

Lutz Rastaetter

List of Publications by Year in descending order

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Version: 2024-02-01

83
papers

1,934
citations

257101

24
h-index

288905

40
g-index

86
all docs

86
docs citations

86
times ranked

1696
citing authors

#	ARTICLE	IF	CITATIONS
1	Ensemble Modeling of CMEs Using the WSA+ENLIL+Cone Model. <i>Solar Physics</i> , 2015, 290, 1775-1814.	1.0	170
2	Community-wide validation of geospace model ground magnetic field perturbation predictions to support model transition to operations. <i>Space Weather</i> , 2013, 11, 369-385.	1.3	136
3	Validation of the coronal mass ejection predictions at the Earth orbit estimated by ENLIL heliosphere cone model. <i>Space Weather</i> , 2009, 7, .	1.3	73
4	Multiscale modeling of magnetospheric reconnection. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	72
5	Geospace Environment Modeling 2008+2009 Challenge: Ground magnetic field perturbations. <i>Space Weather</i> , 2011, 9, .	1.3	71
6	CEDAR Electrodynamics Thermosphere Ionosphere (ETI) Challenge for systematic assessment of ionosphere/thermosphere models: NmF2, hmF2, and vertical drift using ground-based observations. <i>Space Weather</i> , 2011, 9, .	1.3	71
7	Geospace environment modeling 2008+2009 challenge: D_{st} index. <i>Space Weather</i> , 2013, 11, 187-205.	1.3	69
8	CEDAR Electrodynamics Thermosphere Ionosphere (ETI) Challenge for systematic assessment of ionosphere/thermosphere models: Electron density, neutral density, NmF2, and hmF2 using space based observations. <i>Space Weather</i> , 2012, 10, .	1.3	65
9	Field-aligned currents during northward interplanetary magnetic field: Morphology and causes. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	45
10	Dynamics of ring current and electric fields in the inner magnetosphere during disturbed periods: CRCM+BATS-U coupled model. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	42
11	Assessing the performance of community-available global MHD models using key system parameters and empirical relationships. <i>Space Weather</i> , 2015, 13, 868-884.	1.3	40
12	First-principles modeling of geomagnetically induced electromagnetic fields and currents from upstream solar wind to the surface of the Earth. <i>Annales Geophysicae</i> , 2007, 25, 881-893.	0.6	39
13	Global MHD modeling of the impact of a solar wind pressure change. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 21-1.	3.3	38
14	A new look at driven magnetic reconnection at the terrestrial subsolar magnetopause. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	36
15	Comparison of predictive estimates of high-latitude electrodynamic with observations of global-scale Birkeland currents. <i>Space Weather</i> , 2017, 15, 352-373.	1.3	35
16	Exploring predictive performance: A reanalysis of the geospace model transition challenge. <i>Space Weather</i> , 2017, 15, 192-203.	1.3	33
17	Real-time SWMF at CCMC: Assessing the Dst Output From Continuous Operational Simulations. <i>Space Weather</i> , 2018, 16, 1583-1603.	1.3	32
18	Regional 3D Modeling of Ground Electromagnetic Field Due To Realistic Geomagnetic Disturbances. <i>Space Weather</i> , 2018, 16, 476-500.	1.3	31

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19	Systematic evaluation of ground and geostationary magnetic field predictions generated by global magnetohydrodynamic models. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	30
20	Geospace Environment Modeling 2008â€“2009 Challenge: Geosynchronous magnetic field. <i>Space Weather</i> , 2011, 9, .	1.3	30
21	CalcDeltaB: An efficient postprocessing tool to calculate groundâ€“level magnetic perturbations from global magnetosphere simulations. <i>Space Weather</i> , 2014, 12, 553-565.	1.3	29
22	On the performance of global magnetohydrodynamic models in the Earth's magnetosphere. <i>Space Weather</i> , 2013, 11, 313-326.	1.3	28
23	Predicting the time derivative of local magnetic perturbations. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 310-321.	0.8	27
24	Communityâ€“wide validation of geospace model local Kâ€“index predictions to support model transition to operations. <i>Space Weather</i> , 2016, 14, 469-480.	1.3	27
25	Propagation of a sudden impulse through the magnetosphere initiating magnetospheric Pc5 pulsations. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	26
26	Predicting Global Ground Geoelectric Field With Coupled Geospace and Threeâ€“Dimensional Geomagnetic Induction Models. <i>Space Weather</i> , 2018, 16, 1028-1041.	1.3	24
27	Anomalous dynamics of the extremely compressed magnetosphere during 21 January 2005 magnetic storm. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 877-896.	0.8	23
28	Validation of Ionospheric Specifications During Geomagnetic Storms: TEC and foF2 During the 2013 March Storm Event. <i>Space Weather</i> , 2018, 16, 1686-1701.	1.3	22
29	The magnetic structure of Bâ€“O-reconnection. <i>Physica Scripta</i> , 1998, T74, 34-39.	1.2	21
30	Comparison of the observed dependence of large-scale Birkeland currents on solar wind parameters with that obtained from global simulations. <i>Annales Geophysicae</i> , 2011, 29, 1809-1826.	0.6	21
31	Forecasting propagation and evolution of CMEs in an operational setting: What has been learned. <i>Space Weather</i> , 2013, 11, 557-574.	1.3	21
32	Magnetosheath variations during the storm main phase on 20 November 2003: Evidence for solar wind density control of energy transfer to the magnetosphere. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	20
33	The Hohmannâ€“Parker effect measured by the Mars Science Laboratory on the transfer from Earth to Mars: Consequences and opportunities. <i>Planetary and Space Science</i> , 2013, 89, 127-139.	0.9	20
34	Solar filament impact on 21 January 2005: Geospace consequences. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 5401-5448.	0.8	20
35	GEMâ€“CEDAR challenge: Poynting flux at DMSP and modeled Joule heat. <i>Space Weather</i> , 2016, 14, 113-135.	1.3	20
36	Using global magnetospheric models for simulation and interpretation of Swarm external field measurements. <i>Earth, Planets and Space</i> , 2006, 58, 439-449.	0.9	19

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37	Hall-MHD modeling of near-Earth magnetotail current sheet thinning and evolution. <i>Journal of Geophysical Research</i> , 1999, 104, 12301-12311.	3.3	18
38	Rating global magnetosphere model simulations through statistical data-model comparisons. <i>Space Weather</i> , 2016, 14, 819-834.	1.3	17
39	The substorm cycle as reproduced by global MHD models. <i>Space Weather</i> , 2017, 15, 131-149.	1.3	17
40	CEDAR-GEM Challenge for Systematic Assessment of Ionosphere/Thermosphere Models in Predicting TEC During the 2006 December Storm Event. <i>Space Weather</i> , 2017, 15, 1238-1256.	1.3	17
41	Initial Results From the GEM Challenge on the Spacecraft Surface Charging Environment. <i>Space Weather</i> , 2019, 17, 299-312.	1.3	17
42	Magnetopause ripples going against the flow form azimuthally stationary surface waves. <i>Nature Communications</i> , 2021, 12, 5697.	5.8	17
43	Comparison of local energy conversion estimates from Cluster with global MHD simulations. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	16
44	Anomalous Flow Deflection at Earth's Low-Alfvén-Mach-Number Bow Shock. <i>Physical Review Letters</i> , 2008, 101, 065003.	2.9	14
45	Minimum variance analysis-based propagation of the solar wind observations: Application to real-time global magnetohydrodynamic simulations. <i>Space Weather</i> , 2009, 7, .	1.3	14
46	Investigating Upper Atmospheric Joule Heating Using Cross-Combination of Data for Two Moderate Substorm Cases. <i>Space Weather</i> , 2018, 16, 987-1012.	1.3	14
47	Exploring the Influence of Lateral Conductivity Contrasts on the Storm Time Behavior of the Ground Electric Field in the Eastern United States. <i>Space Weather</i> , 2020, 18, e2019SW002216.	1.3	14
48	Magnetized Accreting Stars: Studies of the Inner Accretion-Disk Edge by a Magnetohydrodynamic Approach. II. Ideal Instabilities of the Inner Disk Edge. <i>Astrophysical Journal</i> , 1999, 524, 361-372.	1.6	13
49	Buildup of the ring current during periodic loading-unloading cycles in the magnetotail driven by steady southward interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	12
50	The role of helicity in the reconnection process. <i>Advances in Space Research</i> , 1997, 19, 1789-1792.	1.2	11
51	Polar cap size during 14-16 July 2000 (Bastille Day) solar coronal mass ejection event: MHD modeling and satellite imager observations. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	11
52	Cavities of weak magnetic field strength in the wake of FTEs: Results from global magnetospheric MHD simulations. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	11
53	Ionosphere-thermosphere models at the Community Coordinated Modeling Center. <i>Radio Science</i> , 2009, 44, .	0.8	11
54	Scientific visualization to study Flux Transfer Events at the Community Coordinated Modeling Center. <i>Advances in Space Research</i> , 2012, 49, 1623-1632.	1.2	11

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55	On current sheets in two-dimensional ideal magnetohydrodynamics caused by pressure perturbations. <i>Physics of Plasmas</i> , 1994, 1, 3414-3424.	0.7	10
56	Modeling and analysis of solar wind generated contributions to the near-Earth magnetic field. <i>Earth, Planets and Space</i> , 2006, 58, 451-461.	0.9	10
57	How a Realistic Magnetosphere Alters the Polarizations of Surface, Fast Magnetosonic, and Alfvén Waves. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	0.8	10
58	Effect of multiple substorms on the buildup of the ring current. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	9
59	Evaluating the Uncertainties in the Electron Temperature and Radial Speed Measurements Using White Light Corona Eclipse Observations. <i>Solar Physics</i> , 2014, 289, 2021-2039.	1.0	9
60	Comprehensive Assessment of Models and Events Using Library Tools (CAMEL) Framework: Time Series Comparisons. <i>Space Weather</i> , 2019, 17, 845-860.	1.3	9
61	Evaluating Uncertainties in Coronal Electron Temperature and Radial Speed Measurements Using a Simulation of the Bastille Day Eruption. <i>Solar Physics</i> , 2018, 293, 1.	1.0	8
62	Unifying the validation of ambient solar wind models. <i>Advances in Space Research</i> , 2023, 72, 5275-5286.	1.2	7
63	Magnetic field topology during July 14-16 2000 (Bastille Day) solar CME event. <i>Geophysical Research Letters</i> , 2002, 29, 37-1-37-4.	1.5	6
64	Dependence of DOLP on Coronal Electron Temperature, Speed, and Structure. <i>Solar Physics</i> , 2019, 294, 1.	1.0	6
65	Formation of the Low-Energy α -Finger-Ion Spectral Structure Near the Inner Edge of the Plasma Sheet. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089875.	1.5	6
66	Patchy reconnection and evolution of multiple plasmoids in the Earth's magnetotail: Effects on near-Earth current system. <i>Journal of Geophysical Research</i> , 1999, 104, 25011-25020.	3.3	5
67	Metrics analysis of the coupled Block Adaptive-Tree Solar Wind Roe-Type Upwind Scheme and Fok ring current model performance. <i>Space Weather</i> , 2007, 5, .	1.3	5
68	Comparison between vortices created and evolving during fixed and dynamic solar wind conditions. <i>Annales Geophysicae</i> , 2013, 31, 1463-1483.	0.6	5
69	Nowcasting and forecasting of the magnetopause and bow shock – A status update. <i>Space Weather</i> , 2017, 15, 36-43.	1.3	5
70	Measuring Electron Temperature Using a Linear Polarizer Versus a Polarization Camera. <i>Solar Physics</i> , 2019, 294, 1.	1.0	5
71	Alfvén Mach number and IMF clock angle dependencies of sunward flow channels in the magnetosphere. <i>Geophysical Research Letters</i> , 2013, 40, 1257-1262.	1.5	4
72	The STONE Curve: A ROC-Derived Model Performance Assessment Tool. <i>Earth and Space Science</i> , 2020, 7, e2020EA001106.	1.1	4

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73	Synoptic Measurements of Electron Temperature and Speed in the Solar Corona with Next Generation White-Light Coronagraph. <i>Solar Physics</i> , 2020, 295, 1.	1.0	3
74	Magnetized Accreting Stars: Studies of the Inner Accretion Disk Edge by a Magnetohydrodynamical Approach. I. Construction and Analysis of Magnetopause Equilibria. <i>Astrophysical Journal</i> , 1999, 519, 658-666.	1.6	3
75	Lower hybrid drift wave motion at a dayside magnetopause x-line with energy conversion dominated by a parallel electric field. <i>Physics of Plasmas</i> , 2022, 29, 012905.	0.7	3
76	Simulations of non-stationary magnetic reconnection in Lie-transported electro-magnetic fields. <i>Physica Scripta</i> , 1998, T74, 40-45.	1.2	2
77	Statistical Error Analysis on White-Light Filter Ratio Experiments to Measure Electron Parameters. <i>Solar Physics</i> , 2021, 296, 1.	1.0	2
78	Role of periodic loading&unloading in the magnetotail versus interplanetary magnetic field B_z flipping in the ring current buildup. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	1
79	CCMC Modeling of Magnetic Reconnection in Electron Diffusion Region Events. <i>Proceedings of the International Astronomical Union</i> , 2017, 13, 142-146.	0.0	1
80	Data mining for vortices on the Earth's magnetosphere " algorithm application for detection and analysis. <i>Annales Geophysicae</i> , 2018, 36, 1117-1129.	0.6	1
81	How does the magnetosphere go to sleep?. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2021, 220, 105626.	0.6	1
82	Reply to comment by S. Haaland et al. on "Minimum variance analysis-based propagation of the solar wind observations: Application to real-time global magnetohydrodynamic simulations". <i>Space Weather</i> , 2010, 8, n/a-n/a.	1.3	0
83	Community-wide model validation study for systematic assessment of ionosphere models. , 2015, , .		0