

Å-zgÅ¼r D GÅ¼rcan

List of Publications by Year in descending order

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102
papers

2,943
citations

159585

30
h-index

175258

52
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102
all docs

102
docs citations

102
times ranked

1043
citing authors

#	ARTICLE	IF	CITATIONS
1	Phase and amplitude evolution in the network of triadic interactions of the Hasegawa-Wakatani system. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	2
2	Transition from linear Landau damping to nonlinear Bernstein-Greene-Kruskal modes via phase synchronization. <i>Physical Review E</i> , 2021, 103, 023208.	2.1	9
3	Gyrokinetic investigation of Alfvén instabilities in the presence of turbulence. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 065009.	2.1	20
4	A differential approximation model for passive scalar turbulence. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2021, 54, 335701.	2.1	3
5	Generalized curvature modified plasma dispersion functions and Dupree renormalization of toroidal ITG. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 025018.	2.1	4
6	Turbulence as a Network of Fourier Modes. <i>Mathematics</i> , 2020, 8, 530.	2.2	4
7	Spiral chain models of two-dimensional turbulence. <i>Physical Review E</i> , 2019, 100, 043113.	2.1	5
8	A turbulent cascade model of bounce averaged gyrokinetics. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	2
9	Poloidal asymmetries of flows in the Tore Supra tokamak. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	16
10	Stable and unstable roots of ion temperature gradient driven mode using curvature modified plasma dispersion functions. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 025021.	2.1	5
11	Logarithmically discretized model of bounce averaged gyrokinetics and its implications on tokamak turbulence. <i>Physics of Plasmas</i> , 2018, 25, 102306.	1.9	1
12	Coexistence of Weak and Strong Wave Turbulence in Incompressible Hall Magnetohydrodynamics. <i>Physical Review X</i> , 2018, 8, .	8.9	11
13	Nested polyhedra model of isotropic magnetohydrodynamic turbulence. <i>Physical Review E</i> , 2018, 97, 063111.	2.1	6
14	Localized reversal of the perpendicular velocity in Tore Supra ohmic, L-mode, limited plasmas. <i>Nuclear Fusion</i> , 2017, 57, 046021.	3.5	3
15	Geodesic acoustic modes with poloidal mode couplings ad infinitum. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	5
16	Intrinsic non-inductive current driven by ETG turbulence in tokamaks. <i>Physics of Plasmas</i> , 2017, 24, 102303.	1.9	4
17	Nested polyhedra model of turbulence. <i>Physical Review E</i> , 2017, 95, 063102.	2.1	13
18	Multi-shell transport model for L-H transition. <i>Physics of Plasmas</i> , 2017, 24, 122310.	1.9	0

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19	Linear gyrokinetic investigation of the geodesic acoustic modes in realistic tokamak configurations. <i>Physics of Plasmas</i> , 2017, 24, 122117.	1.9	15
20	Logarithmic discretization and systematic derivation of shell models in two-dimensional turbulence. <i>Physical Review E</i> , 2016, 94, 033106.	2.1	5
21	Transport matrix for particles and momentum in collisional drift waves turbulence in linear plasma devices. <i>Physics of Plasmas</i> , 2016, 23, 022309.	1.9	10
22	Wave-number spectrum of dissipative drift waves and a transition scale. <i>Physical Review E</i> , 2015, 92, 033107.	2.1	9
23	Predator-prey model for the self-organization of stochastic oscillators in dual populations. <i>Physical Review E</i> , 2015, 92, 062930.	2.1	6
24	Direct identification of predator-prey dynamics in gyrokinetic simulations. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	25
25	Comprehensive comparisons of geodesic acoustic mode characteristics and dynamics between Tore Supra experiments and gyrokinetic simulations. <i>Physics of Plasmas</i> , 2015, 22, 062508.	1.9	23
26	Geodesic acoustic modes in a fluid model of tokamak plasma: the effects of finite beta and collisionality. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 125002.	2.1	7
27	Towards an emerging understanding of non-locality phenomena and non-local transport. <i>Nuclear Fusion</i> , 2015, 55, 013022.	3.5	66
28	Finding the Elusive $\mathbf{E} \times \mathbf{B}$ Staircase in Magnetized Plasmas. <i>Physical Review Letters</i> , 2015, 114, 085004.	7.8	98
29	Turbulence elasticity: a key concept to a unified paradigm of $L \rightarrow H$ transition. <i>Nuclear Fusion</i> , 2015, 55, 043022.	3.5	1
30	Gyrokinetic turbulence cascade via predator-prey interactions between different scales. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	6
31	Zonal flows and pattern formation. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2015, 48, 293001.	2.1	47
32	Characterization of predator-prey dynamics, using the evolution of free energy in plasma turbulence. <i>Plasma Physics and Controlled Fusion</i> , 2014, 56, 015002.	2.1	9
33	Coherent structures in ion temperature gradient turbulence-zonal flow. <i>Physics of Plasmas</i> , 2014, 21, 102306.	1.9	16
34	$\mathbf{E} \times \mathbf{B}$ shear pattern formation by radial propagation of heat flux waves. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	19
35	Angular momentum transport modeling: achievements of a gyrokinetic quasi-linear approach. <i>Plasma Physics and Controlled Fusion</i> , 2014, 56, 015011.	2.1	18
36	Turbulence elasticity: A new mechanism for transport barrier dynamics. <i>Physics of Plasmas</i> , 2014, 21, 090702.	1.9	2

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37	Phase space structures in gyrokinetic simulations of fusion plasma turbulence. European Physical Journal D, 2014, 68, 1.	1.3	8
38	Numerical computation of the modified plasma dispersion function with curvature. Journal of Computational Physics, 2014, 269, 156-167.	3.8	10
39	Elasticity in drift-wave zonal-flow turbulence. Physical Review E, 2014, 89, 041101.	2.1	8
40	A Multi Water Bag model of drift kinetic electron plasma. European Physical Journal D, 2014, 68, 1.	1.3	1
41	Structure of nonlocality of plasma turbulence. Nuclear Fusion, 2013, 53, 073029.	3.5	10
42	Spatio-temporal evolution of the $L \rightarrow H$ and $H \rightarrow L$ transitions. Nuclear Fusion, 2013, 53, 073044.	3.5	25
43	Transport of radial heat flux and second sound in fusion plasmas. Physics of Plasmas, 2013, 20, .	1.9	14
44	Science and technology research and development in support to ITER and the Broader Approach at CEA. Nuclear Fusion, 2013, 53, 104023.	3.5	6
45	How the Propagation of Heat-Flux Modulations Triggers E Flow Pattern Formation. Physical Review Letters, 2013, 110, 105002.	7.8	30
46	Progress on theoretical issues in modelling turbulent transport. Nuclear Fusion, 2013, 53, 043008.	3.5	10
47	Physics of Stimulated $L \rightarrow H$ Transitions. Physical Review Letters, 2013, 110, 195002.	7.8	32
48	Spatio-temporal evolution of the $H \rightarrow L$ back transition. Physics of Plasmas, 2013, 20, .	1.9	18
49	Dynamics of stimulated $L \rightarrow H$ transitions. Physics of Plasmas, 2013, 20, .	1.9	16
50	ECH effects on toroidal rotation: KSTAR experiments, intrinsic torque modelling and gyrokinetic stability analyses. Nuclear Fusion, 2013, 53, 113031.	3.5	18
51	An overview of intrinsic torque and momentum transport bifurcations in toroidal plasmas. Nuclear Fusion, 2013, 53, 104019.	3.5	89
52	Symmetry breaking effects of density gradient on parallel momentum transport: A new $\tilde{\nu}_s^*$ effect. Physics of Plasmas, 2012, 19, .	1.9	3
53	An electromagnetic theory of turbulence driven poloidal rotation. Physics of Plasmas, 2012, 19, .	1.9	4
54	Spatio-temporal evolution of the $L \rightarrow H$ transition. Physics of Plasmas, 2012, 19, .	1.9	117

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55	Effect of Sheared Flow on the Growth Rate and Turbulence Decorrelation. Physical Review Letters, 2012, 109, 155006.	7.8	12
56	Analysis of symmetry breaking mechanisms and the role of turbulence self-regulation in intrinsic rotation. Nuclear Fusion, 2012, 52, 013004.	3.5	32
57	Detection of geodesic acoustic mode oscillations, using multiple signal classification analysis of Doppler backscattering signal on Tore Supra. Nuclear Fusion, 2012, 52, 063008.	3.5	30
58	Quasilinear transport modelling at low magnetic shear. Physics of Plasmas, 2012, 19, .	1.9	42
59	Predator prey oscillations in a simple cascade model of drift wave turbulence. Physics of Plasmas, 2011, 18, .	1.9	17
60	Anisotropic shell model of turbulence. Physical Review E, 2011, 84, 066308.	2.1	8
61	Wavenumber spectrum of micro-turbulence in tokamak plasmas. Comptes Rendus Physique, 2011, 12, .	0.9	7
62	Edge Temperature Gradient as Intrinsic Rotation Drive in Alcator C -Mod Tokamak Plasmas. Physical Review Letters, 2011, 106, 215001.	7.8	83
63	On plasma rotation with toroidal magnetic field ripple and no external momentum input. Nuclear Fusion, 2011, 51, 103038.	3.5	25
64	Contribution of Tore Supra in preparation of ITER. Nuclear Fusion, 2011, 51, 094014.	3.5	10
65	Turbulence propagation in heat flux-driven plasmas: implications for temperature profile structure. Nuclear Fusion, 2011, 51, 073009.	3.5	14
66	Collisionality scaling in Tore Supra: detailed energy confinement analysis, turbulence measurements and gyrokinetic modelling. Nuclear Fusion, 2011, 51, 063037.	3.5	8
67	Impact of collisionality on fluctuation characteristics of micro-turbulence. Physics of Plasmas, 2011, 18, 012306.	1.9	42
68	Turbulence intensity pulse propagation with self-consistent nonlinear noise. Physics of Plasmas, 2011, 18, .	1.9	2
69	Error analysis of dimensionless scaling experiments with multiple points using linear regression. Nuclear Fusion, 2010, 50, 022003.	3.5	1
70	Shell models and the possibility of application to fusion plasmas. Plasma Physics and Controlled Fusion, 2010, 52, 045002.	2.1	14
71	Poloidal rotation and its relation to the potential vorticity flux. Physics of Plasmas, 2010, 17, .	1.9	24
72	On the efficiency of intrinsic rotation generation in tokamaks. Physics of Plasmas, 2010, 17, 102313.	1.9	44

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73	A simple model of intrinsic rotation in high confinement regime tokamak plasmas. <i>Physics of Plasmas</i> , 2010, 17, 032509.	1.9	19
74	Entropy production rate in tokamaks with nonaxisymmetric magnetic fields. <i>Physics of Plasmas</i> , 2010, 17, 072505.	1.9	25
75	Measurements and Modeling of Turbulent Transport in the Tore Supra Tokamak. , 2010, , .		0
76	Residual parallel Reynolds stress due to turbulence intensity gradient in tokamak plasmas. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	91
77	Wave-Number Spectrum of Drift-Wave Turbulence. <i>Physical Review Letters</i> , 2009, 102, 255002.	7.8	41
78	Toroidal Rotation Driven by the Polarization Drift. <i>Physical Review Letters</i> , 2009, 103, 205003.	7.8	41
79	Response to "Comment on "Turbulent equipartition theory of toroidal momentum pinch" [Phys. Plasmas 16, 034703 (2009)]. <i>Physics of Plasmas</i> , 2009, 16, 034704.	1.9	3
80	Validating a quasi-linear transport model versus nonlinear simulations. <i>Nuclear Fusion</i> , 2009, 49, 085012.	3.5	72
81	Physics of non-diffusive turbulent transport of momentum and the origins of spontaneous rotation in tokamaks. <i>Nuclear Fusion</i> , 2009, 49, 045002.	3.5	179
82	A novel mechanism for exciting intrinsic toroidal rotation. <i>Physics of Plasmas</i> , 2009, 16, 052302.	1.9	40
83	Turbulence in the TORE SUPRA Tokamak: Measurements and Validation of Nonlinear Simulations. <i>Physical Review Letters</i> , 2009, 102, 165005.	7.8	71
84	Momentum theorems and the structure of atmospheric jets and zonal flows in plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2008, 50, 124018.	2.1	47
85	Transport of parallel momentum by collisionless drift wave turbulence. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	126
86	Turbulent equipartition theory of toroidal momentum pinch. <i>Physics of Plasmas</i> , 2008, 15, 055902.	1.9	44
87	Turbulent Equipartition and Homogenization of Plasma Angular Momentum. <i>Physical Review Letters</i> , 2008, 100, 135001.	7.8	53
88	Front propagation and critical gradient transport models. <i>Physics of Plasmas</i> , 2007, 14, .	1.9	68
89	Spatial and spectral evolution of turbulence. <i>Physics of Plasmas</i> , 2007, 14, 055902.	1.9	16
90	Intrinsic rotation and electric field shear. <i>Physics of Plasmas</i> , 2007, 14, 042306.	1.9	195

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91	Nonlinear gyrokinetic theory of toroidal momentum pinch. Physics of Plasmas, 2007, 14, .	1.9	165
92	Spatial and Spectral evolution of Turbulence Spectra. AIP Conference Proceedings, 2006, , .	0.4	0
93	Radial transport of fluctuation energy in a two-field model of drift-wave turbulence. Physics of Plasmas, 2006, 13, 052306.	1.9	37
94	Nonlinear Triad Interactions and the Mechanism of Spreading in Drift-Wave Turbulence. Physical Review Letters, 2006, 97, 024502.	7.8	22
95	On the dynamics of edge-core coupling. Physics of Plasmas, 2005, 12, 090903.	1.9	44
96	Dynamics of turbulence spreading in magnetically confined plasmas. Physics of Plasmas, 2005, 12, 032303.	1.9	107
97	Streamer formation and collapse in electron temperature gradient driven turbulence. Physics of Plasmas, 2004, 11, 572-583.	1.9	15
98	Nonlinear elongation of two-dimensional structures in electron temperature gradient driven turbulence. Physics of Plasmas, 2004, 11, 4973-4982.	1.9	16
99	Hamiltonian structure of the fluid electron temperature gradient driven mode. Physics of Plasmas, 2004, 11, 332-333.	1.9	6
100	Non-perturbative models of intermittency in drift-wave turbulence: towards a probabilistic theory of anomalous transport. Nuclear Fusion, 2003, 43, 961-968.	3.5	37
101	Investigations of the role of nonlinear couplings in structure formation and transport regulation: experiment, simulation, and theory. Nuclear Fusion, 2003, 43, 761-780.	3.5	34
102	Radial motion of highly conducting sphere in magnetic field. Journal of Mathematical Physics, 2000, 41, 2851-2857.	1.1	0