

# Aitaro Kato

## List of Publications by Year in descending order

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90  
papers

3,875  
citations

270111

25  
h-index

145109

60  
g-index

98  
all docs

98  
docs citations

98  
times ranked

3232  
citing authors

#	ARTICLE	IF	CITATIONS
1	High Pore Fluid Pressure May Cause Silent Slip in the Nankai Trough. <i>Science</i> , 2004, 304, 1295-1298.	6.0	668
2	Propagation of Slow Slip Leading Up to the 2011 <i>M<sub>w</sub></i> 9.0 Tohoku-Oki Earthquake. <i>Science</i> , 2012, 335, 705-708.	6.0	584
3	Connecting slow earthquakes to huge earthquakes. <i>Science</i> , 2016, 353, 253-257.	6.0	458
4	Variations of fluid pressure within the subducting oceanic crust and slow earthquakes. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	133
5	Multiple slow-slip events during a foreshock sequence of the 2014 Iquique, Chile <i>M<sub>w</sub></i> 8.1 earthquake. <i>Geophysical Research Letters</i> , 2014, 41, 5420-5427.	1.5	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. <i>Earth, Planets and Space</i> , 2011, 63, 745-748.	0.9	105
7	Regional extent of the large coseismic slip zone of the 2011 <i>M<sub>w</sub></i> 9.0 Tohoku-Oki earthquake delineated by on-fault aftershocks. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	103
8	Foreshock migration preceding the 2016 <i>M<sub>w</sub></i> 7.0 Kumamoto earthquake, Japan. <i>Geophysical Research Letters</i> , 2016, 43, 8945-8953.	1.5	96
9	Preparatory and precursory processes leading up to the 2014 phreatic eruption of Mount Ontake, Japan. <i>Earth, Planets and Space</i> , 2015, 67, .	0.9	93
10	Accelerated nucleation of the 2014 Iquique, Chile <i>M<sub>w</sub></i> 8.2 Earthquake. <i>Scientific Reports</i> , 2016, 6, 24792.	1.6	87
11	The generation of large earthquakes. <i>Nature Reviews Earth &amp; Environment</i> , 2021, 2, 26-39.	12.2	79
12	Imaging the source region of the 2004 mid-Niigata prefecture earthquake and the evolution of a seismogenic thrust-related fold. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	1.5	67
13	Hypocenter migration and crustal seismic velocity distribution observed for the inland earthquake swarms induced by the 2011 Tohoku-Oki earthquake in NE Japan: implications for crustal fluid distribution and crustal permeability. <i>Geofluids</i> , 2015, 15, 293-309.	0.3	59
14	The preparatory phase of the 2009 <i>M<sub>w</sub></i> 6.3 L'Aquila earthquake by improving the detection capability of low-magnitude foreshocks. <i>Geophysical Research Letters</i> , 2014, 41, 6137-6144.	1.5	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. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	51
16	Multi-fault system of the 2004 Mid-Niigata Prefecture Earthquake and its aftershocks. <i>Earth, Planets and Space</i> , 2005, 57, 417-422.	0.9	48
17	The 2016 Kumamoto earthquake sequence. <i>Proceedings of the Japan Academy Series B: Physical and Biological Sciences</i> , 2016, 92, 358-371.	1.6	48
18	Response of seismicity to static and dynamic stress changes induced by the 2011 <i>M<sub>w</sub></i> 9.0 Tohoku-Oki earthquake. <i>Geophysical Research Letters</i> , 2013, 40, 3572-3578.	1.5	43

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19	Reactivation of ancient rift systems triggers devastating intraplate earthquakes. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	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. <i>Earth, Planets and Space</i> , 2008, 60, 1111-1116.	0.9	39
21	Step-like migration of early aftershocks following the 2007 <i>M<sub>w</sub></i> 6.7 Noto-Hanto earthquake, Japan. <i>Geophysical Research Letters</i> , 2014, 41, 3864-3869.	1.5	36
22	Imaging the source regions of normal faulting sequences induced by the 2011 <i>M<sub>w</sub></i> 9.0 Tohoku-oki earthquake. <i>Geophysical Research Letters</i> , 2013, 40, 273-278.	1.5	35
23	Fault system of the 2004 Mid Niigata Prefecture Earthquake and its aftershocks. <i>Landslides</i> , 2005, 2, 153-157.	2.7	33
24	Are the frictional properties of creeping faults persistent? Evidence from rapid afterslip following the 2011 Tohoku-oki earthquake. <i>Geophysical Research Letters</i> , 2013, 40, 3613-3617.	1.5	32
25	Non-volcanic seismic swarms triggered by circulating fluids and pressure fluctuations above a solidified diorite intrusion. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	28
26	Non-volcanic seismic swarm and fluid transportation driven by subduction of the Philippine Sea slab beneath the Kii Peninsula, Japan. <i>Earth, Planets and Space</i> , 2014, 66, .	0.9	27
27	Improving the Detection of Low-Magnitude Seismicity Preceding the <i>M<sub>w</sub></i> 6.3 Aquila Earthquake: Development of a Scalable Code Based on the Cross Correlation of Template Earthquakes. <i>Bulletin of the Seismological Society of America</i> , 2018, 108, 471-480.	1.1	27
28	Detection of a hidden Boso slow slip event immediately after the 2011 <i>M<sub>w</sub></i> 9.0 Tohoku-oki earthquake, Japan. <i>Geophysical Research Letters</i> , 2014, 41, 5868-5874.	1.5	26
29	Source mechanism of a VLP event immediately before the 2014 eruption of Mt. Ontake, Japan. <i>Earth, Planets and Space</i> , 2015, 67, .	0.9	26
30	Crustal structure in the northern Fossa Magna region, central Japan, modeled from refraction/wide-angle reflection data. <i>Earth, Planets and Space</i> , 2004, 56, 1293-1299.	0.9	25
31	Strength of tremor patches along deep transition zone of a megathrust. <i>Scientific Reports</i> , 2018, 8, 3655.	1.6	25
32	Three-dimensional velocity structure in the source region of the Noto Hanto Earthquake in 2007 imaged by a dense seismic observation. <i>Earth, Planets and Space</i> , 2008, 60, 105-110.	0.9	23
33	Asperity and Barriers of the 2004 Mid-Niigata Prefecture Earthquake Revealed by Highly Dense Seismic Observations. <i>Bulletin of the Seismological Society of America</i> , 2010, 100, 298-306.	1.1	23
34	Monitoring eruption activity using temporal stress changes at Mount Ontake volcano. <i>Nature Communications</i> , 2016, 7, 10797.	5.8	23
35	Highly resolved distribution of aftershocks of the 2007 Noto Hanto Earthquake by a dense seismic observation. <i>Earth, Planets and Space</i> , 2008, 60, 83-88.	0.9	22
36	Detection of deep low-frequency earthquakes in the Nankai subduction zone over 11 years using a matched filter technique. <i>Earth, Planets and Space</i> , 2020, 72, .	0.9	22

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37	Seasonal Variations in Crustal Seismicity in Sanjū District, Southwest Japan. <i>Geophysical Research Letters</i> , 2019, 46, 3172-3179.	1.5	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. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 1007-1024.	1.4	19
39	Episodic tremor and slip silently invades strongly locked megathrust in the Nankai Trough. <i>Scientific Reports</i> , 2019, 9, 9270.	1.6	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. <i>Earth, Planets and Space</i> , 2010, 62, 555-566.	0.9	18
41	Anomalous depth dependency of the stress field in the 2007 Noto Hanto, Japan, earthquake: Potential involvement of a deep fluid reservoir. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	18
42	Source fault model of the 2018 Mw 5.6 northern Osaka earthquake, Japan, inferred from the aftershock sequence. <i>Earth, Planets and Space</i> , 2019, 71, .	0.9	18
43	Delineation of probable asperities on the Atotsugawa fault, central Japan, using a dense temporary seismic network. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	17
44	Graph-Partitioning Based Convolutional Neural Network for Earthquake Detection Using a Seismic Array. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB020269.	1.4	17
45	Imaging of the early acceleration phase of the 2013–2014 Boso slow slip event. <i>Geophysical Research Letters</i> , 2014, 41, 7493-7500.	1.5	16
46	Imaging crustal structure around the western segment of the Atotsugawa fault system, central Japan. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	15
47	Investigating the role of the Itoigawa-Shizuoka tectonic line towards the evolution of the Northern Fossa Magna rift basin. <i>Tectonophysics</i> , 2014, 615-616, 12-26.	0.9	15
48	Non-Double-Couple Microearthquakes in the Focal Area of the 2000 Western Tottori Earthquake (M 7.3) via Hyperdense Seismic Observations. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL084841.	1.5	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. <i>Earth, Planets and Space</i> , 2010, 62, 905-913.	0.9	14
50	Conjugate faulting and structural complexity on the young fault system associated with the 2000 Tottori earthquake. <i>Communications Earth &amp; Environment</i> , 2021, 2, .	2.6	14
51	Short-term spatiotemporal variations in the aftershock sequence of the 2004 mid-Niigata prefecture earthquake. <i>Earth, Planets and Space</i> , 2005, 57, 551-556.	0.9	13
52	High-resolution aftershock observations in the source region of the 2004 mid-Niigata Prefecture Earthquake. <i>Earth, Planets and Space</i> , 2007, 59, 923-928.	0.9	12
53	Anisotropic structures of oceanic slab and mantle wedge in a deep low-frequency tremor zone beneath the Kii Peninsula, SW Japan. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 1091-1097.	1.4	12
54	Temporal Activity Modulation of Deep Very Low Frequency Earthquakes in Shikoku, Southwest Japan. <i>Geophysical Research Letters</i> , 2018, 45, 733-738.	1.5	12

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55	Seismic Evidence of an Early Afterslip During the 2012 Sequence in Emilia (Italy). <i>Geophysical Research Letters</i> , 2019, 46, 625-635.	1.5	12
56	Detailed Spatial Slip Distribution for Short-Term Slow Slip Events Along the Nankai Subduction Zone, Southwest Japan. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2020JB019613.	1.4	12
57	Dynamic rupture of crosscutting faults: A possible rupture process for the 2007 Mw 6.6 Niigata-Chuetsu-Oki earthquake. <i>Journal of Geophysical Research</i> , 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. <i>Tectonophysics</i> , 2012, 562-563, 34-47.	0.9	11
59	Along-strike structural changes controlled by dehydration-related fluids within the Philippine Sea plate around the segment boundary of a megathrust earthquake beneath the Kii peninsula, southwest Japan. <i>Geophysical Research Letters</i> , 2013, 40, 4839-4844.	1.5	11
60	Down-dip variations in a subducting low-velocity zone linked to episodic tremor and slip: a new constraint from ScSp waves. <i>Scientific Reports</i> , 2017, 7, 2868.	1.6	9
61	Improved 3-D P Wave Azimuthal Anisotropy Structure Beneath the Tokyo Metropolitan Area, Japan: New Interpretations of the Dual Subduction System Revealed by Seismic Anisotropy. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB021194.	1.4	8
62	Single and double asperity failures in a large-scale biaxial experiment. <i>Geophysical Research Letters</i> , 2001, 28, 451-454.	1.5	7
63	The Dependence of Constitutive Properties on Temperature and Effective Normal Stress in Seismogenic Environments. <i>Pure and Applied Geophysics</i> , 2004, 161, 1895.	0.8	6
64	The Preseismic and Postseismic Phases of the 700-km Deep M7.9 Bonin Islands Earthquake, Japan. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL085589.	1.5	6
65	Stationarity of aftershock activities of the 2016 Central Tottori Prefecture earthquake revealed by dense seismic observation. <i>Earth, Planets and Space</i> , 2020, 72, .	0.9	6
66	Hyper Dense Seismic Observation for Investigation on Fault Zone Development: Application to Hypocentral Area of 2000 Western Tottori Earthquake. <i>Journal of Geography (Chigaku Zasshi)</i> , 2020, 129, 511-527.	0.1	6
67	Fine structure of P-wave velocity distribution along the Atotsugawa fault, central Japan. <i>Tectonophysics</i> , 2009, 472, 95-104.	0.9	5
68	Modeling the development of a complex fault configuration in the source region of two destructive intraplate earthquakes in the mid-Niigata region. <i>Tectonophysics</i> , 2012, 562-563, 26-33.	0.9	5
69	Time-dependent earthquake probability calculations for southern Kanto after the 2011 M9.0 Tohoku earthquake. <i>Geophysical Journal International</i> , 2013, 193, 914-919.	1.0	5
70	Matched Filtering Accelerated by Tensor Cores on Volta GPUs With Improved Accuracy Using Half-Precision Variables. <i>IEEE Signal Processing Letters</i> , 2019, 26, 1857-1861.	2.1	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. <i>Tectonophysics</i> , 2010, 486, 101-107.	0.9	4
72	Inelastic strain in the hypocentral region of the 2000 Western Tottori earthquake (M 7.3) inferred from aftershock seismic moment tensors. <i>Earth, Planets and Space</i> , 2020, 72, .	0.9	4

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73	Three-dimensional Attenuation Structure beneath the Tokai Region, Central Japan Derived Using Local Earthquake Spectra. <i>Zisin (Journal of the Seismological Society of Japan 2nd Ser)</i> , 2012, 65, 175-187.	0.0	4
74	Detection of low-frequency earthquakes by the matched filter technique using the product of mutual information and correlation coefficient. <i>Earth, Planets and Space</i> , 2021, 73, .	0.9	4
75	Interpretation of various slip modes on a plate boundary based on laboratory and numerical experiments. <i>Earth, Planets and Space</i> , 2004, 56, 795-801.	0.9	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. <i>Geophysical Journal International</i> , 2009, 177, 145-160.	1.0	3
77	Seismicity and crustal structure in the vicinity of the southern Itoigawa-Shizuoka Tectonic Line. <i>Earth, Planets and Space</i> , 2010, 62, 223-235.	0.9	3
78	The weakened lower crust beneath the Nobi fault system, Japan: Implications for stress accumulation to the seismogenic zone. <i>Tectonophysics</i> , 2015, 655, 147-160.	0.9	3
79	An Optimum 2D Seismic-Wavefield Reconstruction in Densely and Nonuniformly Distributed Stations: The Metropolitan Seismic Observation Network in Japan. <i>Seismological Research Letters</i> , 2021, 92, 2015-2027.	0.8	3
80	Spatial variations in seismicity characteristics in and around the source region of the 2019 Yamagata-Oki Earthquake, Japan. <i>Earth, Planets and Space</i> , 2021, 73, .	0.9	3
81	Evolution of aseismic slip rate along plate boundary faults before and after megathrust earthquakes. <i>Communications Earth &amp; Environment</i> , 2021, 2, .	2.6	3
82	Effect of Water on Stability or Instability of the Shear Fracture Process of Rock.. <i>Journal of Geography (Chigaku Zasshi)</i> , 2000, 109, 554-563.	0.1	2
83	Large heterogeneous structure beneath the Atotsugawa Fault, central Japan, revealed by seismic refraction and reflection experiments. <i>Tectonophysics</i> , 2015, 657, 144-154.	0.9	2
84	Slow Slip Transients Before the 2011 Tohoku-Oki Earthquake. <i>Journal of Disaster Research</i> , 2014, 9, 311-316.	0.4	2
85	Vp and Vs Structures in the Crust of Tokai Region, Central Japan, Estimated by Seismic ACROSS Signals. <i>Zisin (Journal of the Seismological Society of Japan 2nd Ser)</i> , 2014, 67, 1-24.	0.0	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). <i>Tectonophysics</i> , 2017, 717, 41-50.	0.9	1
87	Stress relaxation arrested the mainshock rupture of the 2016 Central Tottori earthquake. <i>Communications Earth &amp; Environment</i> , 2021, 2, .	2.6	1
88	Special Issue on Challenges of Earthquake Forecast Research Illuminated by the 2011 Tohoku-Oki Earthquake. <i>Journal of Disaster Research</i> , 2014, 9, 247-247.	0.4	0
89	Special Issue on Earthquake and Volcano Hazards Observation and Research Program. <i>Journal of Disaster Research</i> , 2020, 15, 69-69.	0.4	0
90	Structured regularization-based velocity structure estimation in local earthquake tomography for the adaptation to velocity discontinuities. <i>Earth, Planets and Space</i> , 2022, 74, .	0.9	0