

# Slava Merkin

## List of Publications by Citations

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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	Effects of the low-latitude ionospheric boundary condition on the global magnetosphere. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		134
80	Development of large-scale Birkeland currents determined from the Active Magnetosphere and Planetary Electrodynamics Response Experiment. <i>Geophysical Research Letters</i> , <b>2014</b> , 41, 3017-3025	4.9	121
79	Initial results from a dynamic coupled magnetosphere-ionosphere-ring current model. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		89
78	High-resolution global magnetohydrodynamic simulation of bursty bulk flows. <i>Journal of Geophysical Research: Space Physics</i> , <b>2015</b> , 120, 4555-4566	2.6	76
77	Spontaneous formation of dipolarization fronts and reconnection onset in the magnetotail. <i>Geophysical Research Letters</i> , <b>2013</b> , 40, 22-27	4.9	75
76	Role of magnetosheath force balance in regulating the dayside reconnection potential. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		72
75	Influence of cusp O+ outflow on magnetotail dynamics in a multifluid MHD model of the magnetosphere. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		65
74	Magnetic reconnection, buoyancy, and flapping motions in magnetotail explosions. <i>Journal of Geophysical Research: Space Physics</i> , <b>2014</b> , 119, 7151-7168	2.6	57
73	A kinematically distorted flux rope model for magnetic clouds. <i>Journal of Geophysical Research</i> , <b>2006</b> , 111,		51
72	Explosive Magnetotail Activity. <i>Space Science Reviews</i> , <b>2019</b> , 215, 31	7.5	48
71	Global MHD simulations of the strongly driven magnetosphere: Modeling of the transpolar potential saturation. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110,		46
70	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> , <b>2013</b> , 118, 5478-5496	2.6	44
69	Effects of nightside O+ outflow on magnetospheric dynamics: Results of multifluid MHD modeling. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		39
68	Rapid acceleration of protons upstream of earthward propagating dipolarization fronts. <i>Journal of Geophysical Research: Space Physics</i> , <b>2013</b> , 118, 4952-4962	2.6	38
67	Contribution of Bursty Bulk Flows to the Global Dipolarization of the Magnetotail During an Isolated Substorm. <i>Journal of Geophysical Research: Space Physics</i> , <b>2019</b> , 124, 8647-8668	2.6	36
66	Kinetic Dissipation Around a Dipolarization Front. <i>Geophysical Research Letters</i> , <b>2018</b> , 45, 4639-4647	4.9	32
65	GAMERA: A Three-dimensional Finite-volume MHD Solver for Non-orthogonal Curvilinear Geometries. <i>Astrophysical Journal, Supplement Series</i> , <b>2019</b> , 244, 20	8	32

64	Effects of electrojet turbulence on a magnetosphere-ionosphere simulation of a geomagnetic storm. <i>Journal of Geophysical Research: Space Physics</i> , <b>2017</b> , 122, 5008-5027	2.6	31
63	Why doesn't the ring current injection rate saturate?. <i>Journal of Geophysical Research</i> , <b>2009</b> , 114, n/a-n/a		31
62	Ion Trapping and Acceleration at Dipolarization Fronts: High-Resolution MHD and Test-Particle Simulations. <i>Journal of Geophysical Research: Space Physics</i> , <b>2018</b> , 123, 5580-5589	2.6	31
61	Ion acceleration at dipolarization fronts in the inner magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , <b>2017</b> , 122, 3040-3054	2.6	30
60	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> , <b>2020</b> , 47, e2020GL088227	4.9	30
59	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> , <b>2018</b> , 123, 5590-5609	2.6	30
58	Energetic particle loss through the magnetopause: A combined global MHD and test-particle study. <i>Journal of Geophysical Research: Space Physics</i> , <b>2017</b> , 122, 9329-9343	2.6	27
57	Time-dependent magnetohydrodynamic simulations of the inner heliosphere. <i>Journal of Geophysical Research: Space Physics</i> , <b>2016</b> , 121, 2866-2890	2.6	27
56	Generalized magnetotail equilibria: Effects of the dipole field, thin current sheets, and magnetic flux accumulation. <i>Journal of Geophysical Research: Space Physics</i> , <b>2016</b> , 121, 7664-7683	2.6	26
55	Global evolution of Birkeland currents on 10 min timescales: MHD simulations and observations. <i>Journal of Geophysical Research: Space Physics</i> , <b>2013</b> , 118, 4977-4997	2.6	25
54	The role of the bow shock in solar wind-magnetosphere coupling. <i>Annales Geophysicae</i> , <b>2011</b> , 29, 1129-1135		25
53	Disruption of a heliospheric current sheet fold. <i>Geophysical Research Letters</i> , <b>2011</b> , 38, n/a-n/a	4.9	23
52	Do we know the actual magnetopause position for typical solar wind conditions?. <i>Journal of Geophysical Research: Space Physics</i> , <b>2016</b> , 121, 6493-6508	2.6	23
51	Does a Local B-Minimum Appear in the Tail Current Sheet During a Substorm Growth Phase?. <i>Geophysical Research Letters</i> , <b>2018</b> , 45, 2566-2573	4.9	23
50	Asymmetric Kelvin-Helmholtz Instability at Jupiter's Magnetopause Boundary: Implications for Corotation-Dominated Systems. <i>Geophysical Research Letters</i> , <b>2018</b> , 45, 56-63	4.9	22
49	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> , <b>2007</b> , 112, n/a-n/a		22
48	Comparison of predictive estimates of high-latitude electrodynamic with observations of global-scale Birkeland currents. <i>Space Weather</i> , <b>2017</b> , 15, 352-373	3.7	21
47	Geotail and LFM comparisons of plasma sheet climatology: 1. Average values. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		21

46	Evolution of generalized two-dimensional magnetotail equilibria in ideal and resistive MHD. <i>Journal of Geophysical Research: Space Physics</i> , <b>2015</b> , 120, 1993-2014	2.6	20
45	Simulation of the acceleration of relativistic electrons in the inner magnetosphere using RCM-VERB coupled codes. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116, n/a-n/a		20
44	Effect of anomalous electron heating on the transpolar potential in the LFM global MHD model. <i>Geophysical Research Letters</i> , <b>2005</b> , 32, n/a-n/a	4.9	20
43	On the origin of plasma sheet reconfiguration during the substorm growth phase. <i>Geophysical Research Letters</i> , <b>2017</b> , 44, 8696-8702	4.9	18
42	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> , <b>2017</b> , 122, 11,523-11,542	2.6	18
41	Structure of High Latitude Currents in Magnetosphere-Ionosphere Models. <i>Space Science Reviews</i> , <b>2017</b> , 206, 575-598	7.5	18
40	Magnetospheric modes and solar wind energy coupling efficiency. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		18
39	Distinctive features of internally driven magnetotail reconnection. <i>Geophysical Research Letters</i> , <b>2017</b> , 44, 3028-3037	4.9	17
38	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> , <b>2014</b> , 119, 322-334	2.6	17
37	Predicting magnetospheric dynamics with a coupled Sun-to-Earth model: Challenges and first results. <i>Space Weather</i> , <b>2007</b> , 5, n/a-n/a	3.7	17
36	Data assimilation of low-altitude magnetic perturbations into a global magnetosphere model. <i>Space Weather</i> , <b>2016</b> , 14, 165-184	3.7	17
35	Stability of magnetotail equilibria with a tailward Bz gradient. <i>Journal of Geophysical Research: Space Physics</i> , <b>2016</b> , 121, 9411-9426	2.6	16
34	MHD Stability of Magnetotail Configurations With a Bz Hump. <i>Journal of Geophysical Research: Space Physics</i> , <b>2018</b> , 123, 3477-3492	2.6	16
33	The substorm cycle as reproduced by global MHD models. <i>Space Weather</i> , <b>2017</b> , 15, 131-149	3.7	15
32	On the origin of the dawn-dusk asymmetry of toroidal Pc5 waves. <i>Journal of Geophysical Research: Space Physics</i> , <b>2016</b> , 121, 9632-9650	2.6	15
31	Signatures of Nonideal Plasma Evolution During Substorms Obtained by Mining Multimission Magnetometer Data. <i>Journal of Geophysical Research: Space Physics</i> , <b>2019</b> , 124, 8427-8456	2.6	15
30	Relationship between the ionospheric conductance, field aligned current, and magnetopause geometry: Global MHD simulations. <i>Planetary and Space Science</i> , <b>2005</b> , 53, 873-879	2	15
29	COUPLING OF CORONAL AND HELIOSPHERIC MAGNETOHYDRODYNAMIC MODELS: SOLUTION COMPARISONS AND VERIFICATION. <i>Astrophysical Journal</i> , <b>2016</b> , 831, 23	4.7	15

28	Solar Wind Ion Entry Into the Magnetosphere During Northward IMF. <i>Journal of Geophysical Research: Space Physics</i> , <b>2019</b> , 124, 5461-5481	2.6	14
27	Does the polar cap area saturate?. <i>Geophysical Research Letters</i> , <b>2007</b> , 34,	4.9	14
26	Anomalous electron heating effects on the E region ionosphere in TIEGCM. <i>Geophysical Research Letters</i> , <b>2016</b> , 43, 2351-2358	4.9	13
25	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> , <b>2019</b> , 124, 6212-6225	2.6	13
24	How Jupiter's unusual magnetospheric topology structures its aurora. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	13
23	Geotail and LFM comparisons of plasma sheet climatology: 2. Flow variability. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		12
22	Empirical Modeling of Extreme Events: Storm-Time Geomagnetic Field, Electric Current, and Pressure Distributions <b>2018</b> , 259-279		9
21	Electrodynamic context of magnetopause dynamics observed by magnetospheric multiscale. <i>Geophysical Research Letters</i> , <b>2016</b> , 43, 5988-5996	4.9	8
20	The role of diffuse electron precipitation in the formation of subauroral polarization streams. <i>Journal of Geophysical Research: Space Physics</i> ,	2.6	8
19	Solar concept of flux transport by interchange reconnection applied to the magnetosphere. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		7
18	A global MHD simulation of an event with a quasi-steady northward IMF component. <i>Annales Geophysicae</i> , <b>2007</b> , 25, 1345-1358	2	7
17	Reconstruction of Extreme Geomagnetic Storms: Breaking the Data Paucity Curse. <i>Space Weather</i> , <b>2020</b> , 18, e2020SW002561	3.7	7
16	Conservative averaging-reconstruction techniques (Ring Average) for 3-D finite-volume MHD solvers with axis singularity. <i>Journal of Computational Physics</i> , <b>2019</b> , 376, 276-294	4.1	6
15	Poynting flux-conserving low-altitude boundary conditions for global magnetospheric models. <i>Journal of Geophysical Research: Space Physics</i> , <b>2015</b> , 120, 384-400	2.6	5
14	Modeling the effects of ionospheric oxygen outflow on bursty magnetotail flows. <i>Journal of Geophysical Research: Space Physics</i> , <b>2015</b> , 120, 8723-8737	2.6	5
13	Modeling Kelvin-Helmholtz Instability at the High-Latitude Boundary Layer in a Global Magnetosphere Simulation. <i>Geophysical Research Letters</i> , <b>2021</b> , 48, e2021GL094002	4.9	5
12	Mesoscale perturbations in midtail lobe/mantle during steady northward IMF: ARTEMIS observation and MHD simulation. <i>Journal of Geophysical Research: Space Physics</i> , <b>2017</b> , 122, 6430-6441	2.6	4
11	Effects of ionospheric O <sup>+</sup> on the magnetopause boundary wave activity <b>2011</b> ,		4

10	Storm Time Plasma Pressure Inferred From Multimission Measurements and Its Validation Using Van Allen Probes Particle Data. <i>Space Weather</i> , <b>2020</b> , 18, e2020SW002583	3.7	4
9	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> , <b>2021</b> , 126, e2019JA027698	2.6	3
8	Global effects of a polar solar eclipse on the coupled magnetosphere-ionosphere system. <i>Geophysical Research Letters</i> ,	4.9	2
7	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
6	Electrojet Estimates From Mesospheric Magnetic Field Measurements. <i>Journal of Geophysical Research: Space Physics</i> , <b>2021</b> , 126, e2020JA028644	2.6	1
5	Incorporating Inner Magnetosphere Current-driven Electron Acceleration in Numerical Simulations of Exoplanet Radio Emission. <i>Astrophysical Journal</i> , <b>2021</b> , 914, 60	4.7	1
4	Cross-scale energy cascade powered by magnetospheric convection.. <i>Scientific Reports</i> , <b>2022</b> , 12, 4446	4.9	1
3	Oxygen Ion Escape at Venus Associated With Three-Dimensional Kelvin-Helmholtz Instability. <i>Geophysical Research Letters</i> , <b>2022</b> , 49,	4.9	1
2	High-resolution Simulations of the Inner Heliosphere in Search of the Kelvin-Helmholtz Waves. <i>Astrophysical Journal</i> , <b>2022</b> , 925, 181	4.7	
1	Structure of High Latitude Currents in Magnetosphere-Ionosphere Models. <i>Space Sciences Series of ISSI</i> , <b>2018</b> , 583-606	0.1	