Robert Hager

List of Publications by Year
in descending order

48 papers	860 citations	567281 15 h-index	501196 28 g-index
48 all docs	48 docs citations	48 times ranked	853 citing authors

#	Article	IF	Citations
1	Effects of collisional ion orbit loss on neoclassical tokamak radial electric fields. Nuclear Fusion, 2022, 62, 066012.	3.5	1
2	First coupled GENE–XGC microturbulence simulations. Physics of Plasmas, 2021, 28, 012303.	1.9	9
3	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
4	Spatial coupling of gyrokinetic simulations, a generalized scheme based on first-principles. Physics of Plasmas, 2021, 28, .	1.9	12
5	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
6	Encoder–decoder neural network for solving the nonlinear Fokker–Planck–Landau collision operator in XGC. Journal of Plasma Physics, 2021, 87, .	2.1	9
7	Property of neoclassical GAMs induced by pellet generated plasma perturbations in the gyrokinetic code XGC. Physics of Plasmas, 2021, 28, 044501.	1.9	0
8	Implementation of higher-order velocity mapping between marker particles and grid in the particle-in-cell code XGC. Journal of Plasma Physics, 2021, 87, .	2.1	3
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 $v_\parallel$-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	Nonlinear global gyrokinetic delta-f turbulence simulations in a quasi-axisymmetric stellarator. Physics of Plasmas, 2020, 27, .	1.9	12
13	Gyrokinetic understanding of the edge pedestal transport driven by resonant magnetic perturbations in a realistic divertor geometry. Physics of Plasmas, 2020, 27, .	1.9	15
14	Moment preserving constrained resampling with applications to particle-in-cell methods. Journal of Computational Physics, 2020, 409, 109317.	3.8	16
15	Verification of an improved equation-free projective integration method for neoclassical plasma-profile evolution in tokamak geometry. Physics of Plasmas, 2020, 27, 032505.	1.9	2
16	Spatial core-edge coupling of the particle-in-cell gyrokinetic codes GEM and XGC. Physics of Plasmas, 2020, 27, 122510.	1.9	10
17	Gyrokinetic study of collisional resonant magnetic perturbation (RMP)-driven plasma density and heat transport in tokamak edge plasma using a magnetohydrodynamic screened RMP field. Nuclear Fusion, 2019, 59, 126009.	3.5	26
18	Study of up–down poloidal density asymmetry of high- impurities with the new impurity version of XGCa. Journal of Plasma Physics, 2019, 85, .	2.1	10

#	Article	IF	Citations
19	Verification of the global gyrokinetic stellarator code XGC-S for linear ion temperature gradient driven modes. Physics of Plasmas, 2019, 26, .	1.9	15
20	Pressure balance in a lower collisionality, attached tokamak scrape-off layer. Nuclear Fusion, 2019, 59, 096002.	3.5	1
21	Development of a Gyrokinetic Particle-in-Cell Code for Whole-Volume Modeling of Stellarators. Plasma, 2019, 2, 179-200.	1.8	11
22	Comparative collisionless alpha particle confinement in stellarator reactors with the XGC gyrokinetic code. Physics of Plasmas, 2019, 26, 032506.	1.9	11
23	Cross-verification of neoclassical transport solutions from XGCa against NEO. Physics of Plasmas, 2019, 26, .	1.9	7
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	Analysis of equilibrium and turbulent fluxes across the separatrix in a gyrokinetic simulation. Physics of Plasmas, 2018, 25, 072306.	1.9	4
26	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
27	Kinetic simulations of scrape-off layer physics in the DIII-D tokamak. Nuclear Materials and Energy, 2017, 12, 978-983.	1.3	10
28	Kinetic neoclassical calculations of impurity radiation profiles. Nuclear Materials and Energy, 2017, 12, 1130-1135.	1.3	1
29	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
30	Fast Low-to-High Confinement Mode Bifurcation Dynamics in a Tokamak Edge Plasma Gyrokinetic Simulation. Physical Review Letters, 2017, 118, 175001.	7.8	73
31	Total fluid pressure imbalance in the scrape-off layer of tokamak plasmas. Nuclear Fusion, 2017, 57, 046029.	3.5	3
32	The Fusion Code XGC. , 2017, , 529-552.		5
33	A new hybrid-Lagrangian numerical scheme for gyrokinetic simulation of tokamak edge plasma. Journal of Computational Physics, 2016, 315, 467-475.	3.8	69
34	A fully non-linear multi-species Fokker–Planck–Landau collision operator for simulation of fusion plasma. Journal of Computational Physics, 2016, 315, 644-660.	3.8	61
35	Improved kinetic neoclassical transport calculation for a low-collisionality QH-mode pedestal. Plasma Physics and Controlled Fusion, 2016, 58, 085009.	2.1	5
36	Gyrokinetic neoclassical study of the bootstrap current in the tokamak edge pedestal with fully non-linear Coulomb collisions. Physics of Plasmas, 2016, 23, .	1.9	55

#	Article	IF	Citations
37	Persistent Data Staging Services for Data Intensive In-situ Scientific Workflows. , 2016, , .		6
38	Mesh generation for confined fusion plasma simulation. Engineering With Computers, 2016, 32, 285-293.	6.1	18
39	Poloidal asymmetries in edge transport barriers. Physics of Plasmas, 2015, 22, .	1.9	26
40	Exploring Data Staging Across Deep Memory Hierarchies for Coupled Data Intensive Simulation Workflows. , 2015, , .		26
41	POSTER: Leveraging deep memory hierarchies for data staging in coupled data-intensive simulation workflows. , 2014, , .		5
42	Geodesic acoustic mode frequencies in experimental tokamak equilibria. Plasma Physics and Controlled Fusion, 2013, 55, 035009.	2.1	7
43	The nonlinear dispersion relation of geodesic acoustic modes. Physics of Plasmas, 2012, 19, .	1.9	9
44	Nonlinear Dispersion Relation of Geodesic Acoustic Modes. Physical Review Letters, 2012, 108, 035004.	7.8	20
45	Search for zonal flows in the edge turbulence of Alcator C-Mod. Plasma Physics and Controlled Fusion, 2012, 54, 025008.	2.1	10
46	Radial propagation of geodesic acoustic modes in up-down asymmetric magnetic geometries. Physics of Plasmas, 2010, 17, 032112.	1.9	12
47	Quiet periods in edge turbulence preceding the L-H transition in the National Spherical Torus Experiment. Physics of Plasmas, 2010, 17, .	1.9	83
48	Radial propagation of geodesic acoustic modes. Physics of Plasmas, 2009, 16, .	1.9	29