Aitaro Kato

List of Publications by Year in descending order

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90 papers	3,875 citations	236925 25 h-index	128289 60 g-index
98 all docs	98 docs citations	98 times ranked	2871 citing authors

#	Article	IF	Citations
1	High Pore Fluid Pressure May Cause Silent Slip in the Nankai Trough. Science, 2004, 304, 1295-1298.	12.6	668
2	Propagation of Slow Slip Leading Up to the 2011 M _w 9.0 Tohoku-Oki Earthquake. Science, 2012, 335, 705-708.	12.6	584
3	Connecting slow earthquakes to huge earthquakes. Science, 2016, 353, 253-257.	12.6	458
4	Variations of fluid pressure within the subducting oceanic crust and slow earthquakes. Geophysical Research Letters, 2010, 37, .	4.0	133
5	Multiple slowâ€slip events during a foreshock sequence of the 2014 Iquique, Chile M_w 8.1 earthquake. Geophysical Research Letters, 2014, 41, 5420-5427.	4.0	125
6	A normal-faulting seismic sequence triggered by the 2011 off the Pacific coast of Tohoku Earthquake: Wholesale stress regime changes in the upper plate. Earth, Planets and Space, 2011, 63, 745-748.	2.5	105
7	Regional extent of the large coseismic slip zone of the 2011 Mw 9.0 Tohokuâ€Oki earthquake delineated by onâ€fault aftershocks. Geophysical Research Letters, 2012, 39, .	4.0	103
8	Foreshock migration preceding the 2016 M_w 7.0 Kumamoto earthquake, Japan. Geophysical Research Letters, 2016, 43, 8945-8953.	4.0	96
9	Preparatory and precursory processes leading up to the 2014 phreatic eruption of Mount Ontake, Japan. Earth, Planets and Space, 2015, 67, .	2.5	93
10	Accelerated nucleation of the 2014 Iquique, Chile Mw 8.2 Earthquake. Scientific Reports, 2016, 6, 24792.	3.3	87
11	The generation of large earthquakes. Nature Reviews Earth & Environment, 2021, 2, 26-39.	29.7	79
12	Imaging the source region of the 2004 mid-Niigata prefecture earthquake and the evolution of a seismogenic thrust-related fold. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	67
13	Hypocenter migration and crustal seismic velocity distribution observed for the inland earthquake swarms induced by the 2011 Tohokuâ€Oki earthquake in NE Japan: implications for crustal fluid distribution and crustal permeability. Geofluids, 2015, 15, 293-309.	0.7	59
14	The preparatory phase of the 2009 M_w 6.3â€‰L'Aquila earthquake by improving the detection capability of lowâ€magnitude foreshocks. Geophysical Research Letters, 2014, 41, 6137-6144.	4.0	58
15	Imaging the seismic structure and stress field in the source region of the 2004 mid-Niigata prefecture earthquake: Structural zones of weakness and seismogenic stress concentration by ductile flow. Journal of Geophysical Research, 2006, 111, .	3.3	51
16	Multi-fault system of the 2004 Mid-Niigata Prefecture Earthquake and its aftershocks. Earth, Planets and Space, 2005, 57, 417-422.	2.5	48
17	The 2016 Kumamoto earthquake sequence. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2016, 92, 358-371.	3.8	48
18	Response of seismicity to static and dynamic stress changes induced by the 2011 M9.0 Tohokuâ€Oki earthquake. Geophysical Research Letters, 2013, 40, 3572-3578.	4.0	43

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19	Reactivation of ancient rift systems triggers devastating intraplate earthquakes. Geophysical Research Letters, 2009, 36, .	4.0	41
20	Imaging heterogeneous velocity structures and complex aftershock distributions in the source region of the 2007 Niigataken Chuetsu-oki Earthquake by a dense seismic observation. Earth, Planets and Space, 2008, 60, 1111-1116.	2.5	39
21	Step-like migration of early aftershocks following the 2007 M_w 6.7 Noto-Hanto earthquake, Japan. Geophysical Research Letters, 2014, 41, 3864-3869.	4.0	36
22	Imaging the source regions of normal faulting sequences induced by the 2011â€‰M9.0 Tohokuâ€Oki earthquake. Geophysical Research Letters, 2013, 40, 273-278.	4.0	35
23	Fault system of the 2004 Mid Niigata Prefecture Earthquake and its aftershocks. Landslides, 2005, 2, 153-157.	5.4	33
24	Are the frictional properties of creeping faults persistent? Evidence from rapid afterslip following the 2011 Tohokuâ€oki earthquake. Geophysical Research Letters, 2013, 40, 3613-3617.	4.0	32
25	Nonâ€volcanic seismic swarms triggered by circulating fluids and pressure fluctuations above a solidified diorite intrusion. Geophysical Research Letters, 2010, 37, .	4.0	28
26	Non-volcanic seismic swarm and fluid transportation driven by subduction of the Philippine Sea slab beneath the Kii Peninsula, Japan. Earth, Planets and Space, 2014, 66, .	2.5	27
27	Improving the Detection of Lowâ€Magnitude Seismicity Preceding the MwÂ6.3 Lâ€™Aquila Earthquake: Development of a Scalable Code Based on the Cross Correlation of Template Earthquakes. Bulletin of the Seismological Society of America, 2018, 108, 471-480.	2.3	27
28	Detection of a hidden Boso slow slip event immediately after the 2011 M_w 9.0 Tohokuâ€Oki earthquake, Japan. Geophysical Research Letters, 2014, 41, 5868-5874.	4.0	26
29	Source mechanism of a VLP event immediately before the 2014 eruption of Mt. Ontake, Japan. Earth, Planets and Space, 2015, 67, .	2.5	26
30	Crustal structure in the northern Fossa Magna region, central Japan, modeled from refraction/wide-angle reflection data. Earth, Planets and Space, 2004, 56, 1293-1299.	2.5	25
31	Strength of tremor patches along deep transition zone of a megathrust. Scientific Reports, 2018, 8, 3655.	3.3	25
32	Three-dimensional velocity structure in the source region of the Noto Hanto Earthquake in 2007 imaged by a dense seismic observation. Earth, Planets and Space, 2008, 60, 105-110.	2.5	23
33	Asperity and Barriers of the 2004 Mid-Niigata Prefecture Earthquake Revealed by Highly Dense Seismic Observations. Bulletin of the Seismological Society of America, 2010, 100, 298-306.	2.3	23
34	Monitoring eruption activity using temporal stress changes at Mount Ontake volcano. Nature Communications, 2016, 7, 10797.	12.8	23
35	Highly resolved distribution of aftershocks of the 2007 Noto Hanto Earthquake by a dense seismic observation. Earth, Planets and Space, 2008, 60, 83-88.	2.5	22
36	Detection of deep low-frequency earthquakes in the Nankai subduction zone over 11Âyears using a matched filter technique. Earth, Planets and Space, 2020, 72, .	2.5	22

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37	Seasonal Variations in Crustal Seismicity in Sanâ€in District, Southwest Japan. Geophysical Research Letters, 2019, 46, 3172-3179.	4.0	21
38	Modeling the dynamics of a phreatic eruption based on a tilt observation: Barrier breakage leading to the 2014 eruption of Mount Ontake, Japan. Journal of Geophysical Research: Solid Earth, 2017, 122, 1007-1024.	3.4	19
39	Episodic tremor and slip silently invades strongly locked megathrust in the Nankai Trough. Scientific Reports, 2019, 9, 9270.	3.3	19
40	Deep crustal structure around the Atotsugawa fault system, central Japan: A weak zone below the seismogenic zone and its role in earthquake generation. Earth, Planets and Space, 2010, 62, 555-566.	2.5	18
41	Anomalous depth dependency of the stress field in the 2007 Noto Hanto, Japan, earthquake: Potential involvement of a deep fluid reservoir. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	18
42	Source fault model of the 2018 Mw 5.6 northern Osaka earthquake, Japan, inferred from the aftershock sequence. Earth, Planets and Space, 2019, 71, .	2.5	18
43	Delineation of probable asperities on the Atotsugawa fault, central Japan, using a dense temporary seismic network. Geophysical Research Letters, 2007, 34, .	4.0	17
44	Graphâ€Partitioning Based Convolutional Neural Network for Earthquake Detection Using a Seismic Array. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB020269.	3.4	17
45	Imaging of the early acceleration phase of the 2013â€“2014 Boso slow slip event. Geophysical Research Letters, 2014, 41, 7493-7500.	4.0	16
46	Imaging crustal structure around the western segment of the Atotsugawa fault system, central Japan. Geophysical Research Letters, 2006, 33, .	4.0	15
47	Investigating the role of the Itoigawa-Shizuoka tectonic line towards the evolution of the Northern Fossa Magna rift basin. Tectonophysics, 2014, 615-616, 12-26.	2.2	15
48	Nonâ€Doubleâ€Couple Microearthquakes in the Focal Area of the 2000 Western Tottori Earthquake (M 7.3) via Hyperdense Seismic Observations. Geophysical Research Letters, 2020, 47, e2019GL084841.	4.0	15
49	Gravity changes observed between 2004 and 2009 near the Tokai slow-slip area and prospects for detecting fluid flow during future slow-slip events. Earth, Planets and Space, 2010, 62, 905-913.	2.5	14
50	Conjugate faulting and structural complexity on the young fault system associated with the 2000 Tottori earthquake. Communications Earth & Environment, 2021, 2, .	6.8	14
51	Short-term spatiotemporal variations in the aftershock sequence of the 2004 mid-Niigata prefecture earthquake. Earth, Planets and Space, 2005, 57, 551-556.	2.5	13
52	High-resolution aftershock observations in the source region of the 2004 mid-Niigata Prefecture Earthquake. Earth, Planets and Space, 2007, 59, 923-928.	2.5	12
53	Anisotropic structures of oceanic slab and mantle wedge in a deep lowâ€frequency tremor zone beneath the Kii Peninsula, SW Japan. Journal of Geophysical Research: Solid Earth, 2013, 118, 1091-1097.	3.4	12
54	Temporal Activity Modulation of Deep Very Low Frequency Earthquakes in Shikoku, Southwest Japan. Geophysical Research Letters, 2018, 45, 733-738.	4.0	12

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55	Seismic Evidence of an Early Afterslip During the 2012 Sequence in Emilia (Italy). Geophysical Research Letters, 2019, 46, 625-635.	4.0	12
56	Detailed Spatial Slip Distribution for Shortâ€Term Slow Slip Events Along the Nankai Subduction Zone, Southwest Japan. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB019613.	3.4	12
57	Dynamic rupture of crosscutting faults: A possible rupture process for the 2007 M_w 6.6 Niigataâ€ken Chuetsuâ€Oki earthquake. Journal of Geophysical Research, 2010, 115, .	3.3	11
58	Seismic structure of the source region of the 2007 Chuetsu-oki earthquake revealed by offshore-onshore seismic survey: Asperity zone of intraplate earthquake delimited by crustal inhomogeneity. Tectonophysics, 2012, 562-563, 34-47.	2.2	11
59	Alongâ€strike structural changes controlled by dehydrationâ€related fluids within the Philippine Sea plate around the segment boundary of a megathrust earthquake beneath the Kii peninsula, southwest Japan. Geophysical Research Letters, 2013, 40, 4839-4844.	4.0	11
60	Down-dip variations in a subducting low-velocity zone linked to episodic tremor and slip: a new constraint from ScSp waves. Scientific Reports, 2017, 7, 2868.	3.3	9
61	Improved 3â€D P Wave Azimuthal Anisotropy Structure Beneath the Tokyo Metropolitan Area, Japan: New Interpretations of the Dual Subduction System Revealed by Seismic Anisotropy. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021194.	3.4	8
62	Single and double asperity failures in a large-scale biaxial experiment. Geophysical Research Letters, 2001, 28, 451-454.	4.0	7
63	The Dependence of Constitutive Properties on Temperature and Effective Normal Stress in Seismogenic Environments. Pure and Applied Geophysics, 2004, 161, 1895.	1.9	6
64	The Preseismic and Postseismic Phases of the 700â€km Deep M7.9 Bonin Islands Earthquake, Japan. Geophysical Research Letters, 2020, 47, e2019GL085589.	4.0	6
65	Stationarity of aftershock activities of the 2016 Central Tottori Prefecture earthquake revealed by dense seismic observation. Earth, Planets and Space, 2020, 72, .	2.5	6
66	Hyper Dense Seismic Observation for Investigation on Fault Zone Development: Application to Hypocentral Area of 2000 Western Tottori Earthquake. Journal of Geography (Chigaku Zasshi), 2020, 129, 511-527.	0.3	6
67	Fine structure of P-wave velocity distribution along the Atotsugawa fault, central Japan. Tectonophysics, 2009, 472, 95-104.	2.2	5
68	Modeling the development of a complex fault configuration in the source region of two destructive intraplate earthquakes in the mid-Niigata region. Tectonophysics, 2012, 562-563, 26-33.	2.2	5
69	Time-dependent earthquake probability calculations for southern Kanto after the 2011 M9.0 Tohoku earthquake. Geophysical Journal International, 2013, 193, 914-919.	2.4	5
70	Matched Filtering Accelerated by Tensor Cores on Volta GPUs With Improved Accuracy Using Half-Precision Variables. IEEE Signal Processing Letters, 2019, 26, 1857-1861.	3.6	5
71	Reactivations of boundary faults within a buried ancient rift system by ductile creeping of weak shear zones in the overpressured lower crust: The 2004 mid-Niigata Prefecture Earthquake. Tectonophysics, 2010, 486, 101-107.	2.2	4
72	Inelastic strain in the hypocentral region of the 2000 Western Tottori earthquake (M 7.3) inferred from aftershock seismic moment tensors. Earth, Planets and Space, 2020, 72, .	2.5	4

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73	Three-dimensional Attenuation Structure beneath the Tokai Region, Central Japan Derived Using Local Earthquake Spectra. Zisin (Journal of the Seismological Society of Japan 2nd Ser), 2012, 65, 175-187.	0.2	4
74	Detection of low-frequency earthquakes by the matched filter technique using the product of mutual information and correlation coefficient. Earth, Planets and Space, 2021, 73, .	2.5	4
75	Interpretation of various slip modes on a plate boundary based on laboratory and numerical experiments. Earth, Planets and Space, 2004, 56, 795-801.	2.5	3
76	Seismic structure in and around the source area of the 2004 mid-Niigata, Japan, earthquake: 3-D waveform modelling based on local tomography images. Geophysical Journal International, 2009, 177, 145-160.	2.4	3
77	Seismicity and crustal structure in the vicinity of the southern Itoigawa-Shizuoka Tectonic Line. Earth, Planets and Space, 2010, 62, 223-235.	2.5	3
78	The weakened lower crust beneath the Nobi fault system, Japan: Implications for stress accumulation to the seismogenic zone. Tectonophysics, 2015, 655, 147-160.	2.2	3
79	An Optimum 2D Seismic-Wavefield Reconstruction in Densely and Nonuniformly Distributed Stations: The Metropolitan Seismic Observation Network in Japan. Seismological Research Letters, 2021, 92, 2015-2027.	1.9	3
80	Spatial variations in seismicity characteristics in and around the source region of the 2019 Yamagata-Oki Earthquake, Japan. Earth, Planets and Space, 2021, 73, .	2.5	3
81	Evolution of aseismic slip rate along plate boundary faults before and after megathrust earthquakes. Communications Earth & Environment, 2021, 2, .	6.8	3
82	Effect of Water on Stability or Instability of the Shear Fracture Process of Rock.. Journal of Geography (Chigaku Zasshi), 2000, 109, 554-563.	0.3	2
83	Large heterogeneous structure beneath the Atotsugawa Fault, central Japan, revealed by seismic refraction and reflection experiments. Tectonophysics, 2015, 657, 144-154.	2.2	2
84	Slow Slip Transients Before the 2011 Tohoku-Oki Earthquake. Journal of Disaster Research, 2014, 9, 311-316.	0.7	2
85	Vp and Vs Structures in the Crust of Tokai Region, Central Japan, Estimated by Seismic ACROSS Signals. Zisin (Journal of the Seismological Society of Japan 2nd Ser), 2014, 67, 1-24.	0.2	1
86	Receiver function images of the distorted Philippine Sea slab contact with the continental crust: Implications for generation of the 1891 Nobi earthquake (Mj 8.0). Tectonophysics, 2017, 717, 41-50.	2.2	1
87	Stress relaxation arrested the mainshock rupture of the 2016 Central Tottori earthquake. Communications Earth & Environment, 2021, 2, .	6.8	1
88	Special Issue on Challenges of Earthquake Forecast Research Illuminated by the 2011 Tohoku-Oki Earthquake. Journal of Disaster Research, 2014, 9, 247-247.	0.7	0
89	Special Issue on Earthquake and Volcano Hazards Observation and Research Program. Journal of Disaster Research, 2020, 15, 69-69.	0.7	0
90	Structured regularizationÂbased velocity structure estimation in local earthquake tomography for the adaptation to velocity discontinuities. Earth, Planets and Space, 2022, 74, .	2.5	0