

Sugama Hideo

List of Publications by Year in descending order

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120
papers

3,220
citations

136950

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175258

52
g-index

123
all docs

123
docs citations

123
times ranked

1053
citing authors

#	ARTICLE	IF	CITATIONS
1	Polarization and magnetization in collisional and turbulent transport processes. Physics of Plasmas, 2022, 29, 052509.	1.9	1
2	Prediction of temperature profiles in helical plasmas by integrated code coupled with gyrokinetic transport models. Plasma Physics and Controlled Fusion, 2022, 64, 085001.	2.1	0
3	The Eulerian variational formulation of the gyrokinetic system in general spatial coordinates. Physics of Plasmas, 2021, 28, .	1.9	3
4	Neoclassical transport simulations with an improved model collision operator. Physics of Plasmas, 2021, 28, 064501.	1.9	4
5	Impact of Magnetic Field Configuration on Heat Transport in Stellarators and Heliotrons. Physical Review Letters, 2021, 127, 225001.	7.8	8
6	Benchmark of a new multi-ion-species collision operator for Γ Monte Carlo neoclassical simulation. Computer Physics Communications, 2020, 255, 107249.	7.5	7
7	Reduced models of turbulent transport in helical plasmas including effects of zonal flows and trapped electrons. Journal of Plasma Physics, 2020, 86, .	2.1	8
8	Gyrokinetic simulations for turbulent transport of multi-ion-species plasmas in helical systems. Physics of Plasmas, 2020, 27, 052501.	1.9	10
9	Improved linearized model collision operator for the highly collisional regime. Physics of Plasmas, 2019, 26, .	1.9	15
10	Modeling of turbulent particle and heat transport in helical plasmas based on gyrokinetic analysis. Physics of Plasmas, 2019, 26, 012510.	1.9	7
11	Recent Progress in the Numerical Simulation Reactor Research Project. Plasma and Fusion Research, 2019, 14, 3503059-3503059.	0.7	0
12	Transport Simulation for Helical Plasmas by use of Gyrokinetic Transport Model. Plasma and Fusion Research, 2019, 14, 3403061-3403061.	0.7	5
13	Simulation studies on temperature profile stiffness in ITG turbulent transport of helical plasmas for flux-matching technique. Physics of Plasmas, 2018, 25, .	1.9	9
14	Eulerian variational formulations and momentum conservation laws for kinetic plasma systems. Physics of Plasmas, 2018, 25, 102506.	1.9	7
15	Multi-machine analysis of turbulent transport in helical systems via gyrokinetic simulation. Nuclear Fusion, 2017, 57, 066010.	3.5	15
16	Moderation of neoclassical impurity accumulation in high temperature plasmas of helical devices. Nuclear Fusion, 2017, 57, 016016.	3.5	22
17	Conservation laws for collisional and turbulent transport processes in toroidal plasmas with large mean flows. Physics of Plasmas, 2017, 24, 020701.	1.9	10
18	Extension of the operational regime of the LHD towards a deuterium experiment. Nuclear Fusion, 2017, 57, 102023.	3.5	116

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19	Benchmark of the local drift-kinetic models for neoclassical transport simulation in helical plasmas. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	11
20	Modern gyrokinetic formulation of collisional and turbulent transport in toroidally rotating plasmas. <i>Reviews of Modern Plasma Physics</i> , 2017, 1, 1.	4.1	18
21	Isotope Effects on Trapped-Electron-Mode Driven Turbulence and Zonal Flows in Helical and Tokamak Plasmas. <i>Physical Review Letters</i> , 2017, 118, 165002.	7.8	82
22	Microinstabilities in hydrogen- and helium-dominated multi-ion-species plasmas in LHD. <i>Plasma Physics and Controlled Fusion</i> , 2017, 59, 044013.	2.1	10
23	Benchmark of the Bootstrap Current Simulation in Helical Plasmas. <i>Plasma and Fusion Research</i> , 2017, 12, 1203004-1203004.	0.7	4
24	Impacts of External Momentum Torque on Impurity Particle Transport in LHD. <i>Plasma and Fusion Research</i> , 2017, 12, 1203039-1203039.	0.7	4
25	A Reduced Transport Model for Ion Heat Diffusivity by Gyro-Kinetic Analysis with Kinetic Electrons in Helical Plasmas. <i>Plasma and Fusion Research</i> , 2017, 12, 1303035-1303035.	0.7	7
26	Validation studies of gyrokinetic ITC and TEM turbulence simulations in a JT-60U tokamak using multiple flux matching. <i>Nuclear Fusion</i> , 2016, 56, 086010.	3.5	27
27	Radially local approximation of the drift kinetic equation. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	6
28	Fluid simulation of tokamak ion temperature gradient turbulence with zonal flow closure model. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	4
29	Impact of hydrogen isotope species on microinstabilities in helical plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2016, 58, 074008.	2.1	25
30	Improved collision operator for plasma kinetic simulations with multi-species ions and electrons. <i>Computer Physics Communications</i> , 2015, 197, 61-72.	7.5	23
31	Nonlinear Entropy Transfer in ETG-TEM Turbulence via TEM Driven Zonal Flows. <i>Plasma and Fusion Research</i> , 2015, 10, 1403047-1403047.	0.7	1
32	Development of Linearized Collision Operator for Multiple Ion Species in Gyrokinetic Flux-Tube Simulations. <i>Plasma and Fusion Research</i> , 2015, 10, 1403058-1403058.	0.7	13
33	Effects of collisions on conservation laws in gyrokinetic field theory. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	12
34	Effects of magnetic drift tangential to magnetic surfaces on neoclassical transport in non-axisymmetric plasmas. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	23
35	Flux tube train model for local turbulence simulation of toroidal plasmas. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	8
36	Turbulent transport of heat and particles in a high ion temperature discharge of the Large Helical Device. <i>Nuclear Fusion</i> , 2015, 55, 043024.	3.5	22

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37	Electromagnetic gyrokinetic simulation of turbulence in torus plasmas. Journal of Plasma Physics, 2015, 81, .	2.1	32
38	Flow damping due to stochastization of the magnetic field. Nature Communications, 2015, 6, 5816.	12.8	28
39	Overview of transport and MHD stability study: focusing on the impact of magnetic field topology in the Large Helical Device. Nuclear Fusion, 2015, 55, 104018.	3.5	10
40	Extended gyrokinetic field theory for time-dependent magnetic confinement fields. Physics of Plasmas, 2014, 21, 012515.	1.9	5
41	Electromagnetic gyrokinetic turbulence in finite-beta helical plasmas. Physics of Plasmas, 2014, 21, 055905.	1.9	20
42	Verification of gyrokinetic microstability codes with an LHD configuration. Physics of Plasmas, 2014, 21, 112305.	1.9	4
43	Quasilinear carbon transport in an impurity hole plasma in LHD. Physics of Plasmas, 2014, 21, .	1.9	35
44	Exploring phase space turbulence in magnetic fusion plasmas. Journal of Physics: Conference Series, 2014, 510, 012045.	0.4	1
45	How to apply a turbulent transport model based on a gyrokinetic simulation for the ion temperature gradient mode in helical plasmas. Journal of Physics: Conference Series, 2014, 561, 012020.	0.4	8
46	Conservation of energy and momentum in nonrelativistic plasmas. Physics of Plasmas, 2013, 20, .	1.9	10
47	A reduced model for ion temperature gradient turbulent transport in helical plasmas. Physics of Plasmas, 2013, 20, .	1.9	40
48	Simulation studies of the effect of $\langle i \rangle E \langle /i \rangle \tilde{A} - \langle i \rangle B \langle /i \rangle$ rotation on neoclassical toroidal viscosity in tokamaks with small magnetic perturbations. Nuclear Fusion, 2013, 53, 113033.	3.5	9
49	Gyrokinetic turbulence simulations of high-beta tokamak and helical plasmas with full-kinetic and hybrid models. Nuclear Fusion, 2013, 53, 053007.	3.5	27
50	Gyrokinetic simulations of entropy transfer in high ion temperature LHD plasmas. Plasma Physics and Controlled Fusion, 2013, 55, 014017.	2.1	2
51	Extension of operation regimes and investigation of three-dimensional currentless plasmas in the Large Helical Device. Nuclear Fusion, 2013, 53, 104015.	3.5	35
52	Relation among ITG Turbulence, Zonal Flows, and Transport in Helical Plasmas. Plasma and Fusion Research, 2013, 8, 1203019-1203019.	0.7	3
53	Nonlinear entropy transfer via zonal flows in gyrokinetic plasma turbulence. Physics of Plasmas, 2012, 19, .	1.9	56
54	Collisionless kinetic-fluid simulation of zonal flows in non-circular tokamaks. Physics of Plasmas, 2012, 19, 092504.	1.9	10

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55	Gyrokinetic turbulent transport simulation of a high ion temperature plasma in large helical device experiment. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	54
56	Gyrokinetic simulation studies for non-axisymmetric plasma confinement: turbulent transport and entropy transfer. <i>Journal of Physics: Conference Series</i> , 2012, 399, 012020.	0.4	0
57	Kinetic Simulations of Neoclassical and Anomalous Transport Processes in Helical Systems. <i>Plasma and Fusion Research</i> , 2012, 7, 2403094-2403094.	0.7	4
58	Zonal Flow Dynamics and Control of Turbulent Transport in Stellarators. <i>Physical Review Letters</i> , 2011, 107, 245002.	7.8	35
59	Quasisymmetric toroidal plasmas with large mean flows. <i>Physics of Plasmas</i> , 2011, 18, 082505.	1.9	11
60	Neoclassical Toroidal Viscosity Calculations in Tokamaks Using a $\hat{\Gamma}$ Monte Carlo Simulation and Their Verifications. <i>Physical Review Letters</i> , 2011, 107, 055001.	7.8	25
61	Effects of equilibrium-scale radial electric fields on zonal flows and turbulence in helical configurations. <i>Nuclear Fusion</i> , 2011, 51, 123003.	3.5	34
62	Calculation of neoclassical toroidal viscosity in tokamaks with broken toroidal symmetry. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 054018.	2.1	21
63	Momentum balance and radial electric fields in axisymmetric and nonaxisymmetric toroidal plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 024004.	2.1	59
64	Effects of parallel dynamics on vortex structures in electron temperature gradient driven turbulence. <i>Physics of Plasmas</i> , 2011, 18, 012303.	1.9	3
65	Linear Gyrokinetic Analyses of ITG Modes and Zonal Flows in LHD with High Ion Temperature. <i>Plasma and Fusion Research</i> , 2011, 6, 1403001-1403001.	0.7	34
66	Benchmark test of drift-kinetic and gyrokinetic codes through neoclassical transport simulations. <i>Computer Physics Communications</i> , 2010, 181, 1069-1076.	7.5	40
67	Enhancement of Residual Zonal Flows in Helical Systems with Equilibrium Radial Electric Fields. <i>Contributions To Plasma Physics</i> , 2010, 50, 571-575.	1.1	8
68	Formation of coherent vortex streets and transport reduction in electron temperature gradient driven turbulence. <i>Physics of Plasmas</i> , 2010, 17, 042306.	1.9	7
69	A convergence study for the Laguerre expansion in the moment equation method for neoclassical transport in general toroidal plasmas. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	10
70	Gyrokinetic Vlasov Code Including Full Three-dimensional Geometry of Experiments. <i>Plasma and Fusion Research</i> , 2010, 5, 016-016.	0.7	37
71	Linearized model collision operators for multiple ion species plasmas and gyrokinetic entropy balance equations. <i>Physics of Plasmas</i> , 2009, 16, 112503.	1.9	95
72	Turbulence-driven zonal flows in helical systems with radial electric fields. <i>Physics of Plasmas</i> , 2009, 16, 056101.	1.9	33

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73	Development of net-current free heliotron plasmas in the Large Helical Device. Nuclear Fusion, 2009, 49, 104015.	3.5	54
74	Moment-equation methods for calculating neoclassical transport coefficients in general toroidal plasmas. Physics of Plasmas, 2008, 15, 042502.	1.9	29
75	Reduction of Turbulent Transport with Zonal Flows Enhanced in Helical Systems. Physical Review Letters, 2008, 100, 195002.	7.8	89
76	Gyrokinetic Studies of Ion Temperature Gradient Turbulence and Zonal Flows in Helical Systems. Plasma and Fusion Research, 2008, 3, 041-041.	0.7	15
77	Development of a Non-Local Neoclassical Transport Code for Helical Configurations. Plasma and Fusion Research, 2008, 3, S1062-S1062.	0.7	50
78	Simulation studies on the GAM oscillation and damping in helical configurations. Nuclear Fusion, 2007, 47, 1258-1264.	3.5	19
79	Gyrokinetic simulation of zonal flows and ion temperature gradient turbulence in helical systems. Nuclear Fusion, 2007, 47, 1383-1390.	3.5	49
80	Collisionless kinetic-fluid model of zonal flows in toroidal plasmas. Physics of Plasmas, 2007, 14, 022502.	1.9	37
81	Zonal flows and ion temperature gradient instabilities in multiple-helicity magnetic fields. Physics of Plasmas, 2007, 14, 122505.	1.9	35
82	Collisionless damping of geodesic acoustic modes. Journal of Plasma Physics, 2006, 72, 825.	2.1	129
83	Gyrokinetic-Vlasov simulations of the ion temperature gradient turbulence in tokamak and helical systems. AIP Conference Proceedings, 2006, , .	0.4	0
84	Gyrokinetic and Gyrofluid Models for Zonal Flow Dynamics in Ion and Electron Temperature Gradient Turbulence. AIP Conference Proceedings, 2006, , .	0.4	0
85	Non-Local Simulation of the Formation of Neoclassical Ambipolar Electric Field in Non-Axisymmetric Configurations. Plasma and Fusion Research, 2006, 1, 002-002.	0.7	28
86	Simulations of Zonal Flow Damping and Electron Bernstein Waves in Helical Systems. AIP Conference Proceedings, 2006, , .	0.4	1
87	Kinetic simulations of turbulent fusion plasmas. Comptes Rendus Physique, 2006, 7, 650-669.	0.9	29
88	Velocityâ€‘space structures of distribution function in toroidal ion temperature gradient turbulence. Nuclear Fusion, 2006, 46, 24-32.	3.5	183
89	Collisionless damping of zonal flows in helical systems. Physics of Plasmas, 2006, 13, 012501.	1.9	188
90	Dynamics of Zonal Flows in Helical Systems. Physical Review Letters, 2005, 94, 115001.	7.8	82

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91	Non-local neoclassical transport simulation of geodesic acoustic mode. Nuclear Fusion, 2005, 45, 1362-1368.	3.5	37
92	Vlasov and Drift Kinetic Simulation Methods Based on the Symplectic Integrator. Transport Theory and Statistical Physics, 2005, 34, 287-309.	0.4	12
93	Confinement characteristics of the quasi-axisymmetric stellarator CHS-qa. Nuclear Fusion, 2004, 44, 575-581.	3.5	13
94	Kinetic simulation of steady states of ion temperature gradient driven turbulence with weak collisionality. Physics of Plasmas, 2004, 11, 1476-1483.	1.9	80
95	Study of electromagnetic microinstabilities in helical systems with the stellarator expansion method. Physics of Plasmas, 2004, 11, 3068-3077.	1.9	10
96	Comparison between kinetic and fluid simulations of slab ion temperature gradient driven turbulence. Physics of Plasmas, 2003, 10, 726-736.	1.9	30
97	Impact of heat deposition profile on global confinement of NBI heated plasmas in the LHD. Nuclear Fusion, 2003, 43, 749-755.	3.5	39
98	Kinetic simulation of a quasisteady state in collisionless ion temperature gradient driven turbulence. Physics of Plasmas, 2002, 9, 3659-3662.	1.9	47
99	Metamorphosis of plasma turbulenceâ€“shear-flow dynamics through a transcritical bifurcation. Physical Review E, 2002, 66, 066408.	2.1	12
100	How to calculate the neoclassical viscosity, diffusion, and current coefficients in general toroidal plasmas. Physics of Plasmas, 2002, 9, 4637-4653.	1.9	93
101	Lagrangian neoclassical transport theory applied to the region near the magnetic axis. Physics of Plasmas, 2002, 9, 3946-3960.	1.9	12
102	Microinstability studies for the large helical device. Nuclear Fusion, 2002, 42, 1047-1054.	3.5	19
103	A Nondissipative Simulation Method for the Drift Kinetic Equation. Journal of the Physical Society of Japan, 2001, 70, 3565-3576.	1.6	17
104	Energy confinement and thermal transport characteristics of net current free plasmas in the Large Helical Device. Nuclear Fusion, 2001, 41, 901-908.	3.5	56
105	Experimental studies towards long pulse steady state operation in LHD. Nuclear Fusion, 2001, 41, 779-790.	3.5	16
106	Overview of LHD experiments. Nuclear Fusion, 2001, 41, 1355-1367.	3.5	53
107	Collisionless kinetic-fluid closure and its application to the three-mode ion temperature gradient driven system. Physics of Plasmas, 2001, 8, 2617-2628.	1.9	43
108	Ion Temperature Gradient Modes and Neoclassical Ripple Transport in Multiple-Helicity Fields. Journal of the Physical Society of Japan, 2001, 70, 2235-2238.	1.6	8

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109	Overview of long pulse operation in the Large Helical Device. Nuclear Fusion, 2000, 40, 1157-1166.	3.5	19
110	Effects of finite beta and radial electric fields on neoclassical transport in the Large Helical Device. Nuclear Fusion, 1997, 37, 1463-1475.	3.5	6
111	L-H confinement mode dynamics in three-dimensional state space. Plasma Physics and Controlled Fusion, 1995, 37, 345-362.	2.1	56
112	Vlasov Equation in the Stochastic Magnetic Field. Journal of the Physical Society of Japan, 1993, 62, 514-523.	1.6	2
113	Poloidal shear flow effect on ideal interchange instability. Nuclear Fusion, 1992, 32, 1647-1652.	3.5	6
114	Statistical Analysis of Anomalous Transport in Resistive Interchange Turbulence. Journal of the Physical Society of Japan, 1992, 61, 3166-3177.	1.6	3
115	Transition from resistive to $\hat{\nu}$ -driven turbulence in stellarator systems. Physics of Fluids B, 1991, 3, 1638-1643.	1.7	3
116	Study of Two-Dimensional Interchange Turbulence. Journal of the Physical Society of Japan, 1990, 59, 3937-3951.	1.6	13
117	Relation between Growth Rate of the Suydam Mode and That of Low Mode Number Interchange Instability. Journal of the Physical Society of Japan, 1989, 58, 1128-1130.	1.6	21
118	No Sign Dependence of Ambipolar Radial Electric Field Effect on Resistive Fluid Turbulence. Journal of the Physical Society of Japan, 1989, 58, 3859-3860.	1.6	7
119	Ion-Temperature-Gradient-Driven Drift Mode Coupled to the Resistive Interchange Mode in a Heliotron/Torsatron. Journal of the Physical Society of Japan, 1989, 58, 4265-4268.	1.6	7
120	A Transport Study for Resistive Interchange Mode Turbulence Based on a Renormalized Theory. Journal of the Physical Society of Japan, 1988, 57, 2010-2025.	1.6	21