

Slava Merkin

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81
papers

2,016
citations

26
h-index

40
g-index

103
ext. papers

2,401
ext. citations

3.7
avg, IF

5.04
L-index

#	Paper	IF	Citations
81	High-resolution Simulations of the Inner Heliosphere in Search of the Kelvin-Helmholtz Waves. <i>Astrophysical Journal</i> , 2022 , 925, 181	4.7	
80	Cross-scale energy cascade powered by magnetospheric convection.. <i>Scientific Reports</i> , 2022 , 12, 4446	4.9	1
79	Oxygen Ion Escape at Venus Associated With Three-Dimensional Kelvin-Helmholtz Instability. <i>Geophysical Research Letters</i> , 2022 , 49,	4.9	1
78	MMS Observations of the Multiscale Wave Structures and Parallel Electron Heating in the Vicinity of the Southern Exterior Cusp. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2019JA027698	2.6	3
77	How Jupiter's unusual magnetospheric topology structures its aurora. <i>Science Advances</i> , 2021 , 7,	14.3	13
76	Electrojet Estimates From Mesospheric Magnetic Field Measurements. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2020JA028644	2.6	1
75	Incorporating Inner Magnetosphere Current-driven Electron Acceleration in Numerical Simulations of Exoplanet Radio Emission. <i>Astrophysical Journal</i> , 2021 , 914, 60	4.7	1
74	Modeling Kelvin-Helmholtz Instability at the High-Latitude Boundary Layer in a Global Magnetosphere Simulation. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL094002	4.9	5
73	Storm Time Plasma Pressure Inferred From Multimission Measurements and Its Validation Using Van Allen Probes Particle Data. <i>Space Weather</i> , 2020 , 18, e2020SW002583	3.7	4
72	Ballooning-Interchange Instability in the Near-Earth Plasma Sheet and Auroral Beads: Global Magnetospheric Modeling at the Limit of the MHD Approximation. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL088227	4.9	30
71	Reconstruction of Extreme Geomagnetic Storms: Breaking the Data Paucity Curse. <i>Space Weather</i> , 2020 , 18, e2020SW002561	3.7	7
70	Explosive Magnetotail Activity. <i>Space Science Reviews</i> , 2019 , 215, 31	7.5	48
69	Conservative averaging-reconstruction techniques (Ring Average) for 3-D finite-volume MHD solvers with axis singularity. <i>Journal of Computational Physics</i> , 2019 , 376, 276-294	4.1	6
68	SAPS in the 17 March 2013 Storm Event: Initial Results From the Coupled Magnetosphere-Ionosphere-Thermosphere Model. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 6212-6225	2.6	13
67	Signatures of Nonideal Plasma Evolution During Substorms Obtained by Mining Multimission Magnetometer Data. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 8427-8456	2.6	15
66	Solar Wind Ion Entry Into the Magnetosphere During Northward IMF. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 5461-5481	2.6	14
65	GAMERA: A Three-dimensional Finite-volume MHD Solver for Non-orthogonal Curvilinear Geometries. <i>Astrophysical Journal, Supplement Series</i> , 2019 , 244, 20	8	32

64	Contribution of Bursty Bulk Flows to the Global Dipolarization of the Magnetotail During an Isolated Substorm. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 8647-8668	2.6	36
63	Empirical Modeling of Extreme Events: Storm-Time Geomagnetic Field, Electric Current, and Pressure Distributions 2018 , 259-279		9
62	Asymmetric Kelvin-Helmholtz Instability at Jupiter's Magnetopause Boundary: Implications for Corotation-Dominated Systems. <i>Geophysical Research Letters</i> , 2018 , 45, 56-63	4.9	22
61	Kinetic Dissipation Around a Dipolarization Front. <i>Geophysical Research Letters</i> , 2018 , 45, 4639-4647	4.9	32
60	MHD Stability of Magnetotail Configurations With a Bz Hump. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 3477-3492	2.6	16
59	Structure of High Latitude Currents in Magnetosphere-Ionosphere Models. <i>Space Sciences Series of ISSI</i> , 2018 , 583-606	0.1	
58	Does a Local B-Minimum Appear in the Tail Current Sheet During a Substorm Growth Phase?. <i>Geophysical Research Letters</i> , 2018 , 45, 2566-2573	4.9	23
57	Ion Trapping and Acceleration at Dipolarization Fronts: High-Resolution MHD and Test-Particle Simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 5580-5589	2.6	31
56	Modeling the Depletion and Recovery of the Outer Radiation Belt During a Geomagnetic Storm: Combined MHD and Test Particle Simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 5590-5609	2.6	30
55	Ion acceleration at dipolarization fronts in the inner magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2017 , 122, 3040-3054	2.6	30
54	Effects of electrojet turbulence on a magnetosphere-ionosphere simulation of a geomagnetic storm. <i>Journal of Geophysical Research: Space Physics</i> , 2017 , 122, 5008-5027	2.6	31
53	Distinctive features of internally driven magnetotail reconnection. <i>Geophysical Research Letters</i> , 2017 , 44, 3028-3037	4.9	17
52	Comparison of predictive estimates of high-latitude electrodynamics with observations of global-scale Birkeland currents. <i>Space Weather</i> , 2017 , 15, 352-373	3.7	21
51	The substorm cycle as reproduced by global MHD models. <i>Space Weather</i> , 2017 , 15, 131-149	3.7	15
50	On the origin of plasma sheet reconfiguration during the substorm growth phase. <i>Geophysical Research Letters</i> , 2017 , 44, 8696-8702	4.9	18
49	The Effect of a Guide Field on Local Energy Conversion During Asymmetric Magnetic Reconnection: Particle-in-Cell Simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2017 , 122, 11,523-11,542	2.6	18
48	Structure of High Latitude Currents in Magnetosphere-Ionosphere Models. <i>Space Science Reviews</i> , 2017 , 206, 575-598	7.5	18
47	Mesoscale perturbations in midtail lobe/mantle during steady northward IMF: ARTEMIS observation and MHD simulation. <i>Journal of Geophysical Research: Space Physics</i> , 2017 , 122, 6430-6441	2.6	4

46	Energetic particle loss through the magnetopause: A combined global MHD and test-particle study. <i>Journal of Geophysical Research: Space Physics</i> , 2017 , 122, 9329-9343	2.6	27
45	Electrodynamic context of magnetopause dynamics observed by magnetospheric multiscale. <i>Geophysical Research Letters</i> , 2016 , 43, 5988-5996	4.9	8
44	Stability of magnetotail equilibria with a tailward Bz gradient. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 9411-9426	2.6	16
43	On the origin of the dawn-dusk asymmetry of toroidal Pc5 waves. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 9632-9650	2.6	15
42	Anomalous electron heating effects on the E region ionosphere in TIEGCM. <i>Geophysical Research Letters</i> , 2016 , 43, 2351-2358	4.9	13
41	Generalized magnetotail equilibria: Effects of the dipole field, thin current sheets, and magnetic flux accumulation. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 7664-7683	2.6	26
40	COUPLING OF CORONAL AND HELIOSPHERIC MAGNETOHYDRODYNAMIC MODELS: SOLUTION COMPARISONS AND VERIFICATION. <i>Astrophysical Journal</i> , 2016 , 831, 23	4.7	15
39	Do we know the actual magnetopause position for typical solar wind conditions?. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 6493-6508	2.6	23
38	Time-dependent magnetohydrodynamic simulations of the inner heliosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 2866-2890	2.6	27
37	Data assimilation of low-altitude magnetic perturbations into a global magnetosphere model. <i>Space Weather</i> , 2016 , 14, 165-184	3.7	17
36	Evolution of generalized two-dimensional magnetotail equilibria in ideal and resistive MHD. <i>Journal of Geophysical Research: Space Physics</i> , 2015 , 120, 1993-2014	2.6	20
35	Poynting flux-conserving low-altitude boundary conditions for global magnetospheric models. <i>Journal of Geophysical Research: Space Physics</i> , 2015 , 120, 384-400	2.6	5
34	Modeling the effects of ionospheric oxygen outflow on bursty magnetotail flows. <i>Journal of Geophysical Research: Space Physics</i> , 2015 , 120, 8723-8737	2.6	5
33	High-resolution global magnetohydrodynamic simulation of bursty bulk flows. <i>Journal of Geophysical Research: Space Physics</i> , 2015 , 120, 4555-4566	2.6	76
32	Development of large-scale Birkeland currents determined from the Active Magnetosphere and Planetary Electrodynamics Response Experiment. <i>Geophysical Research Letters</i> , 2014 , 41, 3017-3025	4.9	121
31	Solar cycle dependence of nightside field-aligned currents: Effects of dayside ionospheric conductivity on the solar wind-magnetosphere-ionosphere coupling. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 322-334	2.6	17
30	Magnetic reconnection, buoyancy, and flapping motions in magnetotail explosions. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 7151-7168	2.6	57
29	Rapid acceleration of protons upstream of earthward propagating dipolarization fronts. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 4952-4962	2.6	38

28	Global evolution of Birkeland currents on 10 min timescales: MHD simulations and observations. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 4977-4997	2.6	25
27	Kelvin-Helmholtz instability of the magnetospheric boundary in a three-dimensional global MHD simulation during northward IMF conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 5478-5496	2.6	44
26	Spontaneous formation of dipolarization fronts and reconnection onset in the magnetotail. <i>Geophysical Research Letters</i> , 2013 , 40, 22-27	4.9	75
25	Initial results from a dynamic coupled magnetosphere-ionosphere-ring current model. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		89
24	Simulation of the acceleration of relativistic electrons in the inner magnetosphere using RCM-VERB coupled codes. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		20
23	Disruption of a heliospheric current sheet fold. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	23
22	Effects of ionospheric O ⁺ on the magnetopause boundary wave activity 2011 ,		4
21	The role of the bow shock in solar wind-magnetosphere coupling. <i>Annales Geophysicae</i> , 2011 , 29, 1129-1135		25
20	Role of magnetosheath force balance in regulating the dayside reconnection potential. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		72
19	Magnetospheric modes and solar wind energy coupling efficiency. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		18
18	Effects of the low-latitude ionospheric boundary condition on the global magnetosphere. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		134
17	Influence of cusp O ⁺ outflow on magnetotail dynamics in a multifluid MHD model of the magnetosphere. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		65
16	Effects of nightside O ⁺ outflow on magnetospheric dynamics: Results of multifluid MHD modeling. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		39
15	Why doesn't the ring current injection rate saturate?. <i>Journal of Geophysical Research</i> , 2009 , 114, n/a-n/a		31
14	Geotail and LFM comparisons of plasma sheet climatology: 1. Average values. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		21
13	Geotail and LFM comparisons of plasma sheet climatology: 2. Flow variability. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		12
12	Solar concept of flux transport by interchange reconnection applied to the magnetosphere. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		7
11	Magnetospheric convection during intermediate driving: Sawtooth events and steady convection intervals as seen in Lyon-Fedder-Mobarry global MHD simulations. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		22

10	Does the polar cap area saturate?. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	14
9	Predicting magnetospheric dynamics with a coupled Sun-to-Earth model: Challenges and first results. <i>Space Weather</i> , 2007 , 5, n/a-n/a	3.7	17
8	A global MHD simulation of an event with a quasi-steady northward IMF component. <i>Annales Geophysicae</i> , 2007 , 25, 1345-1358	2	7
7	A kinematically distorted flux rope model for magnetic clouds. <i>Journal of Geophysical Research</i> , 2006 , 111,		51
6	Global MHD simulations of the strongly driven magnetosphere: Modeling of the transpolar potential saturation. <i>Journal of Geophysical Research</i> , 2005 , 110,		46
5	Effect of anomalous electron heating on the transpolar potential in the LFM global MHD model. <i>Geophysical Research Letters</i> , 2005 , 32, n/a-n/a	4.9	20
4	Relationship between the ionospheric conductance, field aligned current, and magnetopause geometry: Global MHD simulations. <i>Planetary and Space Science</i> , 2005 , 53, 873-879	2	15
3	Global effects of a polar solar eclipse on the coupled magnetosphere-ionosphere system. <i>Geophysical Research Letters</i> ,	4.9	2
2	The role of diffuse electron precipitation in the formation of subauroral polarization streams. <i>Journal of Geophysical Research: Space Physics</i> ,	2.6	8
1	Can Earth's magnetotail plasma sheet produce a source of relativistic electrons for the radiation belts?. <i>Geophysical Research Letters</i> , e2021GL095495	4.9	2