Nuno F Loureiro

List of Publications by Year
in descending order

71 papers	3,062 citations	201674 27 h-index	155660 55 g-index
72 all docs	72 docs citations	72 times ranked	2001 citing authors

#	Article	IF	Citations
1	Instability of current sheets and formation of plasmoid chains. Physics of Plasmas, 2007, 14, .	1.9	560
2	Fast Magnetic Reconnection in the Plasmoid-Dominated Regime. Physical Review Letters, 2010, 105, 235002.	7.8	292
3	Formation of Plasmoid Chains in Magnetic Reconnection. Physical Review Letters, 2009, 103, 105004.	7.8	196
4	Magnetic reconnection and stochastic plasmoid chains in high-Lundquist-number plasmas. Physics of Plasmas, 2012, 19, .	1.9	165
5	X-Point Collapse and Saturation in the Nonlinear Tearing Mode Reconnection. Physical Review Letters, 2005, 95, 235003.	7.8	112
6	Magnetic reconnection: from the Sweetâ€“Parker model to stochastic plasmoid chains. Plasma Physics and Controlled Fusion, 2016, 58, 014021.	2.1	112
7	Turbulent magnetic reconnection in two dimensions. Monthly Notices of the Royal Astronomical Society: Letters, 2009, 399, L146-L150.	3.3	99
8	Gyrokinetic simulations of spherical tokamaks. Plasma Physics and Controlled Fusion, 2009, 51, 124020.	2.1	84
9	Role of Magnetic Reconnection in Magnetohydrodynamic Turbulence. Physical Review Letters, 2017, 118, 245101.	7.8	77
10	Plasmoid and Kelvin-Helmholtz instabilities in Sweet-Parker current sheets. Physical Review E, 2013, 87, 013102.	2.1	75
11	Magnetic Reconnection Onset via Disruption of a Forming Current Sheet by the Tearing Instability. Physical Review Letters, 2016, 116, 105003.	7.8	75
12	Collisionless Reconnection in Magnetohydrodynamic and Kinetic Turbulence. Astrophysical Journal, 2017, 850, 182.	4.5	73
13	Fully Kinetic Simulation of 3D Kinetic AlfvÃ©n Turbulence. Physical Review Letters, 2018, 120, 105101.	7.8	70
14	Fast Collisionless Reconnection and Electron Heating in Strongly Magnetized Plasmas. Physical Review Letters, 2013, 111, 025002.	7.8	69
15	Magnetohydrodynamic Turbulence Mediated by Reconnection. Astrophysical Journal, 2017, 844, 125.	4.5	64
16	Fully Kinetic versus Reduced-kinetic Modeling of Collisionless Plasma Turbulence. Astrophysical Journal, 2017, 847, 28.	4.5	60
17	Ion and electron heating during magnetic reconnection in weakly collisional plasmas. Journal of Plasma Physics, 2015, 81, .	2.1	49
18	Magnetic-Field Generation and Amplification in an Expanding Plasma. Physical Review Letters, 2014, 112, 175001.	7.8	40

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19	Understanding the effect of sheared flow on microinstabilities. Plasma Physics and Controlled Fusion, 2010, 52, 125001.	2.1	37
20	Anomalous Heating and Plasmoid Formation in a Driven Magnetic Reconnection Experiment. Physical Review Letters, 2017, 118, 085001.	7.8	36
21	Viriato : A Fourierâ€“Hermite spectral code for strongly magnetized fluidâ€“kinetic plasma dynamics. Computer Physics Communications, 2016, 206, 45-63.	7.5	35
22	Fluctuation-dissipation relations for a plasma-kinetic Langevin equation. Journal of Plasma Physics, 2015, 81, .	2.1	33
23	Kinetic microtearing modes and reconnecting modes in strongly magnetised slab plasmas. Plasma Physics and Controlled Fusion, 2015, 57, 065008.	2.1	32
24	Mesoscale plasma dynamics, transport barriers and zonal flows: simulations and paradigms. European Journal of Mechanics, B/Fluids, 2004, 23, 475-490.	2.5	29
25	Gyrokinetic simulations of the tearing instability. Physics of Plasmas, 2011, 18, .	1.9	29
26	The generation of magnetic fields by the Biermann battery and the interplay with the Weibel instability. Physics of Plasmas, 2016, 23, .	1.9	29
27	A drift-kinetic analytical model for scrape-off layer plasma dynamics at arbitrary collisionality. Journal of Plasma Physics, 2017, 83, .	2.1	28
28	Multi-scale dynamics of magnetic flux tubes and inverse magnetic energy transfer. Journal of Plasma Physics, 2020, 86, .	2.1	27
29	Numerical Study of Inertial Kinetic-AlfvÃ©n Turbulence. Astrophysical Journal, 2019, 870, 103.	4.5	25
30	Role of reconnection in inertial kinetic-AlfvÃ©n turbulence. Physical Review Research, 2019, 1, .	3.6	24
31	Intrinsic momentum transport in upâ€“down asymmetric tokamaks. Plasma Physics and Controlled Fusion, 2014, 56, 095014.	2.1	22
32	Nonlinear Reconnection in Magnetized Turbulence. Astrophysical Journal, 2020, 890, 55.	4.5	22
33	Systematic linear-stability assessment of AlfvÃ©n eigenmodes in the presence of fusion Î±-particles for ITER-like equilibria. Nuclear Fusion, 2015, 55, 083003.	3.5	21
34	Magnetic island merger as a mechanism for inverse magnetic energy transfer. Physical Review Research, 2019, 1, .	3.6	21
35	An iterative semi-implicit scheme with robust damping. Journal of Computational Physics, 2008, 227, 4518-4542.	3.8	20
36	An experimental platform for pulsed-power driven magnetic reconnection. Physics of Plasmas, 2018, 25, .	1.9	20

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37	Influence of tearing instability on magnetohydrodynamic turbulence. Physical Review E, 2018, 98, .	2.1	20
38	Structure of a Magnetic Flux Annihilation Layer Formed by the Collision of Supersonic, Magnetized Plasma Flows. Physical Review Letters, 2016, 116, 225001.	7.8	16
39	Turbulence in Magnetized Pair Plasmas. Astrophysical Journal Letters, 2018, 866, L14.	8.3	16
40	Theory of the Drift-Wave Instability at Arbitrary Collisionality. Physical Review Letters, 2018, 121, 165001.	7.8	15
41	Interactions of magnetized plasma flows in pulsed-power driven experiments. Plasma Physics and Controlled Fusion, 2020, 62, 014020.	2.1	15
42	Formation and structure of a current sheet in pulsed-power driven magnetic reconnection experiments. Physics of Plasmas, 2017, 24, .	1.9	14
43	Inverse energy transfer in decaying, three-dimensional, non-helical magnetic turbulence due to magnetic reconnection. Monthly Notices of the Royal Astronomical Society, 2021, 501, 3074-3087.	4.4	13
44	Spontaneous magnetization of collisionless plasma. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2119831119.	7.1	13
45	The CASTOR-K Code, Recent Developments and Applications. Plasma Science and Technology, 2015, 17, 89-96.	1.5	12
46	Comprehensive evaluation of the linear stability of AlfvÃ©n eigenmodes driven by alpha particles in an ITER baseline scenario. Nuclear Fusion, 2016, 56, 076007.	3.5	12
47	Linear theory of electron-plasma waves at arbitrary collisionality. Journal of Plasma Physics, 2019, 85, .	2.1	12
48	Spectral and evolutionary analysis of advectiondiffusion equations and the shear flow paradigm. Journal of Plasma Physics, 2002, 68, 363-388.	2.1	11
49	Development of tearing instability in a current sheet forming by sheared incompressible flow. Journal of Plasma Physics, 2018, 84, .	2.1	11
50	Plasmoid instability in the semi-collisional regime. Journal of Plasma Physics, 2018, 84, .	2.1	11
51	Fully Kinetic Large-scale Simulations of the Collisionless Magnetorotational Instability. Astrophysical Journal, 2018, 859, 149.	4.5	11
52	Effect of current corrugations on the stability of the tearing mode. Physics of Plasmas, 2009, 16, 032101.	1.9	10
53	Ion heating and magnetic flux pile-up in a magnetic reconnection experiment with super-AlfvÃ©nic plasma inflows. Physics of Plasmas, 2018, 25, 042108.	1.9	10
54	Dynamic Phase Alignment in Inertial AlfvÃ©n Turbulence. Physical Review Letters, 2020, 125, 265101.	7.8	10

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55	Calculations in the theory of tearing instability. Journal of Physics: Conference Series, 2018, 1100, 012003.	0.4	9
56	Statistical description of coalescing magnetic islands via magnetic reconnection. Journal of Plasma Physics, 2021, 87, .	2.1	9
57	Tearing Instability in AlfvÃ©n and Kineticâ€AlfvÃ©n Turbulence. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028185.	2.4	7
58	Validation of gyrokinetic simulations of a National Spherical Torus eXperiment H-mode plasma and comparisons with a high-k scattering synthetic diagnostic. Plasma Physics and Controlled Fusion, 2019, 61, 115015.	2.1	6
59	Conditions for up-down asymmetry in the core of tokamak equilibria. Nuclear Fusion, 2014, 54, 093003.	3.5	5
60	Sensitivity of alpha-particle-driven AlfvÃ©n eigenmodes to q-profile variation in ITER scenarios. Nuclear Fusion, 2016, 56, 112006.	3.5	5
61	Fully kinetic Biermann battery and associated generation of pressure anisotropy. Physical Review E, 2018, 97, 033204.	2.1	5
62	Influence of higher-order harmonics on the saturation of the tearing mode. Plasma Physics and Controlled Fusion, 2009, 51, 035002.	2.1	4
63	Dependence of alpha-particle-driven AlfvÃ©n eigenmode linear stability on device magnetic field strength and consequences for next-generation tokamaks. Nuclear Fusion, 2019, 59, 046020.	3.5	4
64	Validation of gyrokinetic simulations in NSTX and projections for high-k turbulence measurements in NSTX-U. Physics of Plasmas, 2020, 27, 122505.	1.9	4
65	Laminar and turbulent plasmoid ejection in a laboratory Parker Spiral current sheet. Journal of Plasma Physics, 2021, 87, .	2.1	3
66	Dynamic Phase Alignment in Navier-Stokes Turbulence. Physical Review Letters, 2021, 127, 274501.	7.8	3
67	Plasma Dynamics in Low-Electron-Beta Environments. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	2
68	Electromagnetic effects in the stabilization of turbulence by sheared flow. Plasma Physics and Controlled Fusion, 2014, 56, 015007.	2.1	1
69	Symmetries of a reduced fluid-gyrokinetic system. Journal of Plasma Physics, 2018, 84, .	2.1	1
70	10.1063/1.4946017.1. , 2016, , .		0
71	10.1063/1.5023664.1. , 2018, , .		0