Seung-Hoe Ku

List of Publications by Year
in descending order

88 papers	2,394 citations	218677 26 h-index	223800 46 g-index
91 all docs	91 docs citations	91 times ranked	1474 citing authors

#	Article	IF	Citations
1	Generation of E â€‰ Ã—â€‰ B flow shear by finite orbit width effects from heat sources in tokamaks. Nuclear Fusion, 2022, 62, 036010.	3.5	2
2	Maintaining Trust in Reduction: Preserving the Accuracy of Quantities of Interest for Lossy Compression. Communications in Computer and Information Science, 2022, , 22-39.	0.5	3
3	Toward the core-edge coupling of delta-f and total-f gyrokinetic models. Physics of Plasmas, 2022, 29, 032301.	1.9	1
4	Effects of collisional ion orbit loss on neoclassical tokamak radial electric fields. Nuclear Fusion, 2022, 62, 066012.	3.5	1
5	Constructing a new predictive scaling formula for ITER's divertor heat-load width informed by a simulation-anchored machine learning. Physics of Plasmas, 2021, 28, .	1.9	22
6	Spatial coupling of gyrokinetic simulations, a generalized scheme based on first-principles. Physics of Plasmas, 2021, 28, .	1.9	12
7	A Framework for International Collaboration on ITER Using Large-Scale Data Transfer to Enable Near-Real-Time Analysis. Fusion Science and Technology, 2021, 77, 98-108.	1.1	2
8	Property of neoclassical GAMs induced by pellet generated plasma perturbations in the gyrokinetic code XGC. Physics of Plasmas, 2021, 28, 044501.	1.9	0
9	Improving Gyrokinetic Field Solvers toward Whole-Volume Modeling of Stellarators. Plasma and Fusion Research, 2021, 16, 2403054-2403054.	0.7	1
10	Verification of a fully implicit particle-in-cell method for the v âˆ¥-formalism of electromagnetic gyrokinetics in the XGC code. Physics of Plasmas, 2021, 28, 072505.	1.9	7
11	Comparison of edge turbulence characteristics between DIII-D and C-Mod simulations with XGC1. Physics of Plasmas, 2020, 27, .	1.9	4
12	Reduction of blob-filament radial propagation by parallel variation of flows: Analysis of a gyrokinetic simulation. Physics of Plasmas, 2020, 27, .	1.9	5
13	Finding Structure in Large Data Sets of Particle Distribution Functions Using Unsupervised Machine Learning. IEEE Transactions on Plasma Science, 2020, , 1-4.	1.3	0
14	Nonlinear global gyrokinetic delta-f turbulence simulations in a quasi-axisymmetric stellarator. Physics of Plasmas, 2020, 27, .	1.9	12
15	Spatial core-edge coupling of the particle-in-cell gyrokinetic codes GEM and XGC. Physics of Plasmas, 2020, 27, 122510.	1.9	10
16	10.1063/5.0002876.1. , 2020, , .		0
17	Study of upâ€“down poloidal density asymmetry of high- impurities with the new impurity version of XGCa. Journal of Plasma Physics, 2019, 85, .	2.1	10
18	Verification of the global gyrokinetic stellarator code XGC-S for linear ion temperature gradient driven modes. Physics of Plasmas, 2019, 26, .	1.9	15

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19	Pressure balance in a lower collisionality, attached tokamak scrape-off layer. Nuclear Fusion, 2019, 59, 096002.	3.5	1
20	Development of a Gyrokinetic Particle-in-Cell Code for Whole-Volume Modeling of Stellarators. Plasma, 2019, 2, 179-200.	1.8	11
21	Shadowing effects in simulated Alcator C-Mod gas puff imaging data. Nuclear Materials and Energy, 2019, 19, 113-119.	1.3	7
22	X-point ion orbit physics in scrape-off layer and generation of a localized electrostatic potential perturbation around X-point. Physics of Plasmas, 2019, 26, 014504.	1.9	3
23	Comparative collisionless alpha particle confinement in stellarator reactors with the XGC gyrokinetic code. Physics of Plasmas, 2019, 26, 032506.	1.9	11
24	A fast low-to-high confinement mode bifurcation dynamics in the boundary-plasma gyrokinetic code XGC1. Physics of Plasmas, 2018, 25, .	1.9	79
25	Coupling Exascale Multiphysics Applications: Methods and Lessons Learned. , 2018, , .		20
26	Gyroaveraging operations using adaptive matrix operators. Physics of Plasmas, 2018, 25, .	1.9	7
27	A tight-coupling scheme sharing minimum information across a spatial interface between gyrokinetic turbulence codes. Physics of Plasmas, 2018, 25, 072308.	1.9	17
28	Analysis of equilibrium and turbulent fluxes across the separatrix in a gyrokinetic simulation. Physics of Plasmas, 2018, 25, 072306.	1.9	4
29	Cross-verification of the global gyrokinetic codes GENE and XGC. Physics of Plasmas, 2018, 25, 062308.	1.9	26
30	Gyrokinetic simulation study of magnetic island effects on neoclassical physics and micro-instabilities in a realistic KSTAR plasma. Physics of Plasmas, 2018, 25, .	1.9	24
31	What happens to full-f gyrokinetic transport and turbulence in a toroidal wedge simulation?. Physics of Plasmas, 2017, 24, .	1.9	7
32	Overview of NSTX Upgrade initial results and modelling highlights. Nuclear Fusion, 2017, 57, 102006.	3.5	45
33	Verification of long wavelength electromagnetic modes with a gyrokinetic-fluid hybrid model in the XGC code. Physics of Plasmas, 2017, 24, 054508.	1.9	14
34	Gyrokinetic projection of the divertor heat-flux width from present tokamaks to ITER. Nuclear Fusion, 2017, 57, 116023.	3.5	125
35	Pedestal and edge electrostatic turbulence characteristics from an XGC1 gyrokinetic simulation. Plasma Physics and Controlled Fusion, 2017, 59, 105014.	2.1	28
36	Fast Low-to-High Confinement Mode Bifurcation Dynamics in a Tokamak Edge Plasma Gyrokinetic Simulation. Physical Review Letters, 2017, 118, 175001.	7.8	73

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37	Neutral recycling effects on ITG turbulence. Nuclear Fusion, 2017, 57, 086028.	3.5	28
38	Full-f XGC1 gyrokinetic study of improved ion energy confinement from impurity stabilization of ITG turbulence. Physics of Plasmas, 2017, 24, .	1.9	14
39	A new hybrid-Lagrangian numerical scheme for gyrokinetic simulation of tokamak edge plasma. Journal of Computational Physics, 2016, 315, 467-475.	3.8	69
40	A fully non-linear multi-species Fokkerâ€“Planckâ€“Landau collision operator for simulation of fusion plasma. Journal of Computational Physics, 2016, 315, 644-660.	3.8	61
41	Mesh generation for confined fusion plasma simulation. Engineering With Computers, 2016, 32, 285-293.	6.1	18
42	Kinetic modeling of divertor heat load fluxes in the Alcator C-Mod and DIII-D tokamaks. Physics of Plasmas, 2015, 22, .	1.9	9
43	An overview of recent physics results from NSTX. Nuclear Fusion, 2015, 55, 104002.	3.5	21
44	NERSC's Impact on Advances of Global Gyrokinetic PIC Codes for Fusion Energy Research. Computing in Science and Engineering, 2015, 17, 10-21.	1.2	2
45	Kinetic neoclassical transport in the H-mode pedestal. Physics of Plasmas, 2014, 21, .	1.9	34
46	Intrinsic momentum generation by a combined neoclassical and turbulence mechanism in diverted DIII-D plasma edge. Physics of Plasmas, 2014, 21, 092501.	1.9	23
47	ISABELA for effective in situ compression of scientific data. Concurrency Computation Practice and Experience, 2013, 25, 524-540.	2.2	62
48	Pedestal fueling simulations with a coupled kinetic plasmaâ€“kinetic neutral transport code. Journal of Nuclear Materials, 2013, 438, S1275-S1279.	2.7	6
49	Dependence of the Lâ€“H transition on X-point geometry and divertor recycling on NSTX. Nuclear Fusion, 2013, 53, 113032.	3.5	23
50	An overview of intrinsic torque and momentum transport bifurcations in toroidal plasmas. Nuclear Fusion, 2013, 53, 104019.	3.5	89
51	Progress in characterization of the pedestal stability and turbulence during the edge-localized-mode cycle on National Spherical Torus Experiment. Nuclear Fusion, 2013, 53, 093026.	3.5	28
52	Bootstrap current for the edge pedestal plasma in a diverted tokamak geometry. Physics of Plasmas, 2012, 19, .	1.9	31
53	Physics of intrinsic rotation in flux-driven ITG turbulence. Nuclear Fusion, 2012, 52, 063013.	3.5	22
54	ISOBAR Preconditioner for Effective and High-throughput Lossless Data Compression. , 2012, , .		47

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55	S-preconditioner for Multi-fold Data Reduction with Guaranteed User-Controlled Accuracy. , 2011, , .		2
56	The Mistral base case to validate kinetic and fluid turbulence transport codes of the edge and SOL plasmas. Journal of Nuclear Materials, 2011, 415, S597-S600.	2.7	13
57	Neoclassical physics in full distribution function gyrokinetics. Physics of Plasmas, 2011, 18, .	1.9	35
58	ISABELA-QA. , 2011, , .		31
59	Predictions on heat transport and plasma rotation from global gyrokinetic simulations. Nuclear Fusion, 2011, 51, 103023.	3.5	56
60	Plasmon band gap generated by intense ion acoustic waves. Physics of Plasmas, 2010, 17, 024501.	1.9	1
61	Theory of plasmon decay in dense plasmas and warm dense matters. Physics of Plasmas, 2010, 17, .	1.9	6
62	Backward Raman compression of x-rays in metals and warm dense matters. Physics of Plasmas, 2010, 17, .	1.9	16
63	Suppression of Landau damping via electron band gap. Physics of Plasmas, 2010, 17, .	1.9	17
64	Photonic band gap and x-ray optics in warm dense matter. Physics of Plasmas, 2010, 17, 052702.	1.9	4
65	On the validity of the local diffusive paradigm in turbulent plasma transport. Physical Review E, 2010, 82, 025401.	2.1	155
66	Compressed ion temperature gradient turbulence in diverted tokamak edge. Physics of Plasmas, 2009, 16, .	1.9	80
67	Full-f gyrokinetic particle simulation of centrally heated global ITG turbulence from magnetic axis to edge pedestal top in a realistic tokamak geometry. Nuclear Fusion, 2009, 49, 115021.	3.5	139
68	Extended MHD simulation of resonant magnetic perturbations. Nuclear Fusion, 2009, 49, 055025.	3.5	43
69	Overview of results from the National Spherical Torus Experiment (NSTX). Nuclear Fusion, 2009, 49, 104016.	3.5	41
70	Whole-volume integrated gyrokinetic simulation of plasma turbulence in realistic diverted-tokamak geometry. Journal of Physics: Conference Series, 2009, 180, 012057.	0.4	21
71	Scaling to 150K cores: Recent algorithm and performance engineering developments enabling XGC1 to run at scale. Journal of Physics: Conference Series, 2009, 180, 012036.	0.4	21
72	Spontaneous rotation sources in a quiescent tokamak edge plasma. Physics of Plasmas, 2008, 15, .	1.9	86

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73	Coarse-graining the electron distribution in turbulence simulations of tokamak plasmas. Physics of Plasmas, 2008, 15, .	1.9	12
74	Toward a first-principles integrated simulation of tokamak edge plasmas. Journal of Physics: Conference Series, 2008, 125, 012042.	0.4	12
75	Coupled simulation of kinetic pedestal growth and MHD ELM crash. Journal of Physics: Conference Series, 2007, 78, 012087.	0.4	15
76	Gyrokinetic particle simulation of neoclassical transport in the pedestal/scrape-off region of a tokamak plasma. Journal of Physics: Conference Series, 2006, 46, 87-91.	0.4	31
77	Particle Simulation of Neoclassical Transport in the Plasma Edge. Contributions To Plasma Physics, 2006, 46, 496-503.	1.1	14
78	Neoclassical polarization drift of collisionless single ions in a sheared radial electric field in a tokamak magnetic geometry. Physics of Plasmas, 2006, 13, 012503.	1.9	6
79	Wall intersection of ion orbits induced by fast transport of pedestal plasma over an electrostatic potential hill in a tokamak plasma edge. Physics of Plasmas, 2005, 12, 102501.	1.9	11
80	Seasonal Variation May Affect the Pregnancy Rates of Fresh Embryo Transfer Cycles, NOT in Cryopreserved-Thawed Embryo Transfer Cycles in Women With Tubal or Unexplained Infertility. Fertility and Sterility, 2005, 84, S246-S247.	1.0	0
81	Effect of gas fuelling location on H-mode access in NSTX. Plasma Physics and Controlled Fusion, 2004, 46, A305-A313.	2.1	33
82	Property of an X-point generated velocity-space hole in a diverted tokamak plasma edge. Physics of Plasmas, 2004, 11, 5626-5633.	1.9	42
83	Numerical study of neoclassical plasma pedestal in a tokamak geometry. Physics of Plasmas, 2004, 11, 2649-2667.	1.9	158
84	Response to â€œComment on â€˜X-transport: A baseline nonambipolar transport in a diverted tokamak plasma edgeâ€™â€Šâ€•[Phys. Plasmas 10, 1530 (2003)]. Physics of Plasmas, 2003, 10, 1532-1533.	1.9	2
85	X-transport: A baseline nonambipolar transport in a diverted tokamak plasma edge. Physics of Plasmas, 2002, 9, 3884-3892.	1.9	73
86	Numerical investigation on plasma and poly-Si etching uniformity control over a large area in a resonant inductively coupled plasma source. Physics of Plasmas, 2001, 8, 1384.	1.9	13
87	An optimum feedback coil position for active stabilization of resistive wall modes. Physics of Plasmas, 2001, 8, 3107-3110.	1.9	2
88	Strong variation of average ion energy in oscillation frequency of sheath potential. Physics of Plasmas, 2000, 7, 766-769.	1.9	6