

Taik Soo Hahm

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9590109/publications.pdf>

Version: 2024-02-01

121
papers

10,584
citations

47006

47
h-index

34986

98
g-index

121
all docs

121
docs citations

121
times ranked

2330
citing authors

#	ARTICLE	IF	CITATIONS
1	Zonal flows in plasma—a review. <i>Plasma Physics and Controlled Fusion</i> , 2005, 47, R35-R161.	2.1	1,682
2	Turbulent Transport Reduction by Zonal Flows: Massively Parallel Simulations. , 1998, 281, 1835-1837.		870
3	Foundations of nonlinear gyrokinetic theory. <i>Reviews of Modern Physics</i> , 2007, 79, 421-468.	45.6	791
4	Flow shear induced fluctuation suppression in finite aspect ratio shaped tokamak plasma. <i>Physics of Plasmas</i> , 1995, 2, 1648-1651.	1.9	548
5	Nonlinear gyrokinetic equations for tokamak microturbulence. <i>Physics of Fluids</i> , 1988, 31, 2670-2673.	1.4	391
6	On the dynamics of turbulent transport near marginal stability. <i>Physics of Plasmas</i> , 1995, 2, 3640-3649.	1.9	330
7	Shearing rate of time-dependent $E \times B$ flow. <i>Physics of Plasmas</i> , 1999, 6, 922-926.	1.9	248
8	Effects of Collisional Zonal Flow Damping on Turbulent Transport. <i>Physical Review Letters</i> , 1999, 83, 3645-3648.	7.8	237
9	Nonlinear gyrokinetic theory for finite-beta plasmas. <i>Physics of Fluids</i> , 1988, 31, 1940.	1.4	235
10	Forced magnetic reconnection. <i>Physics of Fluids</i> , 1985, 28, 2412.	1.4	225
11	Size Scaling of Turbulent Transport in Magnetically Confined Plasmas. <i>Physical Review Letters</i> , 2002, 88, 195004.	7.8	210
12	The dynamics of marginality and self-organized criticality as a paradigm for turbulent transport. <i>Physics of Plasmas</i> , 1996, 3, 1858-1866.	1.9	209
13	Turbulence spreading into the linearly stable zone and transport scaling. <i>Plasma Physics and Controlled Fusion</i> , 2004, 46, A323-A333.	2.1	185
14	Turbulent Fluctuations in TFTR Configurations with Reversed Magnetic Shear. <i>Physical Review Letters</i> , 1996, 77, 3145-3148.	7.8	178
15	Physics of zonal flows. <i>Physics of Plasmas</i> , 2006, 13, 055502.	1.9	172
16	Nonlinear gyrokinetic theory of toroidal momentum pinch. <i>Physics of Plasmas</i> , 2007, 14, .	1.9	165
17	Transport of parallel momentum by collisionless drift wave turbulence. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	126
18	Properties of ion temperature gradient drift instabilities in H -mode plasmas. <i>Physics of Fluids B</i> , 1989, 1, 1185-1192.	1.7	119

#	ARTICLE	IF	CITATIONS
19	Roles of Electric Field Shear and Shafranov Shift in Sustaining High Confinement in Enhanced Reversed Shear Plasmas on the TFTR Tokamak. <i>Physical Review Letters</i> , 1997, 78, 2972-2975.	7.8	119
20	Gyro-kinetic simulation of global turbulent transport properties in tokamak experiments. <i>Physics of Plasmas</i> , 2006, 13, 092505.	1.9	117
21	Turbulence spreading and transport scaling in global gyrokinetic particle simulations. <i>Physics of Plasmas</i> , 2004, 11, 1099-1108.	1.9	116
22	Three-dimensional hybrid gyrokinetic-magnetohydrodynamics simulation. <i>Physics of Fluids B</i> , 1992, 4, 2033-2037.	1.7	115
23	Nonlinear gyrokinetic equations for turbulence in core transport barriers. <i>Physics of Plasmas</i> , 1996, 3, 4658-4664.	1.9	112
24	Local transport barrier formation and relaxation in reverse-shear plasmas on the Tokamak Fusion Test Reactor. <i>Physics of Plasmas</i> , 1997, 4, 1736-1744.	1.9	109
25	Dynamics of turbulence spreading in magnetically confined plasmas. <i>Physics of Plasmas</i> , 2005, 12, 032303.	1.9	107
26	Zonal flow measurements concept I. <i>Plasma Physics and Controlled Fusion</i> , 2000, 42, A205-A210.	2.1	101
27	Rotation shear induced fluctuation decorrelation in a toroidal plasma. <i>Physics of Plasmas</i> , 1994, 1, 2940-2944.	1.9	99
28	Dynamics of Transition to Enhanced Confinement in Reversed Magnetic Shear Discharges. <i>Physical Review Letters</i> , 1997, 78, 1472-1475.	7.8	93
29	Physics behind transport barrier theory and simulations. <i>Plasma Physics and Controlled Fusion</i> , 2002, 44, A87-A101.	2.1	84
30	Linear stability of tearing modes. <i>Physics of Fluids</i> , 1986, 29, 3230.	1.4	83
31	Edge Temperature Gradient as Intrinsic Rotation Drive in Alcator C -Mod Tokamak Plasmas. <i>Physical Review Letters</i> , 2011, 106, 215001.	7.8	83
32	Nonlinear flow generation by electrostatic turbulence in tokamaks. <i>Physics of Plasmas</i> , 2010, 17, 072511.	1.9	81
33	Compressed ion temperature gradient turbulence in diverted tokamak edge. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	80
34	Gyrokinetic simulations in general geometry and applications to collisional damping of zonal flows. <i>Physics of Plasmas</i> , 2000, 7, 1857-1862.	1.9	77
35	Mesoscopic Transport Events and the Breakdown of Fick's Law for Turbulent Fluxes. <i>Journal of the Korean Physical Society</i> , 2018, 73, 747-792.	0.7	77
36	Mechanisms for generating toroidal rotation in tokamaks without external momentum input. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	74

#	ARTICLE	IF	CITATIONS
37	Nonlocal properties of gyrokinetic turbulence and the role of $E\tilde{A}-B$ flow shear. <i>Physics of Plasmas</i> , 2007, 14, 072306.	1.9	69
38	Physics of burning plasmas in toroidal magnetic confinement devices. <i>Plasma Physics and Controlled Fusion</i> , 2006, 48, B15-B28.	2.1	68
39	Weak turbulence theory of collisionless trapped electron driven drift instability in tokamaks. <i>Physics of Fluids B</i> , 1991, 3, 989-999.	1.7	65
40	Shear-Alfvén waves in gyrokinetic plasmas. <i>Physics of Plasmas</i> , 2001, 8, 4435-4440.	1.9	65
41	Wave-Particle Decorrelation and Transport of Anisotropic Turbulence in Collisionless Plasmas. <i>Physical Review Letters</i> , 2007, 99, 265003.	7.8	61
42	Measurement of Turbulence Decorrelation during Transport Barrier Evolution in a High-Temperature Fusion Plasma. <i>Physical Review Letters</i> , 2005, 94, 135002.	7.8	60
43	Design Features and Commissioning of the Versatile Experiment Spherical Torus (VEST) at Seoul National University. <i>Plasma Science and Technology</i> , 2013, 15, 244-251.	1.5	57
44	Generalized expression for polarization density. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	55
45	Resistive fluid turbulence in diverted tokamaks and the edge transport barrier in H-mode plasmas. <i>Physics of Fluids</i> , 1987, 30, 133.	1.4	53
46	Turbulent Equipartition and Homogenization of Plasma Angular Momentum. <i>Physical Review Letters</i> , 2008, 100, 135001.	7.8	53
47	Nonlinear Saturation of Toroidal Alfvén Eigenmodes via Ion Compton Scattering. <i>Physical Review Letters</i> , 1995, 74, 266-269.	7.8	52
48	Bounce-averaged kinetic equations and neoclassical polarization density. <i>Physics of Plasmas</i> , 1999, 6, 188-199.	1.9	51
49	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
50	On the dynamics of edge-core coupling. <i>Physics of Plasmas</i> , 2005, 12, 090903.	1.9	44
51	Turbulent equipartition theory of toroidal momentum pinch. <i>Physics of Plasmas</i> , 2008, 15, 055902.	1.9	44
52	Fully electromagnetic nonlinear gyrokinetic equations for tokamak edge turbulence. <i>Physics of Plasmas</i> , 2009, 16, 022305.	1.9	44
53	Toroidal Rotation Driven by the Polarization Drift. <i>Physical Review Letters</i> , 2009, 103, 205003.	7.8	41
54	A novel mechanism for exciting intrinsic toroidal rotation. <i>Physics of Plasmas</i> , 2009, 16, 052302.	1.9	40

#	ARTICLE	IF	CITATIONS
55	Radial transport of fluctuation energy in a two-field model of drift-wave turbulence. <i>Physics of Plasmas</i> , 2006, 13, 052306.	1.9	37
56	The structure and dynamics of electrostatic and magnetostatic drift holes. <i>Physics of Fluids B</i> , 1990, 2, 2048-2063.	1.7	36
57	Self-Consistency Constraints on Turbulent Magnetic Transport and Relaxation in a Collisionless Plasma. <i>Physical Review Letters</i> , 1986, 57, 1899-1902.	7.8	35
58	Local transport in Joint European Tokamak edge-localized, high-confinement mode plasmas with H, D, DT, and T isotopes. <i>Physics of Plasmas</i> , 2000, 7, 5038-5050.	1.9	35
59	Fluctuations and transport due to ion-temperature-gradient-driven instabilities. <i>Physical Review Letters</i> , 1990, 64, 2015-2018.	7.8	33
60	Role of impurity dynamics in resistivity-gradient-driven turbulence and tokamak edge plasma phenomena. <i>Physics of Fluids</i> , 1987, 30, 1452.	1.4	32
61	Status of and prospects for advanced tokamak regimes from multi-machine comparisons using the International Tokamak Physics Activity database. <i>Plasma Physics and Controlled Fusion</i> , 2004, 46, A19-A34.	2.1	31
62	Turbulence spreading in reversed shear plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2006, 48, A409-A418.	2.1	31
63	Nonlinear theory of collisionless trapped ion modes. <i>Physics of Plasmas</i> , 1996, 3, 242-247.	1.9	29
64	Simulation of Fusion Plasmas: Current Status and Future Direction. <i>Plasma Science and Technology</i> , 2007, 9, 312-387.	1.5	29
65	Sheared rotation effects on kinetic stability in enhanced confinement tokamak plasmas, and nonlinear dynamics of fluctuations and flows in axisymmetric plasmas. <i>Physics of Plasmas</i> , 1998, 5, 1815-1821.	1.9	28
66	Transport reduction by shear flows in dynamical models. <i>Physics of Plasmas</i> , 2004, 11, 4554-4558.	1.9	27
67	Effects of plasma turbulence on the nonlinear evolution of magnetic island in tokamak. <i>Nature Communications</i> , 2021, 12, 375.	12.8	27
68	Gyrokinetic simulations of electrostatic microinstabilities with bounce-averaged kinetic electrons for shaped tokamak plasmas. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	26
69	Nonlinear gyrokinetic theory with polarization drift. <i>Physics of Plasmas</i> , 2010, 17, 082304.	1.9	25
70	Poloidal rotation and its relation to the potential vorticity flux. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	24
71	Semicollisional drift-tearing modes in toroidal plasmas. <i>Physics of Fluids</i> , 1986, 29, 1891.	1.4	21
72	Eddy viscosity and laminarization of sheared flow in three dimensional reduced magnetohydrodynamic turbulence. <i>Physics of Plasmas</i> , 2001, 8, 3576-3582.	1.9	21

#	ARTICLE	IF	CITATIONS
73	Role of flow shear in enhanced core confinement regimes. Plasma Physics and Controlled Fusion, 1996, 38, 1427-1431.	2.1	20
74	Theory of fine-scale zonal flow generation from trapped electron mode turbulence. Physics of Plasmas, 2009, 16, 082302.	1.9	20
75	Neoclassical tearing modes in a tokamak. Physics of Fluids, 1988, 31, 3709.	1.4	19
76	A simple model of intrinsic rotation in high confinement regime tokamak plasmas. Physics of Plasmas, 2010, 17, 032509.	1.9	19
77	Microturbulence and flow shear in high-performance JET ITB plasma. Plasma Physics and Controlled Fusion, 2002, 44, 1215-1228.	2.1	18
78	Theory of semicollisional kinetic Alfvén modes in sheared magnetic fields. Physics of Fluids, 1985, 28, 3061.	1.4	17
79	Evidence of a turbulent ExB mixing avalanche mechanism of gas breakdown in strongly magnetized systems. Nature Communications, 2018, 9, 3523.	12.8	17
80	Anisotropic $E \times B$ shearing rate in a magnetic island. Physics of Plasmas, 2021, 28, .	1.9	17
81	Spatial and spectral evolution of turbulence. Physics of Plasmas, 2007, 14, 055902.	1.9	16
82	$E \times B$ flow shear effects on radial correlation length of turbulence and gyroradius scaling of confinement. Physics of Plasmas, 1996, 3, 427-429.	1.9	14
83	Compact formulas for bounce/transit averaging in axisymmetric tokamak geometry. Physics of Plasmas, 2014, 21, 122510.	1.9	14
84	Properties of ion temperature gradient and trapped electron modes in tokamak plasmas with inverted density profiles. Physics of Plasmas, 2017, 24, .	1.9	14
85	Nonlinear theory of trapped electron temperature gradient driven turbulence in flat density H mode plasmas. Physics of Fluids B, 1991, 3, 1445-1451.	1.7	13
86	Atomic physics effects on dissipative toroidal drift wave stability. Physics of Fluids B, 1992, 4, 2567-2576.	1.7	13
87	Effects of profiles on transport reduction in DIII-D and TFTR. Plasma Physics and Controlled Fusion, 1998, 40, 657-660.	2.1	13
88	Gyrokinetic study of slowing-down \pm particles transport due to trapped electron mode turbulence. Physics of Plasmas, 2018, 25, 122305.	1.9	13
89	Flow shear induced Compton scattering of electron drift instability. Physics of Fluids B, 1992, 4, 2801-2806.	1.7	12
90	$E \times B$ shearing rate in quasisymmetric plasmas. Physics of Plasmas, 1997, 4, 4074-4078.	1.9	12

#	ARTICLE	IF	CITATIONS
91	Weak turbulence theory of ion temperature gradient modes for inverted density plasmas. Physics of Fluids B, 1990, 2, 1815-1821.	1.7	11
92	Characteristics of turbulence-driven plasma flow and origin of experimental empirical scalings of intrinsic rotation. Physics of Plasmas, 2011, 18, 042502.	1.9	11
93	Theory of semicollisional drift-interchange modes in cylindrical plasmas. Physics of Fluids, 1985, 28, 2432.	1.4	10
94	Dynamics and fluctuation spectra of electrostatic resistive interchange turbulence. Physics of Fluids, 1986, 29, 2871-2880.	1.4	10
95	Verification of Gyrokinetic Particle Simulation of Device Size Scaling of Turbulent Transport. Plasma Science and Technology, 2012, 14, 1125-1126.	1.5	10
96	ELM-related fluctuations in PBX-M H-modes. Plasma Physics and Controlled Fusion, 1994, 36, A135-A140.	2.1	9
97	Microturbulent drift mode stability before internal transport barrier formation in the Alcator C-Mod radio frequency heated H-mode. Physics of Plasmas, 2005, 12, 072519.	1.9	9
98	Effects of q-profile structure on turbulence spreading: A fluctuation intensity transport analysis. Physics of Plasmas, 2014, 21, .	1.9	9
99	A synthetic diagnostic for validation of electron gyroradius scale turbulence simulations against coherent scattering measurements. Physics of Plasmas, 2010, 17, .	1.9	8
100	Trapped particle dynamics in toroidally rotating plasmas. Physics of Fluids B, 1992, 4, 4046-4050.	1.7	7
101	ExB shear and precession shear induced turbulence suppression and its influence on electron thermal internal transport barrier formation. Physics of Plasmas, 2016, 23, .	1.9	7
102	Small scale coherent vortex generation in drift wave-zonal flow turbulence. Physics of Plasmas, 2015, 22, 122304.	1.9	6
103	Ion Heating from Nonlinear Landau Damping of High Mode Number Toroidal Alfvén Eigenmodes. Plasma Science and Technology, 2015, 17, 534-538.	1.5	6
104	Effect of temperature anisotropy on residual zonal flow level. Physics of Plasmas, 2021, 28, 052303.	1.9	6
105	Theory of neoclassical resistivityâ€gradientâ€driven turbulence. Physics of Fluids B, 1989, 1, 2172-2180.	1.7	5
106	Influence of radial electric field on Alfvénâ€type instabilities. Physics of Plasmas, 1994, 1, 2099-2100.	1.9	5
107	Effect of Turbulence Spreading on Subcritical Turbulence in Inhomogeneous Plasmas. Journal of the Physical Society of Japan, 2005, 74, 2001-2006.	1.6	5
108	Comment on "Anomalous electron heat transport driven by low-frequency electromagnetic turbulence". Physical Review Letters, 1988, 60, 966-966.	7.8	4

#	ARTICLE	IF	CITATIONS
109	Fast ion driven drift instability in reversed shear plasmas. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	4
110	Sheared-flow modes in toroidal geometry. <i>Physics of Plasmas</i> , 2000, 7, 588-595.	1.9	3
111	Physics of Zonal Flows. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	3
112	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
113	In-out asymmetry of zonal flow shear and turbulence reduction. <i>Physics of Plasmas</i> , 2016, 23, 102312.	1.9	3
114	Response to "Comment on "Nonlinear gyrokinetic theory with polarization drift" [Phys. Plasmas 17, 124701 (2010)]. <i>Physics of Plasmas</i> , 2010, 17, 124702.	1.9	2
115	Gyrokinetic studies of fast ion precession driven drift instability in reversed shear plasmas. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	2
116	Extended bounce-kinetic model for trapped electron mode turbulence. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	1
117	Atomic physics effects on tokamak edge drift-tearing modes. <i>Physics of Fluids B</i> , 1993, 5, 3246-3251.	1.7	0
118	Preface: Theory of plasma instabilities: Transport, stability, and their interactions. <i>Physics of Plasmas</i> , 2005, 12, 090901.	1.9	0
119	Spatial and Spectral evolution of Turbulence Spectra. <i>AIP Conference Proceedings</i> , 2006, , .	0.4	0
120	Transport of parallel momentum by collisionless drift wave turbulence. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	0
121	Nonlinear gyrokinetic simulation of saturated turbulence produced by fast ion precession driven drift instability in reversed shear plasmas. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2021, 414, 127632.	2.1	0