

Gunnar Hornig

List of Publications by Year in descending order

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33
papers

1,291
citations

394421

19
h-index

395702

33
g-index

34
all docs

34
docs citations

34
times ranked

703
citing authors

#	ARTICLE	IF	CITATIONS
1	Theory of magnetic connectivity in the solar corona. Journal of Geophysical Research, 2002, 107, SSH 3-1-SSH 3-13.	3.3	364
2	On the nature of three-dimensional magnetic reconnection. Journal of Geophysical Research, 2003, 108, .	3.3	107
3	Evolution of magnetic flux in an isolated reconnection process. Physics of Plasmas, 2003, 10, 2712-2721.	1.9	77
4	Dynamics of braided coronal loops. Astronomy and Astrophysics, 2011, 525, A57.	5.1	75
5	Dynamics of braided coronal loops. Astronomy and Astrophysics, 2010, 516, A5.	5.1	67
6	Topological Constraints on Magnetic Relaxation. Physical Review Letters, 2010, 105, 085002.	7.8	57
7	MAGNETIC BRAIDING AND PARALLEL ELECTRIC FIELDS. Astrophysical Journal, 2009, 696, 1339-1347.	4.5	55
8	MAGNETIC BRAIDING AND QUASI-SEPARATRIX LAYERS. Astrophysical Journal, 2009, 704, 1288-1295.	4.5	49
9	Evolution of field line helicity during magnetic reconnection. Physics of Plasmas, 2015, 22, .	1.9	44
10	Heating of braided coronal loops. Astronomy and Astrophysics, 2011, 536, A67.	5.1	40
11	A fully magnetohydrodynamic simulation of three-dimensional non-null reconnection. Physics of Plasmas, 2005, 12, 052307.	1.9	36
12	The global distribution of magnetic helicity in the solar corona. Astronomy and Astrophysics, 2016, 594, A98.	5.1	32
13	A generalized flux function for three-dimensional magnetic reconnection. Physics of Plasmas, 2011, 18, .	1.9	29
14	Unique topological characterization of braided magnetic fields. Physics of Plasmas, 2013, 20, .	1.9	29
15	Lagrangian coherent structures in photospheric flows and their implications for coronal magnetic structure. Astronomy and Astrophysics, 2012, 539, A1.	5.1	26
16	THE STRUCTURE OF CURRENT LAYERS AND DEGREE OF FIELD-LINE BRAIDING IN CORONAL LOOPS. Astrophysical Journal, 2015, 805, 47.	4.5	26
17	Towards a third-order topological invariant for magnetic fields. Journal of Physics A, 2002, 35, 3945-3959.	1.6	21
18	Braided magnetic fields: equilibria, relaxation and heating. Plasma Physics and Controlled Fusion, 2016, 58, 054008.	2.1	20

#	ARTICLE	IF	CITATIONS
19	The Parker problem: existence of smooth force-free fields and coronal heating. Living Reviews in Solar Physics, 2020, 17, 1.	22.0	19
20	Dynamical constraints from field line topology in magnetic flux tubes. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 265501.	2.1	18
21	Physical role of topological constraints in localized magnetic relaxation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150012.	2.1	17
22	On the Magnetic Squashing Factor and the Lie Transport of Tangents. Astrophysical Journal, 2017, 848, 117.	4.5	15
23	Coronal Magnetic Topologies in a Spherical Geometry I. Two Bipolar Flux Sources. Solar Physics, 2006, 235, 259-280.	2.5	9
24	THE DEPENDENCE OF CORONAL LOOP HEATING ON THE CHARACTERISTICS OF SLOW PHOTOSPHERIC MOTIONS. Astrophysical Journal, 2016, 824, 19.	4.5	9
25	Quantifying the tangling of trajectories using the topological entropy. Chaos, 2017, 27, 093102.	2.5	9
26	Estimating the Rate of Field Line Braiding in the Solar Corona by Photospheric Flows. Astrophysical Journal, 2018, 864, 157.	4.5	9
27	Dynamic non-null magnetic reconnection in three dimensions—II: composite solutions. Geophysical and Astrophysical Fluid Dynamics, 2009, 103, 515-534.	1.2	7
28	Do Current and Magnetic Helicities Have the Same Sign?. Astrophysical Journal, 2019, 884, 55.	4.5	7
29	Dynamic accessibility of inflow and outflow reconnective solutions. Physics of Plasmas, 2005, 12, 112902.	1.9	6
30	Topological constraints in the reconnection of vortex braids. Physics of Fluids, 2021, 33, .	4.0	5
31	Evolution of field line helicity in magnetic relaxation. Physics of Plasmas, 2021, 28, .	1.9	3
32	On the solutions of three-dimensional non-null magnetic reconnection. Physics of Plasmas, 2009, 16, 082101.	1.9	1
33	Magnetic field line braiding in the solar atmosphere. Proceedings of the International Astronomical Union, 2016, 12, 77-81.	0.0	0