

Alexey Mishchenko

List of Publications by Year in descending order

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60
papers

1,083
citations

394421

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60
all docs

60
docs citations

60
times ranked

755
citing authors

#	ARTICLE	IF	CITATIONS
1	Multi-scale analysis of global electromagnetic instabilities in ITER pre-fusion-power operation plasmas. Nuclear Fusion, 2022, 62, 112007.	3.5	5
2	Tokamak ITG-KBM transition benchmarking with the mixed variables/pullback transformation electromagnetic gyrokinetic scheme. Physics of Plasmas, 2021, 28, 034501.	1.9	6
3	Gyrokinetic investigation of Alfvén instabilities in the presence of turbulence. Plasma Physics and Controlled Fusion, 2021, 63, 065009.	2.1	20
4	Numerics and computation in gyrokinetic simulations of electromagnetic turbulence with global particle-in-cell codes. Plasma Physics and Controlled Fusion, 2021, 63, 084007.	2.1	8
5	W7-X and the sawtooth instability: towards realistic simulations of current-driven magnetic reconnection. Nuclear Fusion, 2021, 61, 086001.	3.5	5
6	Gyrokinetic investigation of the nonlinear interaction of Alfvén instabilities and energetic particle-driven geodesic acoustic modes. Physics of Plasmas, 2021, 28, 072504.	1.9	10
7	Orb5: A global electromagnetic gyrokinetic code using the PIC approach in toroidal geometry. Computer Physics Communications, 2020, 251, 107072.	7.5	66
8	Nonlinear gyrokinetic PIC simulations in stellarators with the code EUTERPE. Journal of Plasma Physics, 2020, 86, .	2.1	18
9	A new frontier in laboratory physics: magnetized electron-positron plasmas. Journal of Plasma Physics, 2020, 86, .	2.1	31
10	Linear gyrokinetics of electron-positron plasmas in closed field-line systems. Journal of Plasma Physics, 2020, 86, .	2.1	5
11	Effect of the electron redistribution on the nonlinear saturation of Alfvén eigenmodes and the excitation of zonal flows. Journal of Plasma Physics, 2020, 86, .	2.1	9
12	Gyrokinetic investigation of the damping channels of Alfvén modes in ASDEX Upgrade. Physics of Plasmas, 2020, 27, 042501.	1.9	17
13	The MHD continuum with a radial electric field. Physics of Plasmas, 2020, 27, .	1.9	5
14	Local gyrokinetic stability theory of plasmas of arbitrary degree of neutrality. Journal of Plasma Physics, 2019, 85, .	2.1	6
15	Linear gyrokinetic studies with ORB5 en route to pair plasmas. Journal of Plasma Physics, 2019, 85, .	2.1	4
16	Verification and validation of integrated simulation of energetic particles in fusion plasmas. Nuclear Fusion, 2019, 59, 066006.	3.5	40
17	An iterative approach to an arbitrarily short-wavelength solver in global gyrokinetic simulations. Journal of Plasma Physics, 2019, 85, .	2.1	4
18	Reduction of the statistical error in electromagnetic gyrokinetic particle-in-cell simulations. Journal of Plasma Physics, 2019, 85, .	2.1	14

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19	Kinetic infernal modes for Wendelstein 7-X-like ν -profiles. Journal of Plasma Physics, 2019, 85, .	2.1	7
20	Pullback scheme implementation in ORB5. Computer Physics Communications, 2019, 238, 194-202.	7.5	25
21	Global turbulence features across marginality and non-local pedestal-core interactions. Plasma Physics and Controlled Fusion, 2019, 61, 034003.	2.1	9
22	Electrostatic stability of electron-positron plasmas in dipole geometry. Journal of Plasma Physics, 2018, 84, .	2.1	10
23	Gyrokinetic stability of electron-positron-ion plasmas. Journal of Plasma Physics, 2018, 84, .	2.1	10
24	Nonlinear gyrokinetic simulation of fast ion-driven modes including continuum interaction. Physics of Plasmas, 2018, 25, 012301.	1.9	1
25	Mode excitation by an antenna in global gyrokinetic simulations. Journal of Physics: Conference Series, 2018, 1125, 012017.	0.4	0
26	Linear electrostatic gyrokinetics for electron-positron plasmas. Journal of Plasma Physics, 2018, 84, .	2.1	7
27	Benchmark of gyrokinetic, kinetic MHD and gyrofluid codes for the linear calculation of fast particle driven TAE dynamics. Nuclear Fusion, 2018, 58, 126027.	3.5	40
28	Nonlinear interplay of Alfvén instabilities and energetic particles in tokamaks. Plasma Physics and Controlled Fusion, 2017, 59, 054004.	2.1	10
29	Semianalytical calculation of the zonal-flow oscillation frequency in stellarators. Plasma Physics and Controlled Fusion, 2017, 59, 065005.	2.1	13
30	Toroidal Alfvén eigenmodes with nonlinear gyrokinetic and fluid hybrid models. Physics of Plasmas, 2017, 24, 022508.	1.9	9
31	Mitigation of the cancellation problem in the gyrokinetic particle-in-cell simulations of global electromagnetic modes. Physics of Plasmas, 2017, 24, 081206.	1.9	19
32	An explicit large time step particle-in-cell scheme for nonlinear gyrokinetic simulations in the electromagnetic regime. Physics of Plasmas, 2016, 23, .	1.9	24
33	Linear gyrokinetic particle-in-cell simulations of Alfvén instabilities in tokamaks. Physics of Plasmas, 2016, 23, 012108.	1.9	17
34	A hierarchy of electromagnetic gyrokinetic and fluid hybrid models for the simulation of global modes. Plasma Physics and Controlled Fusion, 2015, 57, 054013.	2.1	6
35	Global linear gyrokinetic particle-in-cell simulations including electromagnetic effects in shaped plasmas. Nuclear Fusion, 2015, 55, 053006.	3.5	13
36	Pullback transformation in gyrokinetic electromagnetic simulations. Physics of Plasmas, 2014, 21, .	1.9	39

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37	New variables for gyrokinetic electromagnetic simulations. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	24
38	Fluid electron, gyrokinetic ion simulations of linear internal kink and energetic particle modes. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	17
39	Gyrokinetic particle-in-cell simulations of Alfvén eigenmodes in presence of continuum effects. <i>Physics of Plasmas</i> , 2014, 21, 052114.	1.9	7
40	Global hybrid-gyrokinetic simulations of fast-particle effects on Alfvén Eigenmodes in stellarators. <i>Nuclear Fusion</i> , 2014, 54, 104003.	3.5	8
41	Technical challenges in the construction of the steady-state stellarator Wendelstein 7-X. <i>Nuclear Fusion</i> , 2013, 53, 126001.	3.5	77
42	Global gyrokinetic particle-in-cell simulations of internal kink instabilities. <i>Physics of Plasmas</i> , 2012, 19, 122104.	1.9	20
43	Zonal flows in stellarators in an ambient radial electric field. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	19
44	Oscillations of zonal flows in stellarators. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 054006.	2.1	27
45	Higher-order energy-conserving gyrokinetic theory. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	10
46	Global particle-in-cell simulations of plasma pressure effects on Alfvénic modes. <i>Physics of Plasmas</i> , 2011, 18, 012504.	1.9	12
47	Particle Transport of LHD. <i>Fusion Science and Technology</i> , 2010, 58, 70-90.	1.1	25
48	Simulation of Residual Zonal Flow Levels in Stellarators Including a Radial Electric Field. <i>Contributions To Plasma Physics</i> , 2010, 50, 766-769.	1.1	15
49	Global particle-in-cell simulations of fast-particle effects on shear Alfvén waves. <i>Physics of Plasmas</i> , 2009, 16, 082105.	1.9	50
50	Guiding-center recursive Vlasov and Lie-transform methods in plasma physics. <i>Journal of Plasma Physics</i> , 2009, 75, 675-696.	2.1	15
51	Global particle-in-cell simulations of Alfvénic modes. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	34
52	From kinetic MHD in stellarators to a fully kinetic description of wave particle interaction. , 2008, , .		16
53	Collisionless dynamics of zonal flows in stellarator geometry. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	38
54	Curvature particle pinch in tokamak and stellarator geometry. <i>Physics of Plasmas</i> , 2007, 14, 102308.	1.9	7

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55	A many-particle approach to the gyro-kinetic theory. Journal of Plasma Physics, 2007, 73, 757-772.	2.1	3
56	Electromagnetic gyrokinetic PIC simulation with an adjustable control variates method. Journal of Computational Physics, 2007, 225, 568-590.	3.8	54
57	Global linear gyrokinetic particle-in-cell simulations of fine-scale modes in a tokamak. AIP Conference Proceedings, 2006, , .	0.4	3
58	Particle simulations with a generalized gyrokinetic solver. Physics of Plasmas, 2005, 12, 062305.	1.9	27
59	Conventional \hat{f} -particle simulations of electromagnetic perturbations with finite elements. Physics of Plasmas, 2004, 11, 5480-5486.	1.9	42
60	Linear and nonlinear excitation of TAE modes by external electromagnetic perturbations using ORB5. Plasma Physics and Controlled Fusion, 0, , .	2.1	1