

Kazuro Hirahara

List of Publications by Year in descending order

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65
papers

2,311
citations

257450

24
h-index

214800

47
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all docs

65
docs citations

65
times ranked

1769
citing authors

#	ARTICLE	IF	CITATIONS
1	A slow thrust slip event following the two 1996 Hyuganada Earthquakes beneath the Bungo Channel, southwest Japan. <i>Geophysical Research Letters</i> , 1999, 26, 3237-3240.	4.0	377
2	Water flow to the mantle transition zone inferred from a receiver function image of the Pacific slab. <i>Earth and Planetary Science Letters</i> , 2008, 274, 346-354.	4.4	289
3	Three-dimensional seismic structure beneath southwest Japan: The subducting Philippine Sea Plate. <i>Tectonophysics</i> , 1981, 79, 1-44.	2.2	130
4	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. <i>Earth and Planetary Science Letters</i> , 2004, 228, 215-226.	4.4	119
5	Afterslip and viscoelastic relaxation following the 2011 Tohoku-oki earthquake ($M_w 9.0$) inferred from inland GPS and seafloor GPS/Acoustic data. <i>Geophysical Research Letters</i> , 2015, 42, 66-73.	4.0	97
6	A large-scale three-dimensional seismic structure under the Japan Islands and the sea of Japan.. <i>Journal of Physics of the Earth</i> , 1977, 25, 393-417.	1.4	77
7	The horizontally lying slab. <i>Geophysical Research Letters</i> , 1989, 16, 1059-1062.	4.0	74
8	Local GPS tropospheric tomography. <i>Earth, Planets and Space</i> , 2000, 52, 935-939.	2.5	74
9	High resolution receiver function imaging of the seismic velocity discontinuities in the crust and the uppermost mantle beneath southwest Japan. <i>Earth, Planets and Space</i> , 2003, 55, 59-64.	2.5	71
10	Three-dimensional seismic structure of subducting lithospheric plates under the Japan islands. <i>Physics of the Earth and Planetary Interiors</i> , 1980, 21, 109-119.	1.9	59
11	How deep can we see the high velocity anomalies beneath the Japan Islands?. <i>Geophysical Research Letters</i> , 1988, 15, 828-831.	4.0	57
12	the thickness of upper mantle discontinuities, as inferred from short-period J-array data. <i>Geophysical Research Letters</i> , 1994, 21, 1811-1814.	4.0	57
13	Simulation of postseismic deformations caused by the 1896 Riku-u Earthquake, northeast Japan: Re-evaluation of the viscosity in the upper mantle. <i>Geophysical Research Letters</i> , 1999, 26, 2561-2564.	4.0	51
14	Travel time inversion for three-dimensional P-wave velocity anisotropy.. <i>Journal of Physics of the Earth</i> , 1984, 32, 197-218.	1.4	46
15	Simultaneous Inversion of Geodetic and Strong Motion Data for the Source-Process of the Hyogo-ken Nanbu, Japan, Earthquake.. <i>Journal of Physics of the Earth</i> , 1996, 44, 455-471.	1.4	46
16	Three-dimensional P-wave velocity structure beneath the Indonesian region. <i>Tectonophysics</i> , 1993, 220, 175-192.	2.2	42
17	A viscoelastic model of interseismic strain concentration in Niigata-Kobe Tectonic Zone of central Japan. <i>Earth, Planets and Space</i> , 2003, 55, 667-675.	2.5	40
18	Crustal structure beneath Aso Caldera, Southwest Japan, as derived from receiver function analysis. <i>Journal of Volcanology and Geothermal Research</i> , 2010, 195, 1-12.	2.1	32

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19	Megaquake cycle at the Tohoku subduction zone with thermal fluid pressurization near the surface. <i>Earth and Planetary Science Letters</i> , 2012, 325-326, 21-26.	4.4	31
20	Detailed structure of the upper mantle discontinuities around the Japan subduction zone imaged by receiver function analyses. <i>Earth, Planets and Space</i> , 2005, 57, 5-14.	2.5	29
21	Detection of three-dimensional velocity anisotropy. <i>Physics of the Earth and Planetary Interiors</i> , 1988, 51, 71-85.	1.9	28
22	An elastic/viscoelastic finite element analysis method for crustal deformation using a 3-D island-scale high-fidelity model. <i>Geophysical Journal International</i> , 2016, 206, 114-129.	2.4	28
23	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. <i>Geophysical Research Letters</i> , 2014, 41, 1899-1906.	4.0	27
24	GPS observations of postseismic deformation for the 1995 Hyogo-Ken Nanbu Earthquake, Japan. <i>Geophysical Research Letters</i> , 1997, 24, 503-506.	4.0	25
25	Dense GPS Array observations across the Atotsugawa fault, central Japan. <i>Geophysical Research Letters</i> , 2003, 30, .	4.0	25
26	Coseismic thermal pressurization can notably prolong earthquake recurrence intervals on weak rate and state friction faults: Numerical experiments using different constitutive equations. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	23
27	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. <i>Geophysical Journal International</i> , 2015, 203, 646-663.	2.4	23
28	Along-arc variation in water distribution in the uppermost mantle beneath Kyushu, Japan, as derived from receiver function analyses. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 3540-3556.	3.4	22
29	Upper mantle imaging beneath the Japan Islands by Hi-net tiltmeter recordings. <i>Earth, Planets and Space</i> , 2006, 58, 1007-1012.	2.5	21
30	Lower slab boundary in the Japan subduction zone. <i>Earth and Planetary Science Letters</i> , 2006, 247, 101-107.	4.4	19
31	Fast numerical simulation of crustal deformation using a three-dimensional high-fidelity model. <i>Geophysical Journal International</i> , 2013, 195, 1730-1744.	2.4	19
32	Low-velocity zones in the crust beneath Aso caldera, Kyushu, Japan, derived from receiver function analyses. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 2013-2033.	3.4	17
33	A model for complex slip behavior on a large asperity at subduction zones. <i>Geophysical Research Letters</i> , 2002, 29, 2511-2514.	4.0	16
34	Fault instability on a finite and planar fault related to early phase of nucleation. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	16
35	Long-term changes in the Coulomb failure function on inland active faults in southwest Japan due to east-west compression and interplate earthquakes. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 502-518.	3.4	14
36	A 3-D Quasi-static Model for a Variety of Slip Behaviors on a Subduction Fault. <i>Pure and Applied Geophysics</i> , 2004, 161, 2417.	1.9	13

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37	An adjoint-based simultaneous estimation method of the asthenosphere's viscosity and afterslip using a fast and scalable finite-element adjoint solver. <i>Geophysical Journal International</i> , 2018, 213, 461-474.	2.4	12
38	Three-dimensional shear velocity structure beneath the Japan islands and its tectonic implications.. <i>Journal of Physics of the Earth</i> , 1980, 28, 221-241.	1.4	12
39	Structure of the Philippine Sea Plate Subducting beneath the Kui Peninsula. <i>Zisin (Journal of the Tj ETQq1 1 0.784314 rgBT /Overlock</i>	0.2	11
40	Common-conversion-point stacking of receiver functions for estimating the geometry of dipping interfaces. <i>Geophysical Journal International</i> , 2011, 185, 1305-1311.	2.4	11
41	An adjoint data assimilation method for optimizing frictional parameters on the afterslip area. <i>Earth, Planets and Space</i> , 2013, 65, 1575-1580.	2.5	11
42	Parallel simulation system for earthquake generation: fault analysis modules and parallel coupling analysis. <i>Concurrency Computation Practice and Experience</i> , 2002, 14, 499-519.	2.2	10
43	GeoFEM Kinematic Earthquake Cycle Simulation in Southwest Japan. <i>Pure and Applied Geophysics</i> , 2004, 161, 2069.	1.9	10
44	Simple Spring-mass Model Simulation of Earthquake Cycle along the Nankai Trough in Southwest Japan. <i>Pure and Applied Geophysics</i> , 2004, 161, 2433.	1.9	10
45	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.. <i>Journal of Physics of the Earth</i> , 1996, 44, 301-315.	1.4	9
46	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. <i>Geophysical Journal International</i> , 2008, 174, 331-335.	2.4	9
47	Time-Height Distribution of Water Vapor Derived by Moving Cell Tomography During Tsukuba GPS Campaigns. <i>Journal of the Meteorological Society of Japan</i> , 2004, 82, 561-568.	1.8	8
48	Effect of the Earth's surface topography on quasi-dynamic earthquake cycles. <i>Geophysical Journal International</i> , 2015, 203, 384-398.	2.4	8
49	Robust and portable capacity computing method for many finite element analyses of a high-fidelity crustal structure model aimed for coseismic slip estimation. <i>Computers and Geosciences</i> , 2016, 94, 121-130.	4.2	8
50	Estimation of frictional properties and slip evolution on a long-term slow slip event fault with the ensemble Kalman filter: numerical experiments. <i>Geophysical Journal International</i> , 2019, 219, 2074-2096.	2.4	8
51	Crustal Deformation Associated with the 1995 Hyogo-ken Nanbu Earthquake, Japan Derived from GPS Measurements.. <i>Journal of Physics of the Earth</i> , 1996, 44, 281-286.	1.4	8
52	Adjoint-based direct data assimilation of GNSS time series for optimizing frictional parameters and predicting postseismic deformation following the 2003 Tokachi-oki earthquake. <i>Earth, Planets and Space</i> , 2020, 72, .	2.5	4
53	3-D Viscoelastic FEM Modeling of Crustal Deformation in Northeast Japan. , 2002, , 2239-2259.		4
54	Viscoelastic simulation of earthquake cycle using a simple spring-Dashpot-mass system with a friction law. <i>Geophysical Research Letters</i> , 2001, 28, 4391-4394.	4.0	3

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55	Several Hundred Finite Element Analyses of an Inversion of Earthquake Fault Slip Distribution using a High-fidelity Model of the Crustal Structure. <i>Procedia Computer Science</i> , 2014, 29, 877-887.	2.0	3
56	Numerical Verification Criteria for Coseismic and Postseismic Crustal Deformation Analysis with Large-scale High-fidelity Model. <i>Procedia Computer Science</i> , 2015, 51, 1534-1544.	2.0	3
57	Estimation of Frictional Parameters and Initial Values of Simulation Variables Using an Adjoint Data Assimilation Method with Synthetic Afterslip Data. <i>Zisin (Journal of the Seismological Society of Japan)</i> 11, 107-114.	0.784314	0
58	Interplate Earthquake Fault Slip During Periodic Earthquake Cycles in a Viscoelastic Medium at a Subduction Zone. , 2002, , 2201-2220.		3
59	Interseismic pore compaction suppresses earthquake occurrence and causes faster apparent fault loading. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	2
60	GeoFEM Kinematic Earthquake Cycle Simulation in Southwest Japan. , 2004, , 2069-2090.		2
61	A 3-D Quasi-static Model for a Variety of Slip Behaviors on a Subduction Fault. , 2004, , 2417-2431.		2
62	High-resolution receiver function imaging of velocity discontinuities in the crust and the upper mantle beneath the Japan Islands. , 2006, , .		1
63	Comparison of Crustal Deformations Observed with GPS and Strainmeters/Tiltmeters. <i>International Association of Geodesy Symposia</i> , 1998, , 450-458.	0.4	1
64	3-D Seismic Velocity Structure beneath Southwest Japan Revealed by Geotomography. , 1986, , 237-245.		1
65	Toward Advanced Earthquake Cycle Simulation. <i>Journal of Disaster Research</i> , 2009, 4, 99-105.	0.7	0