

# Shiro Ikeda

## List of Publications by Year in descending order

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98  
papers

10,159  
citations

126708

33  
h-index

71532

76  
g-index

99  
all docs

99  
docs citations

99  
times ranked

4546  
citing authors

#	ARTICLE	IF	CITATIONS
1	First M87 Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole. <i>Astrophysical Journal Letters</i> , 2019, 875, L1.	3.0	2,264
2	First M87 Event Horizon Telescope Results. VI. The Shadow and Mass of the Central Black Hole. <i>Astrophysical Journal Letters</i> , 2019, 875, L6.	3.0	897
3	First M87 Event Horizon Telescope Results. V. Physical Origin of the Asymmetric Ring. <i>Astrophysical Journal Letters</i> , 2019, 875, L5.	3.0	814
4	First M87 Event Horizon Telescope Results. IV. Imaging the Central Supermassive Black Hole. <i>Astrophysical Journal Letters</i> , 2019, 875, L4.	3.0	806
5	First M87 Event Horizon Telescope Results. II. Array and Instrumentation. <i>Astrophysical Journal Letters</i> , 2019, 875, L2.	3.0	618
6	First Sagittarius A* Event Horizon Telescope Results. I. The Shadow of the Supermassive Black Hole in the Center of the Milky Way. <i>Astrophysical Journal Letters</i> , 2022, 930, L12.	3.0	568
7	First M87 Event Horizon Telescope Results. III. Data Processing and Calibration. <i>Astrophysical Journal Letters</i> , 2019, 875, L3.	3.0	519
8	An approach to blind source separation based on temporal structure of speech signals. <i>Neurocomputing</i> , 2001, 41, 1-24.	3.5	502
9	First M87 Event Horizon Telescope Results. VIII. Magnetic Field Structure near The Event Horizon. <i>Astrophysical Journal Letters</i> , 2021, 910, L13.	3.0	297
10	First M87 Event Horizon Telescope Results. VII. Polarization of the Ring. <i>Astrophysical Journal Letters</i> , 2021, 910, L12.	3.0	215
11	First Sagittarius A* Event Horizon Telescope Results. VI. Testing the Black Hole Metric. <i>Astrophysical Journal Letters</i> , 2022, 930, L17.	3.0	215
12	First Sagittarius A* Event Horizon Telescope Results. V. Testing Astrophysical Models of the Galactic Center Black Hole. <i>Astrophysical Journal Letters</i> , 2022, 930, L16.	3.0	187
13	The Event Horizon General Relativistic Magnetohydrodynamic Code Comparison Project. <i>Astrophysical Journal, Supplement Series</i> , 2019, 243, 26.	3.0	175
14	First Sagittarius A* Event Horizon Telescope Results. III. Imaging of the Galactic Center Supermassive Black Hole. <i>Astrophysical Journal Letters</i> , 2022, 930, L14.	3.0	163
15	First Sagittarius A* Event Horizon Telescope Results. II. EHT and Multiwavelength Observations, Data Processing, and Calibration. <i>Astrophysical Journal Letters</i> , 2022, 930, L13.	3.0	142
16	First Sagittarius A* Event Horizon Telescope Results. IV. Variability, Morphology, and Black Hole Mass. <i>Astrophysical Journal Letters</i> , 2022, 930, L15.	3.0	137
17	Constraints on black-hole charges with the 2017 EHT observations of M87*. <i>Physical Review D</i> , 2021, 103, .	1.6	126
18	Imaging the Schwarzschild-radius-scale Structure of M87 with the Event Horizon Telescope Using Sparse Modeling. <i>Astrophysical Journal</i> , 2017, 838, 1.	1.6	111

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19	Independent component analysis for noisy data – MEG data analysis. <i>Neural Networks</i> , 2000, 13, 1063-1074.	3.3	109
20	Combined approach of array processing and independent component analysis for blind separation of acoustic signals. <i>IEEE Transactions on Speech and Audio Processing</i> , 2003, 11, 204-215.	2.0	97
21	Super-resolution imaging with radio interferometry using sparse modeling. <i>Publication of the Astronomical Society of Japan</i> , 2014, 66, .	1.0	73
22	Superresolution Full-polarimetric Imaging for Radio Interferometry with Sparse Modeling. <i>Astronomical Journal</i> , 2017, 153, 159.	1.9	70
23	Event Horizon Telescope observations of the jet launching and collimation in Centaurus A. <i>Nature Astronomy</i> , 2021, 5, 1017-1028.	4.2	65
24	Broadband Multi-wavelength Properties of M87 during the 2017 Event Horizon Telescope Campaign. <i>Astrophysical Journal Letters</i> , 2021, 911, L11.	3.0	56
25	Event Horizon Telescope imaging of the archetypal blazar 3C 279 at an extreme 20 microarcsecond resolution. <i>Astronomy and Astrophysics</i> , 2020, 640, A69.	2.1	54
26	Stochastic Reasoning, Free Energy, and Information Geometry. <i>Neural Computation</i> , 2004, 16, 1779-1810.	1.3	48
27	Information Geometry of Turbo and Low-Density Parity-Check Codes. <i>IEEE Transactions on Information Theory</i> , 2004, 50, 1097-1114.	1.5	43
28	Improved in-cell structure determination of proteins at near-physiological concentration. <i>Scientific Reports</i> , 2016, 6, 38312.	1.6	43
29	Superresolution Interferometric Imaging with Sparse Modeling Using Total Squared Variation: Application to Imaging the Black Hole Shadow. <i>Astrophysical Journal</i> , 2018, 858, 56.	1.6	43
30	The Polarized Image of a Synchrotron-emitting Ring of Gas Orbiting a Black Hole. <i>Astrophysical Journal</i> , 2021, 912, 35.	1.6	43
31	Millimeter Light Curves of Sagittarius A* Observed during the 2017 Event Horizon Telescope Campaign. <i>Astrophysical Journal Letters</i> , 2022, 930, L19.	3.0	43
32	Capacity of a Single Spiking Neuron Channel. <i>Neural Computation</i> , 2009, 21, 1714-1748.	1.3	39
33	Risk assessment of radioisotope contamination for aquatic living resources in and around Japan. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 3838-3843.	3.3	35
34	Exhaustive Search for Sparse Variable Selection in Linear Regression. <i>Journal of the Physical Society of Japan</i> , 2018, 87, 044802.	0.7	35
35	An asymmetric logistic regression model for ecological data. <i>Methods in Ecology and Evolution</i> , 2016, 7, 249-260.	2.2	31
36	A combined approach of array processing and independent component analysis for blind separation of acoustic signals. , 0, , .		30

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37	Machine-learning selection of optical transients in the Subaru/Hyper Suprime-Cam survey. Publication of the Astronomical Society of Japan, 0, , .	1.0	28
38	An introductory review of information theory in the context of computational neuroscience. Biological Cybernetics, 2011, 105, 55-70.	0.6	26
39	The Hyper Suprime-Cam SSP transient survey in COSMOS: Overview. Publication of the Astronomical Society of Japan, 2019, 71, .	1.0	22
40	The Tomo-e Gozen wide field CMOS camera for the Kiso Schmidt telescope. , 2018, , .		22
41	Selective Dynamical Imaging of Interferometric Data. Astrophysical Journal Letters, 2022, 930, L18.	3.0	21
42	Characterizing and Mitigating Intraday Variability: Reconstructing Source Structure in Accreting Black Holes with mm-VLBI. Astrophysical Journal Letters, 2022, 930, L21.	3.0	20
43	A Universal Power-law Prescription for Variability from Synthetic Images of Black Hole Accretion Flows. Astrophysical Journal Letters, 2022, 930, L20.	3.0	20
44	DATA COMPRESSION FOR THE TOMO-e GOZEN USING LOW-RANK MATRIX APPROXIMATION. Astrophysical Journal, 2017, 835, 1.	1.6	19
45	SYMBA: An end-to-end VLBI synthetic data generation pipeline. Astronomy and Astrophysics, 2020, 636, A5.	2.1	18
46	PRECL: A new method for interferometry imaging from closure phase. Publication of the Astronomical Society of Japan, 2016, 68, .	1.0	17
47	Denoising weak lensing mass maps with deep learning. Physical Review D, 2019, 100, .	1.6	17
48	Noise reduction for weak lensing mass mapping: an application of generative adversarial networks to Subaru Hyper Suprime-Cam first-year data. Monthly Notices of the Royal Astronomical Society, 2021, 504, 1825-1839.	1.6	15
49	Variable selection for modeling the absolute magnitude at maximum of Type Ia supernovae. Publication of the Astronomical Society of Japan, 2015, 67, .	1.0	13
50	Phase retrieval from single biomolecule diffraction pattern. Optics Express, 2012, 20, 3375.	1.7	12
51	Development of a prototype of the Tomo-e Gozen wide-field CMOS camera. Proceedings of SPIE, 2016, , .	0.8	12
52	ICA on Noisy Data: A Factor Analysis Approach. Perspectives in Neural Computing, 2000, , 201-215.	0.1	12
53	Bin mode estimation methods for Compton camera imaging. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 760, 46-56.	0.7	10
54	Protein NMR Structure Refinement based on Bayesian Inference. Journal of Physics: Conference Series, 2016, 699, 012005.	0.3	10

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55	New Constraint on the Atmosphere of (50000) Quaoar from a Stellar Occultation. <i>Astronomical Journal</i> , 2019, 158, 236.	1.9	10
56	Imaging black holes with sparse modeling. <i>Journal of Physics: Conference Series</i> , 2016, 699, 012006.	0.3	8
57	Super-resolution Imaging of the Protoplanetary Disk HD 142527 Using Sparse Modeling. <i>Astrophysical Journal</i> , 2020, 895, 84.	1.6	7
58	Search for Alignment of Disk Orientations in Nearby Star-forming Regions: Lupus, Taurus, Upper Scorpius, $\rho$ Ophiuchi, and Orion. <i>Astrophysical Journal</i> , 2020, 899, 55.	1.6	7
59	Editorial - Neural Networks and Learning Systems Come Together. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2012, 23, 1-6.	7.2	6
60	“Slow-scanning” in Ground-based Mid-infrared Observations. <i>Astrophysical Journal</i> , 2018, 857, 37.	1.6	6
61	The Variability of the Black Hole Image in M87 at the Dynamical Timescale. <i>Astrophysical Journal</i> , 2022, 925, 13.	1.6	6
62	ALMA Super-resolution Imaging of T Tau: r = 12 au Gap in the Compact Dust Disk around T Tau N. <i>Astrophysical Journal</i> , 2021, 923, 121.	1.6	6
63	Introduction to the issue on differential geometry in signal processing. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2013, 7, 573-575.	7.3	5
64	An optical search for transients lasting a few seconds. <i>Publication of the Astronomical Society of Japan</i> , 2020, 72, .	1.0	5
65	Evaluation of large pixel CMOS image sensors for the Tomo-e Gozen wide field camera. , 2018, , .		5
66	Accelerating cross-validation with total variation and its application to super-resolution imaging. <i>PLoS ONE</i> , 2017, 12, e0188012.	1.1	5
67	Motor planning and sparse motor command representation. <i>Neurocomputing</i> , 2007, 70, 1748-1752.	3.5	4
68	Motor planning as an optimization of command representation. , 2009, , .		4
69	Rate-distortion function for gamma sources under absolute-log distortion measure. , 2013, , .		4
70	Relationship between radar cross section and optical magnitude based on radar and optical simultaneous observations of faint meteors. <i>Planetary and Space Science</i> , 2020, 194, 105011.	0.9	4
71	A Data-scientific Noise-removal Method for Efficient Submillimeter Spectroscopy With Single-dish Telescopes. <i>Astronomical Journal</i> , 2021, 162, 111.	1.9	4
72	A robot organizing purposive behavior by itself. , 0, , .		3

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73	Entropic risk minimization for nonparametric estimation of mixing distributions. Machine Learning, 2015, 99, 119-136.	3.4	3
74	Development of a real-time data processing system for a prototype of the Tomo-e Gozen wide field CMOS camera. Proceedings of SPIE, 2016, , .	0.8	3
75	Luminosity function of faint sporadic meteors measured with a wide-field CMOS mosaic camera Tomo-e PM. Planetary and Space Science, 2019, 165, 281-292.	0.9	3
76	A self-organizing system with cell-specialization. , 0, , .		2
77	ICA for noisy neurobiological data. , 2000, , .		2
78	Information geometry of turbo codes. , 0, , .		2
79	Information geometry for turbo decoding. Systems and Computers in Japan, 2005, 36, 79-87.	0.2	2
80	Spiking neuron channel. , 2009, , .		2
81	Data-driven approach to Type Ia supernovae: variable selection on the peak luminosity and clustering in visual analytics. Journal of Physics: Conference Series, 2016, 699, 012009.	0.3	2
82	Rate-Distortion Functions for Gamma-Type Sources Under Absolute-Log Distortion Measure. IEEE Transactions on Information Theory, 2016, 62, 5496-5502.	1.5	2
83	An image reconstruction method for an X-ray telescope system with an angular resolution booster. Publication of the Astronomical Society of Japan, 2019, 71, .	1.0	2
84	Amino-acid selective isotope labeling enables simultaneous overlapping signal decomposition and information extraction from NMR spectra. Journal of Biomolecular NMR, 2020, 74, 125-137.	1.6	2
85	Three-dimensional Reconstruction of Weak-lensing Mass Maps with a Sparsity Prior. I. Cluster Detection. Astrophysical Journal, 2021, 916, 67.	1.6	2
86	Information geometry of turbo and LDPC codes. , 0, , .		1
87	Compton camera imaging. , 2013, , .		1
88	Feature selection for classification of blazars based on optical photometric and polarimetric time-series data. Publication of the Astronomical Society of Japan, 2020, 72, .	1.0	1
89	Improving Mobile Reception of Digital Satellite Broadcasting. , 2007, , .		0
90	Capacity of a single spiking neuron. Journal of Physics: Conference Series, 2009, 197, 012014.	0.3	0

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91	Combining binary machines for multi-class: Statistical model and parameter estimation. Journal of Physics: Conference Series, 2010, 233, 012006.	0.3	0
92	Channel Capacity and Optimization of Probability Measure. Ieice Ess Fundamentals Review, 2012, 5, 230-238.	0.1	0
93	Sparsely extracting stored movements to construct interfaces for humanoid end-effector control. , 2015, , .		0
94	Sparse Modeling for Astronomical Data Analysis. Journal of Physics: Conference Series, 2016, 699, 012008.	0.3	0
95	Concept for an X-ray telescope system with an angular resolution booster. Publication of the Astronomical Society of Japan, 2019, 71, .	1.0	0
96	Extracting common signal components from the X-ray and optical light curves of GX 339 <sup>+</sup> 4: New view for anti-correlation. Publication of the Astronomical Society of Japan, 2021, 73, 716-727.	1.0	0
97	Channel Estimation and Code Word Inference for Mobile Digital Satellite Broadcasting Reception. IEICE Transactions on Communications, 2008, E91-B, 3886-3898.	0.4	0
98	New method of eclipse mapping and an application to HT Cas in the 2017 superoutburst. , 2018, , .		0