

Daniela Grasso

List of Publications by Year in descending order

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77
papers

1,452
citations

331259

21
h-index

344852

36
g-index

77
all docs

77
docs citations

77
times ranked

567
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonlinear collisionless magnetic reconnection. Physical Review Letters, 1993, 71, 3802-3805.	2.9	189
2	Invariants and Geometric Structures in Nonlinear Hamiltonian Magnetic Reconnection. Physical Review Letters, 1998, 80, 4430-4433.	2.9	120
3	Recent advances in collisionless magnetic reconnection. Plasma Physics and Controlled Fusion, 2002, 44, B389-B405.	0.9	84
4	Phase Mixing and Island Saturation in Hamiltonian Reconnection. Physical Review Letters, 2001, 86, 5051-5054.	2.9	81
5	Hamiltonian magnetic reconnection. Plasma Physics and Controlled Fusion, 1999, 41, 1497-1515.	0.9	71
6	Hamiltonian formulation and analysis of a collisionless fluid reconnection model. Plasma Physics and Controlled Fusion, 2008, 50, 085014.	0.9	54
7	Aspects of three-dimensional magnetic reconnection. Physics of Plasmas, 2005, 12, 032309.	0.7	49
8	Multiple States of Nonlinear Drift-Tearing Islands. Physical Review Letters, 2004, 93, 075001.	2.9	46
9	Cyro-induced acceleration of magnetic reconnection. Physics of Plasmas, 2013, 20, .	0.7	36
10	Extended theory of the Taylor problem in the plasmoid-unstable regime. Physics of Plasmas, 2015, 22, .	0.7	35
11	Hamiltonian four-field model for magnetic reconnection: nonlinear dynamics and extension to three dimensions with externally applied fields. Nuclear Fusion, 2010, 50, 034007.	1.6	34
12	Visco-resistive plasmoid instability. Physics of Plasmas, 2016, 23, .	0.7	30
13	Resistive stability of a plasma with runaway electrons. Physics of Plasmas, 2007, 14, .	0.7	28
14	Magnetohydrodynamics modelling successfully predicts new helical states in reversed-field pinch fusion plasmas. Nuclear Fusion, 2017, 57, 116029.	1.6	28
15	Linear stability and mode structure of drift tearing modes. Physics of Plasmas, 2001, 8, 4306-4317.	0.7	24
16	Ion Larmor radius effects in collisionless reconnection. Plasma Physics Reports, 2000, 26, 512-518.	0.3	23
17	Secondary instabilities in two- and three-dimensional magnetic reconnection in fusion relevant plasmas. Physics of Plasmas, 2007, 14, 055703.	0.7	23
18	Nonlinear gyrofluid simulations of collisionless reconnection. Physics of Plasmas, 2010, 17, 082312.	0.7	23

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19	Barriers in the transition to global chaos in collisionless magnetic reconnection. I. Ridges of the finite time Lyapunov exponent field. <i>Physics of Plasmas</i> , 2011, 18, .	0.7	23
20	Nonlinear response of magnetic islands to localized electron cyclotron current injection. <i>Physics of Plasmas</i> , 2014, 21, .	0.7	23
21	Growth and stabilization of drift-tearing modes in weakly collisional plasmas. <i>Nuclear Fusion</i> , 2002, 42, 1067-1074.	1.6	22
22	Magnetic islands and spontaneous generation of zonal flows. <i>Plasma Physics and Controlled Fusion</i> , 2006, 48, L87-L95.	0.9	21
23	Stable and unstable invariant manifolds in a partially chaotic magnetic configuration generated by nonlinear reconnection. <i>Physics of Plasmas</i> , 2008, 15, .	0.7	21
24	Numerical investigation of a compressible gyrofluid model for collisionless magnetic reconnection. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	20
25	Asymmetric tearing mode in the presence of viscosity. <i>Physics of Plasmas</i> , 2011, 18, 112108.	0.7	16
26	Detection of magnetic barriers in a chaotic domain: first application of finite time Lyapunov exponent method to a magnetic confinement configuration. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 085004.	0.9	16
27	Variational integrators for reduced magnetohydrodynamics. <i>Journal of Computational Physics</i> , 2016, 321, 435-458.	1.9	16
28	Critical $\hat{\Gamma}^2$ for stability of viscoresistive tearing modes. <i>Physics of Plasmas</i> , 2008, 15, .	0.7	15
29	Coherent magnetic structures in self-organized plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 044003.	0.9	15
30	Coupling between reconnection and Kelvin-Helmholtz instabilities in collisionless plasmas. <i>Nonlinear Processes in Geophysics</i> , 2009, 16, 241-249.	0.6	14
31	Developments in the theory of collisionless reconnection in magnetic configurations with a strong guide field. <i>Nonlinear Processes in Geophysics</i> , 2004, 11, 567-577.	0.6	12
32	Effect of sheared flow on magnetic islands. <i>Physics of Plasmas</i> , 2007, 14, 022302.	0.7	12
33	Hamiltonian magnetic reconnection with parallel electron heat flux dynamics. <i>Journal of Plasma Physics</i> , 2015, 81, .	0.7	12
34	Coherent transport structures in magnetized plasmas. I. Theory. <i>Physics of Plasmas</i> , 2018, 25, .	0.7	12
35	A reduced Landau-gyrofluid model for magnetic reconnection driven by electron inertia. <i>Journal of Plasma Physics</i> , 2018, 84, .	0.7	11
36	Electron response to collisionless magnetic reconnection. <i>Physics of Plasmas</i> , 2010, 17, 042104.	0.7	10

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37	Structure and computation of two-dimensional incompressible extended MHD. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	10
38	Collisionless reconnection in instabilities and due to external forcing. <i>Physics of Plasmas</i> , 2000, 7, 178-184.	0.7	9
39	Gyrofluid simulations of collisionless reconnection in the presence of diamagnetic effects. <i>Journal of Physics: Conference Series</i> , 2010, 260, 012020.	0.3	9
40	Barriers in the transition to global chaos in collisionless magnetic reconnection. II. Field line spectroscopy. <i>Physics of Plasmas</i> , 2011, 18, .	0.7	9
41	Phase diagrams of forced magnetic reconnection in Taylor's model. <i>Journal of Plasma Physics</i> , 2015, 81, .	0.7	9
42	Coherent transport structures in magnetized plasmas. II. Numerical results. <i>Physics of Plasmas</i> , 2018, 25, .	0.7	9
43	Progress in the theory of magnetic reconnection phenomena. <i>Plasma Physics and Controlled Fusion</i> , 2004, 46, B201-B212.	0.9	8
44	Predicting the behaviour of magnetic reconnection processes in fusion burning plasma experiments. <i>Nuclear Fusion</i> , 2004, 44, 362-371.	1.6	8
45	Nonlinear processes in Hamiltonian reconnection. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2010, 15, 2-9.	1.7	8
46	Formation of plasmoid chains in fusion relevant plasmas. <i>Journal of Physics: Conference Series</i> , 2014, 561, 012004.	0.3	8
47	Open problems of magnetic island control by electron cyclotron current drive. <i>Journal of Plasma Physics</i> , 2016, 82, .	0.7	8
48	The deceiving $\hat{\nu}^2$: On the equilibrium dependent dynamics of nonlinear magnetic islands. <i>Physics of Plasmas</i> , 2014, 21, 102514.	0.7	7
49	Test-electron analysis of the magnetic reconnection topology. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	7
50	Gyrofluid analysis of electron $\hat{\nu}^2$ effects on collisionless reconnection. <i>Journal of Plasma Physics</i> , 2022, 88, .	0.7	7
51	Magnetic island suppression by electron cyclotron current drive as converse of a forced reconnection problem. <i>Journal of Plasma Physics</i> , 2018, 84, .	0.7	6
52	Asymmetry effects driving secondary instabilities in two-dimensional collisionless magnetic reconnection. <i>Physics of Plasmas</i> , 2020, 27, .	0.7	6
53	Modelling of macroscopic magnetic islands in tokamaks. <i>Nuclear Fusion</i> , 2001, 41, 1207-1218.	1.6	5
54	Magnetic Reconnection: Collisionless Regimes. <i>Physica Scripta</i> , 2004, T107, 153.	1.2	5

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55	Numerical investigation of a three-dimensional four field model for collisionless magnetic reconnection. Communications in Nonlinear Science and Numerical Simulation, 2012, 17, 2085-2094.	1.7	5
56	Numerical comparison between a gyrofluid and gyrokinetic model investigating collisionless magnetic reconnection. Physics of Plasmas, 2014, 21, .	0.7	5
57	Physics conditions for robust control of tearing modes in a rotating tokamak plasma. Plasma Physics and Controlled Fusion, 2018, 60, 014044.	0.9	5
58	Coexistence of Plasmoid and Kelvin-Helmholtz Instabilities in Collisionless Plasma Turbulence. Astrophysical Journal, 2022, 929, 62.	1.6	5
59	Barriers to field line transport in 3D magnetic configurations. Journal of Physics: Conference Series, 2010, 260, 012012.	0.3	3
60	Ion diamagnetic effects in gyrofluid collisionless magnetic reconnection. Journal of Physics: Conference Series, 2012, 401, 012008.	0.3	3
61	Nonlinear 2-D effects in the control of magnetic Islands by ECCD. AIP Conference Proceedings, 2014, , .	0.3	3
62	Linear stability analysis of collisionless reconnection in the presence of an equilibrium flow aligned with the guide field. European Physical Journal D, 2014, 68, 1.	0.6	3
63	Lagrangian Coherent Structures as a new frame to investigate the particle transport in highly chaotic magnetic systems. Journal of Physics: Conference Series, 2018, 1125, 012008.	0.3	3
64	HAMILTONIAN STRUCTURE OF A COLLISIONLESS RECONNECTION MODEL VALID FOR HIGH AND LOW $\hat{\nu}^2$ PLASMAS. , 2007, , .		3
65	Fast gyrofluid reconnection in high temperature plasmas. Journal of Physics: Conference Series, 2012, 401, 012005.	0.3	2
66	BIFURCATION ANALYSIS OF SEQUENCE OF MAGNETIC ISLAND EQUILIBRIA AND SPONTANEOUS GENERATION OF ZONAL FLOWS. , 2007, , .		2
67	Inertial magnetic reconnection effects on the electron dynamics in a three-dimensional configuration. Journal of Physics: Conference Series, 2012, 401, 012019.	0.3	1
68	Impact of electron temperature anisotropy on the collisionless tearing mode instability in the presence of a strong guide field. Physics of Plasmas, 2021, 28, .	0.7	1
69	NONLINEAR DYNAMICS OF A HAMILTONIAN FOUR-FIELD MODEL FOR MAGNETIC RECONNECTION IN COLLISIONLESS PLASMAS. , 2008, , .		1
70	Hamiltonian Model of Magnetic Reconnection. Physica Scripta, 1998, T75, 200.	1.2	0
71	Numerical solution of a reduced model of collisionless magnetic reconnection in two and three dimensions. Computer Physics Communications, 2004, 164, 23-28.	3.0	0
72	Nonlinear Collisionless Magnetic Reconnection. , 2008, , .		0

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73	Electron response in gyrofluid simulations of magnetic reconnection. Journal of Physics: Conference Series, 2010, 260, 012015.	0.3	0
74	ASYMMETRY EFFECTS IN VISCORESISTIVE MAGNETIC RECONNECTION. , 2010, , .		0
75	Magnetic island evolution under the action of electron cyclotron current drive. Journal of Physics: Conference Series, 2012, 401, 012002.	0.3	0
76	Fast Collisionless Magnetic Reconnection: Fluid Regime and Kinetic Effects. Physica Scripta, 2001, T98, 72.	1.2	0
77	Fluid equations: derivation and simulation. , 0, , .		0