Shinsuke Satake

List of Publications by Year in descending order

78 papers	1,012 citations	471509 17 h-index	501196 28 g-index
78 all docs	78 docs citations	78 times ranked	649 citing authors

#	Article	IF	Citations
1	Extension of the operational regime of the LHD towards a deuterium experiment. Nuclear Fusion, 2017, 57, 102023.	3.5	116
2	Development of net-current free heliotron plasmas in the Large Helical Device. Nuclear Fusion, 2009, 49, 104015.	3.5	54
3	Development of a Non-Local Neoclassical Transport Code for Helical Configurations. Plasma and Fusion Research, 2008, 3, S1062-S1062.	0.7	50
4	Core radial electric field and transport in Wendelstein 7-X plasmas. Physics of Plasmas, 2018, 25, .	1.9	47
5	Benchmark test of drift-kinetic and gyrokinetic codes through neoclassical transport simulations. Computer Physics Communications, 2010, 181, 1069-1076.	7.5	40
6	Inter-machine validation study of neoclassical transport modelling in medium- to high-density stellarator-heliotron plasmas. Nuclear Fusion, 2013, 53, 063022.	3.5	40
7	Non-local neoclassical transport simulation of geodesic acoustic mode. Nuclear Fusion, 2005, 45, 1362-1368.	3.5	37
8	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
9	Extended capability of the integrated transport analysis suite, TASK3D-a, for LHD experiment. Nuclear Fusion, 2017, 57, 126016.	3.5	28
10	Neoclassical Toroidal Viscosity Calculations in Tokamaks Using a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î´</mml:mi><mml:mi>f</mml:mi></mml:math>MonteÂCarlo Simulation and Their Verifications. Physical Review Letters, 2011, 107, 055001.	7.8	25
11	Effects of magnetic drift tangential to magnetic surfaces on neoclassical transport in non-axisymmetric plasmas. Physics of Plasmas, 2015, 22, .	1.9	23
12	Moderation of neoclassical impurity accumulation in high temperature plasmas of helical devices. Nuclear Fusion, 2017, 57, 016016.	3.5	22
13	Calculation of neoclassical toroidal viscosity in tokamaks with broken toroidal symmetry. Plasma Physics and Controlled Fusion, 2011, 53, 054018.	2.1	21
14	Gyrokinetic microinstability analysis of high-T _i and high-T _e isotope plasmas in Large Helical Device. Plasma Physics and Controlled Fusion, 2019, 61, 014016.	2.1	21
15	Large tangential electric fields in plasmas close to temperature screening. Plasma Physics and Controlled Fusion, 2018, 60, 074004.	2.1	20
16	Simulation studies on the GAM oscillation and damping in helical configurations. Nuclear Fusion, 2007, 47, 1258-1264.	3.5	19
17	Experimental study of radial electric field and electrostatic potential fluctuation in the Large Helical Device. Plasma Physics and Controlled Fusion, 2010, 52, 124025.	2.1	19
18	Neoclassical transport benchmark of global full-f gyrokinetic simulation in stellarator configurations. Physics of Plasmas, 2018, 25, .	1.9	18

#	Article	IF	Citations
19	Experimental analyses and predictive simulations of toroidal rotation driven by the neoclassical toroidal viscosity in rippled tokamaks. Nuclear Fusion, 2014, 54, 114005.	3.5	17
20	Physics analyses on the core plasma properties in the helical fusion DEMO reactor FFHR-d1. Nuclear Fusion, 2014, 54, 043010.	3.5	15
21	Multi-machine analysis of turbulent transport in helical systems via gyrokinetic simulation. Nuclear Fusion, 2017, 57, 066010.	3.5	15
22	Improved linearized model collision operator for the highly collisional regime. Physics of Plasmas, 2019, 26, .	1.9	15
23	Neoclassical electron transport calculation by using Î´f Monte Carlo method. Physics of Plasmas, 2011, 18, 032511.	1.9	13
24	Particle transport after pellet injection in the TJ-II stellarator. Plasma Physics and Controlled Fusion, 2016, 58, 084004.	2.1	13
25	Lagrangian neoclassical transport theory applied to the region near the magnetic axis. Physics of Plasmas, 2002, 9, 3946-3960.	1.9	12
26	Benchmark of the local drift-kinetic models for neoclassical transport simulation in helical plasmas. Physics of Plasmas, 2017, 24, .	1.9	11
27	Transport characteristics of deuterium and hydrogen plasmas with ion internal transport barrier in the Large Helical Device. Nuclear Fusion, 2019, 59, 106002.	3.5	11
28	Development of a Gyrokinetic Particle-in-Cell Code for Whole-Volume Modeling of Stellarators. Plasma, 2019, 2, 179-200.	1.8	11
29	3-D effects on viscosity and generation of toroidal and poloidal flows in LHD. Physics of Plasmas, 2013, 20, .	1.9	10
30	Measurements of radial profile of hydrogen and deuterium density in isotope mixture plasmas using bulk charge exchange spectroscopy. Review of Scientific Instruments, 2019, 90, 093503.	1.3	10
31	Extended investigations of isotope effects on ECRH plasma in LHD. Plasma Physics and Controlled Fusion, 2020, 62, 024006.	2.1	10
32	Simulation studies of the effect ofEÃ—Brotation on neoclassical toroidal viscosity in tokamaks with small magnetic perturbations. Nuclear Fusion, 2013, 53, 113033.	3.5	9
33	Transport, stability and plasma control studies in the TJ-II stellarator. Nuclear Fusion, 2015, 55, 104014.	3.5	9
34	Global calculation of neoclassical impurity transport including the variation of electrostatic potential. Journal of Plasma Physics, 2020, 86, .	2.1	9
35	Role of Neoclassical Transport and Radial Electric Field in LHD Plasmas. Fusion Science and Technology, 2010, 58, 269-276.	1.1	8
36	Integrated modelling of toroidal rotation with the 3D non-local drift-kinetic code and boundary models for JT-60U analyses and predictive simulations. Nuclear Fusion, 2015, 55, 073033.	3.5	8

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37	Investigation of ion and electron heat transport of high-T_eECH heated discharges in the large helical device. Plasma Physics and Controlled Fusion, 2016, 58, 045004.	2.1	8
38	Development of a real-time simulation tool towards self-consistent scenario of plasma start-up and sustainment on helical fusion reactor FFHR-d1. Nuclear Fusion, 2017, 57, 066011.	3.5	8
39	Conceptual design of a compact helical fusion reactor FFHR-c1 for the early demonstration of year-long electric power generation. Nuclear Fusion, 2019, 59, 076030.	3.5	8
40	Modelling of ion energy transport in perturbed magnetic field in collisionless toroidal plasma. Plasma Physics and Controlled Fusion, 2010, 52, 115004.	2.1	7
41	The effect of transient density profile shaping on transport in large stellarators and heliotrons. Nuclear Fusion, 2017, 57, 066016.	3.5	7
42	Eulerian variational formulations and momentum conservation laws for kinetic plasma systems. Physics of Plasmas, 2018, 25, 102506.	1.9	7
43	Benchmark of a new multi-ion-species collision operator for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e1799" altimg="si284.svg"><mml:mrow><mml:mi>Î´</mml:mi><mml:mi>f</mml:mi></mml:mrow></mml:math> Monte Carlo neoclassical simulation. Computer Physics Communications, 2020, 255, 107249.	7.5	7
44	Isotope effects on transport in LHD. Plasma Physics and Controlled Fusion, 2021, 63, 094001.	2.1	7
45	Consideration of the Influence of Coil Misalignment on the Chinese First Quasi-Axisymmetric Stellarator Magnetic Configuration. Plasma and Fusion Research, 2019, 14, 3403151-3403151.	0.7	7
46	Transition of poloidal viscosity by electrode biasing in the Large Helical Device. Nuclear Fusion, 2013, 53, 073014.	3.5	6
47	Experimental observation of response to resonant magnetic perturbation and its hysteresis in LHD. Nuclear Fusion, 2015, 55, 073004.	3.5	6
48	Integrated physics analysis of plasma start-up scenario of helical reactor FFHR-d1. Nuclear Fusion, 2015, 55, 063040.	3.5	6
49	Radially local approximation of the drift kinetic equation. Physics of Plasmas, 2016, 23, .	1.9	6
50	Predictions of toroidal rotation and torque sources arising in non-axisymmetric perturbed magnetic fields in tokamaks. Nuclear Fusion, 2017, 57, 116050.	3.5	6
51	Study on impurity hole plasmas by global neoclassical simulation. Nuclear Fusion, 2021, 61, 086025.	3.5	6
52	Bootstrap Current Simulations with Experimental LHD Plasma Density and Temperature Profiles, Energy Scattering and Finite Orbit Width. Plasma and Fusion Research, 2012, 7, 1403077-1403077.	0.7	6
53	Neoclassical effect on strike point patterns in local island divertor configuration of LHD. Nuclear Fusion, 2005, 45, 1534-1543.	3.5	5
54	Global kinetic simulations of neoclassical toroidal viscosity in low-collisional perturbed tokamak plasmas. Physics of Plasmas, 2017, 24, 102522.	1.9	5

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55	Neoclassical Radial Electric Field in a Plasma with a Flow.. Journal of Plasma and Fusion Research, 2002, 78, 1344-1351.	0.4	5
56	Global Effects on the Variation of Ion Density and Electrostatic Potential on the Flux Surface in Helical Plasmas. Plasma and Fusion Research, 2019, 14, 3403102-3403102.	0.7	5
57	Integration of Large-Scale Simulations and Numerical Modelling Tools in Close Link with the LHD Experiment. Plasma and Fusion Research, 2014, 9, 3402017-3402017.	0.7	4
58	Benchmark of the Bootstrap Current Simulation in Helical Plasmas. Plasma and Fusion Research, 2017, 12, 1203004-1203004.	0.7	4
59	Optimization of modular and helical coils applying genetic algorithm and fully-three-dimensional B-spline curves. Nuclear Fusion, 2021, 61, 106004.	3.5	4
60	Stochastic Approach to Modeling Fluctuating Flow. Plasma and Fusion Research, 2006, 1, 012-012.	0.7	4
61	Monte-Carlo Simulation of Neoclassical Transport in Magnetic Islands and Ergodic Regions. Plasma and Fusion Research, 2008, 3, S1060-S1060.	0.7	4
62	Transport Modeling of Edge Plasma in an m/n=1/1 Magnetic Island. Contributions To Plasma Physics, 2008, 48, 106-110.	1.1	3
63	Effects of the applied magnetic fields with various toroidal phase differences on the neoclassical toroidal viscosity in JT-60SA. Nuclear Fusion, 2018, 58, 112012.	3.5	3
64	The Eulerian variational formulation of the gyrokinetic system in general spatial coordinates. Physics of Plasmas, 2021, 28, .	1.9	3
65	Development of Computational Technique for Labeling Magnetic Flux-Surfaces. Plasma and Fusion Research, 2006, 1, 038-038.	0.7	3
66	Radial Electric Field Formation Including Electron Radial Drift for a Core Electron-Root Confinement (CERC) Plasma in LHD. Plasma and Fusion Research, 2011, 6, 1203016-1203016.	0.7	3
67	Direct observation of the non-locality of non-diffusive counter-gradient electron thermal transport during the formation of hollow electron-temperature profiles in the Large Helical Device. Physics of Plasmas, 2022, 29, .	1.9	3
68	Dependence of radial thermal diffusivity on parameters of toroidal plasma affected by resonant magnetic perturbations. Plasma Physics and Controlled Fusion, 2013, 55, 065005.	2.1	2
69	Development of a Driftâ€Kinetic Simulation Code for Estimating Collisional Transport Affected by RMPs and Radial Electric Field. Contributions To Plasma Physics, 2016, 56, 592-597.	1.1	2
70	Core plasma design of the compact helical reactor with a consideration of the equipartition effect. Plasma Physics and Controlled Fusion, 2018, 60, 074001.	2.1	2
71	Formation of Electron-Root Radial Electric Field and its Effect on Thermal Transport in LHD High <i>T</i>_ePlasma. Plasma and Fusion Research, 2013, 8, 1403039-1403039.	0.7	2
72	Monte Carlo Simulation Code for Solving Radial Fluid Equations in Toroidal Plasmas. Plasma and Fusion Research, 2011, 6, 2403066-2403066.	0.7	1

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73	Development of Three-Dimensional Neoclassical Transport Simulation Code with High Performance Fortran on a Vector-Parallel Computer. , 2005, , 344-357.		1
74	Suppression of non-axisymmetric field-induced Î±-particle loss channels in a quasi-axisymmetric stellarator. AIP Advances, 2022, 12, 055214.	1.3	1
75	Evaluation of Impacts of Driving Forces on Neoclassical Transport with Weight-Splitting Method. Plasma and Fusion Research, 2022, 17, 1403065-1403065.	0.7	1
76	Application of an improved control-variate scheme to local neoclassical transport simulations. Computer Physics Communications, 2014, 185, 2313-2321.	7.5	0
77	Electron heat diffusivity in radially-bounded ergodic region of toroidal plasma. Nuclear Fusion, 2018, 58, 016033.	3.5	0
78	A New Simulation Method of Geodesic Acoustic Mode in Toroidal Plasmas by Using Band-Limited White Noise in a Î´f Neoclassical Transport Code. Progress in Nuclear Science and Technology, 2011, 2, 72-77.	0.3	0