Derived by Moving Cell Tomography During Tsukuba GPS Campaigns. Journal of the Meteorological Society of Japan, 2004, 82, 561-568.	1.8	8
32	GeoFEM Kinematic Earthquake Cycle Simulation in Southwest Japan. Pure and Applied Geophysics, 2004, 161, 2069.	1.9	10
33	A 3-D Quasi-static Model for a Variety of Slip Behaviors on a Subduction Fault. Pure and Applied Geophysics, 2004, 161, 2417.	1.9	13
34	Simple Spring-mass Model Simulation of Earthquake Cycle along the Nankai Trough in Southwest Japan. Pure and Applied Geophysics, 2004, 161, 2433.	1.9	10
35	A numerical simulation of earthquake cycles along the Nankai Trough in southwest Japan: lateral variation in frictional property due to the slab geometry controls the nucleation position. Earth and Planetary Science Letters, 2004, 228, 215-226.	4.4	119
36	GeoFEM Kinematic Earthquake Cycle Simulation in Southwest Japan. , 2004, , 2069-2090.		2

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37	A 3-D Quasi-static Model for a Variety of Slip Behaviors on a Subduction Fault. , 2004, , 2417-2431.		2
38	Dense GPS Array observations across the Atotsugawa fault, central Japan. Geophysical Research Letters, 2003, 30, .	4.0	25
39	A viscoelastic model of interseismic strain concentration in Niigata-Kobe Tectonic Zone of central Japan. Earth, Planets and Space, 2003, 55, 667-675.	2.5	40
40	High resolution receiver function imaging of the seismic velocity discontinuities in the crust and the uppermost mantle beneath southwest Japan. Earth, Planets and Space, 2003, 55, 59-64.	2.5	71
41	A model for complex slip behavior on a large asperity at subduction zones. Geophysical Research Letters, 2002, 29, 25-1-25-4.	4.0	16
42	Parallel simulation system for earthquake generation: fault analysis modules and parallel coupling analysis. Concurrency Computation Practice and Experience, 2002, 14, 499-519.	2.2	10
43	3-D Viscoelastic FEM Modeling of Crustal Deformation in Northeast Japan. , 2002, , 2239-2259.		4
44	Interplate Earthquake Fault Slip During Periodic Earthquake Cycles in a Viscoelastic Medium at a Subduction Zone. , 2002, , 2201-2220.		3
45	Viscoelastic simulation of earthquake cycle using a simple spring-Dashpot-mass system with a friction law. Geophysical Research Letters, 2001, 28, 4391-4394.	4.0	3
46	Local GPS tropospheric tomography. Earth, Planets and Space, 2000, 52, 935-939.	2.5	74
47	A slow thrust slip event following the two 1996 Hyuganada Earthquakes beneath the Bungo Channel, southwest Japan. Geophysical Research Letters, 1999, 26, 3237-3240.	4.0	377
48	Simulation of postseismic deformations caused by the 1896 Riku-u Earthquake, northeast Japan: Re-evaluation of the viscosity in the upper mantle. Geophysical Research Letters, 1999, 26, 2561-2564.	4.0	51
49	Comparison of Crustal Deformations Observed with GPS and Strainmeters/Tiltmeters. International Association of Geodesy Symposia, 1998, , 450-458.	0.4	1
50	GPS observations of postseismic deformation for the 1995 Hyogo-Ken Nanbu Earthquake, Japan. Geophysical Research Letters, 1997, 24, 503-506.	4.0	25
51	GPS Observations of Post-Seismic Crustal Movements in the Focal Region of the 1995 Hyogo-ken Nanbu Earthquake. Static and Real-Time Kinematic GPS Observations.. Journal of Physics of the Earth, 1996, 44, 301-315.	1.4	9
52	Simultaneous Inversion of Geodetic and Strong Motion Data for the Source-Process of the Hyogo-ken Nanbu, Japan, Earthquake.. Journal of Physics of the Earth, 1996, 44, 455-471.	1.4	46
53	Crustal Deformation Associated with the 1995 Hyogo-ken Nanbu Earthquake, Japan Derived from GPS Measurements.. Journal of Physics of the Earth, 1996, 44, 281-286.	1.4	8
54	the thickness of upper mantle discontinuities, as inferred from short-period J-array data. Geophysical Research Letters, 1994, 21, 1811-1814.	4.0	57

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55	Three-dimensional P-wave velocity structure beneath the Indonesian region. Tectonophysics, 1993, 220, 175-192.	2.2	42
56	The horizontally lying slab. Geophysical Research Letters, 1989, 16, 1059-1062.	4.0	74
57	Detection of three-dimensional velocity anisotropy. Physics of the Earth and Planetary Interiors, 1988, 51, 71-85.	1.9	28
58	How deep can we see the high velocity anomalies beneath the Japan Islands?. Geophysical Research Letters, 1988, 15, 828-831.	4.0	57
59	3-D Seismic Velocity Structure beneath Southwest Japan Revealed by Geotomography. , 1986, , 237-245.		1
60	Travel time inversion for three-dimensional P-wave velocity anisotropy.. Journal of Physics of the Earth, 1984, 32, 197-218.	1.4	46
61	Three-dimensional seismic structure beneath southwest Japan: The subducting Philippine Sea Plate. Tectonophysics, 1981, 79, 1-44.	2.2	130
62	Structure of the Philippine Sea Plate Subducting beneath the Kui Peninsula. Zisin (Journal of the) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 4	0.2	11
63	Three-dimensional seismic structure of subducting lithospheric plates under the Japan islands. Physics of the Earth and Planetary Interiors, 1980, 21, 109-119.	1.9	59
64	Three-dimensional shear velocity structure beneath the Japan islands and its tectonic implications.. Journal of Physics of the Earth, 1980, 28, 221-241.	1.4	12
65	A large-scale three-dimensional seismic structure under the Japan Islands and the sea of Japan.. Journal of Physics of the Earth, 1977, 25, 393-417.	1.4	77