

# Yi-Hsin Liu

## List of Publications by Year in descending order

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55  
papers

2,109  
citations

304743

22  
h-index

233421

45  
g-index

56  
all docs

56  
docs citations

56  
times ranked

1708  
citing authors

#	ARTICLE	IF	CITATIONS
1	Formation of Hard Power Laws in the Energetic Particle Spectra Resulting from Relativistic Magnetic Reconnection. <i>Physical Review Letters</i> , 2014, 113, 155005.	7.8	333
2	PARTICLE ACCELERATION AND PLASMA DYNAMICS DURING MAGNETIC RECONNECTION IN THE MAGNETICALLY DOMINATED REGIME. <i>Astrophysical Journal</i> , 2015, 806, 167.	4.5	238
3	EFFICIENT PRODUCTION OF HIGH-ENERGY NONTHERMAL PARTICLES DURING MAGNETIC RECONNECTION IN A MAGNETICALLY DOMINATED ION-ELECTRON PLASMA. <i>Astrophysical Journal Letters</i> , 2016, 818, L9.	8.3	113
4	Why does Steady-State Magnetic Reconnection have a Maximum Local Rate of Order 0.1?. <i>Physical Review Letters</i> , 2017, 118, 085101.	7.8	112
5	A review of the 0.1 reconnection rate problem. <i>Journal of Plasma Physics</i> , 2017, 83, .	2.1	93
6	Bifurcated Structure of the Electron Diffusion Region in Three-Dimensional Magnetic Reconnection. <i>Physical Review Letters</i> , 2013, 110, 265004.	7.8	82
7	Onset of reconnection in the near magnetotail: PIC simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9773-9789.	2.4	69
8	Scaling of Magnetic Reconnection in Relativistic Collisionless Pair Plasmas. <i>Physical Review Letters</i> , 2015, 114, 095002.	7.8	69
9	The structure of the magnetic reconnection exhaust boundary. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	67
10	Recent Evolution in the Theory of Magnetic Reconnection and Its Connection with Turbulence. <i>Space Science Reviews</i> , 2013, 178, 307-323.	8.1	66
11	Determining the Dominant Acceleration Mechanism during Relativistic Magnetic Reconnection in Large-scale Systems. <i>Astrophysical Journal Letters</i> , 2019, 879, L23.	8.3	54
12	On the electron diffusion region in asymmetric reconnection with a guide magnetic field. <i>Geophysical Research Letters</i> , 2016, 43, 2359-2364.	4.0	50
13	Measurement of the Magnetic Reconnection Rate in the Earth's Magnetotail. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 9150-9168.	2.4	50
14	Recent progress on particle acceleration and reconnection physics during magnetic reconnection in the magnetically-dominated relativistic regime. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	48
15	Do dispersive waves play a role in collisionless magnetic reconnection?. <i>Physics of Plasmas</i> , 2014, 21, 022113.	1.9	45
16	Drift turbulence, particle transport, and anomalous dissipation at the reconnecting magnetopause. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	45
17	Three-Dimensional Magnetic Reconnection With a Spatially Confined X-Line Extent: Implications for Dipolarizing Flux Bundles and the Dawn-Dusk Asymmetry. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 2819-2830.	2.4	34
18	Magnetic Energy Release, Plasma Dynamics, and Particle Acceleration in Relativistic Turbulent Magnetic Reconnection. <i>Astrophysical Journal</i> , 2021, 919, 111.	4.5	34

#	ARTICLE	IF	CITATIONS
19	Particle acceleration during magnetic reconnection in a low-beta pair plasma. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	28
20	On the role of separatrix instabilities in heating the reconnection outflow region. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	27
21	The effects of strong temperature anisotropy on the kinetic structure of collisionless slow shocks and reconnection exhausts. I. Particle-in-cell simulations. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	25
22	The effects of strong temperature anisotropy on the kinetic structure of collisionless slow shocks and reconnection exhausts. II. Theory. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	23
23	The acceleration of charged particles and formation of power-law energy spectra in nonrelativistic magnetic reconnection. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	22
24	The physical foundation of the reconnection electric field. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	20
25	Radiation and Polarization Signatures from Magnetic Reconnection in Relativistic Jets. I. A Systematic Study. <i>Astrophysical Journal</i> , 2020, 901, 149.	4.5	20
26	First-principles theory of the rate of magnetic reconnection in magnetospheric and solar plasmas. <i>Communications Physics</i> , 2022, 5, .	5.3	20
27	Orientation of X lines in asymmetric magnetic reconnection—Mass ratio dependency. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 7331-7341.	2.4	19
28	Exact Vlasov–Maxwell equilibria for asymmetric current sheets. <i>Geophysical Research Letters</i> , 2017, 44, 8685-8695.	4.0	19
29	Collisionless energy transfer in kinetic turbulence: field–particle correlations in Fourier space. <i>Journal of Plasma Physics</i> , 2019, 85, .	2.1	19
30	Suppression of collisionless magnetic reconnection in asymmetric current sheets. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	18
31	Energy Conversion and Partition in the Asymmetric Reconnection Diffusion Region. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 8185-8205.	2.4	17
32	Ultralow Frequency Waves Deep Inside the Inner Magnetosphere Driven by Dipolarizing Flux Bundles. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 10,112.	2.4	16
33	Orientation and Stability of Asymmetric Magnetic Reconnection X Line. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 4908-4920.	2.4	16
34	On the Collisionless Asymmetric Magnetic Reconnection Rate. <i>Geophysical Research Letters</i> , 2018, 45, 3311-3318.	4.0	15
35	Three-Dimensional X-line Spreading in Asymmetric Magnetic Reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027094.	2.4	15
36	Strongly localized magnetic reconnection by the super-Alfvénic shear flow. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	13

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37	The Critical Role of Collisionless Plasma Energization on the Structure of Relativistic Magnetic Reconnection. <i>Astrophysical Journal Letters</i> , 2020, 892, L13.	8.3	13
38	Multi-scale observations of the magnetopause Kelvinâ€Helmholtz waves during southward IMF. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	12
39	Population Mixing in Asymmetric Magnetic Reconnection with a Guide Field. <i>Physical Review Letters</i> , 2017, 118, 145101.	7.8	11
40	A Case Study of Connection Between Ground Magnetic Field Perturbations and Tail Current Sheet Bursty Flows at $X \sim 60 R_E$ . <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1822-1833.	2.4	11
41	Reconnection and interchange instability in the near magnetotail. <i>Earth, Planets and Space</i> , 2015, 67, .	2.5	10
42	Remote Sensing of the Reconnection Electric Field From In Situ Multipoint Observations of the Separatrix Boundary. <i>Geophysical Research Letters</i> , 2018, 45, 3829-3837.	4.0	10
43	Multiscale Coupling During Magnetopause Reconnection: Interface Between the Electron and Ion Diffusion Regions. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA027985.	2.4	10
44	Scaling of Magnetic Reconnection With a Limited X-Line Extent. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088147.	4.0	10
45	Decay of Kelvinâ€Helmholtz Vortices at the Earth's Magnetopause Under Pure Southward IMF Conditions. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087574.	4.0	10
46	An Event Study of Simultaneous Earthward and Tailward Reconnection Exhaust Flows in the Earth's Midtail. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027406.	2.4	10
47	Stacked Electron Diffusion Regions and Electron Kelvinâ€Helmholtz Vortices within the Ion Diffusion Region of Collisionless Magnetic Reconnection. <i>Astrophysical Journal Letters</i> , 2022, 926, L27.	8.3	10
48	The Effect of Thermal Pressure on Collisionless Magnetic Reconnection Rate. <i>Astrophysical Journal</i> , 2021, 912, 152.	4.5	9
49	Multi-scale evolution of Kelvinâ€Helmholtz waves at the Earth's magnetopause during southward IMF periods. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	8
50	Identification of Active Magnetic Reconnection Using Magnetic Flux Transport in Plasma Turbulence. <i>Astrophysical Journal Letters</i> , 2021, 909, L28.	8.3	6
51	A New Look at the Electron Diffusion Region in Asymmetric Magnetic Reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028456.	2.4	4
52	Fast magnetic reconnection induced by resistivity gradients in 2D magnetohydrodynamics. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	4
53	The relation between the energy conversion rate and reconnection rate in Petschek-type reconnectionâ€Implications for solar flares. <i>Physics of Plasmas</i> , 2021, 28, 082103.	1.9	4
54	Spatial evolution of magnetic reconnection diffusion region structures with distance from the X-line. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	3

#	ARTICLE	IF	CITATIONS
55	Violation of Field Line Conservation and Associated Spatial Scales in Particle-in-Cell Simulations and MMS Data. Journal of Geophysical Research: Space Physics, 2018, 123, 1853-1884.	2.4	0