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	Quiet periods in edge turbulence preceding the L-H transition in the National Spherical Torus Experiment. Physics of Plasmas, 2010, 17, .	1.9	83
2	A fast low-to-high confinement mode bifurcation dynamics in the boundary-plasma gyrokinetic code XGC1. Physics of Plasmas, 2018, 25, .	1.9	79
3	Fast Low-to-High Confinement Mode Bifurcation Dynamics in a Tokamak Edge Plasma Gyrokinetic Simulation. Physical Review Letters, 2017, 118, 175001.	7.8	73
4	A new hybrid-Lagrangian numerical scheme for gyrokinetic simulation of tokamak edge plasma. Journal of Computational Physics, 2016, 315, 467-475.	3.8	69
5	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
6	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
7	Radial propagation of geodesic acoustic modes. Physics of Plasmas, 2009, 16, .	1.9	29
8	Poloidal asymmetries in edge transport barriers. Physics of Plasmas, 2015, 22, .	1.9	26
9	Exploring Data Staging Across Deep Memory Hierarchies for Coupled Data Intensive Simulation Workflows. , 2015, , .		26
10	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
11	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
12	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
13	Nonlinear Dispersion Relation of Geodesic Acoustic Modes. Physical Review Letters, 2012, 108, 035004.	7.8	20
14	Mesh generation for confined fusion plasma simulation. Engineering With Computers, 2016, 32, 285-293.	6.1	18
15	Moment preserving constrained resampling with applications to particle-in-cell methods. Journal of Computational Physics, 2020, 409, 109317.	3.8	16
16	Verification of the global gyrokinetic stellarator code XGC-S for linear ion temperature gradient driven modes. Physics of Plasmas, 2019, 26, .	1.9	15
17	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
18	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

#	Article	IF	Citations
19	Radial propagation of geodesic acoustic modes in up-down asymmetric magnetic geometries. Physics of Plasmas, 2010, 17, 032112.	1.9	12
20	Nonlinear global gyrokinetic delta-<i>f</i> turbulence simulations in a quasi-axisymmetric stellarator. Physics of Plasmas, 2020, 27, .	1.9	12
21	Spatial coupling of gyrokinetic simulations, a generalized scheme based on first-principles. Physics of Plasmas, 2021, 28, .	1.9	12
22	Development of a Gyrokinetic Particle-in-Cell Code for Whole-Volume Modeling of Stellarators. Plasma, 2019, 2, 179-200.	1.8	11
23	Comparative collisionless alpha particle confinement in stellarator reactors with the XGC gyrokinetic code. Physics of Plasmas, 2019, 26, 032506.	1.9	11
24	Search for zonal flows in the edge turbulence of Alcator C-Mod. Plasma Physics and Controlled Fusion, 2012, 54, 025008.	2.1	10
25	Kinetic simulations of scrape-off layer physics in the DIII-D tokamak. Nuclear Materials and Energy, 2017, 12, 978-983.	1.3	10
26	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
27	Spatial core-edge coupling of the particle-in-cell gyrokinetic codes GEM and XGC. Physics of Plasmas, 2020, 27, 122510.	1.9	10
28	The nonlinear dispersion relation of geodesic acoustic modes. Physics of Plasmas, 2012, 19, .	1.9	9
29	First coupled GENE–XGC microturbulence simulations. Physics of Plasmas, 2021, 28, 012303.	1.9	9
30	Encoder–decoder neural network for solving the nonlinear Fokker–Planck–Landau collision operator in XGC. Journal of Plasma Physics, 2021, 87, .	2.1	9
31	Geodesic acoustic mode frequencies in experimental tokamak equilibria. Plasma Physics and Controlled Fusion, 2013, 55, 035009.	2.1	7
32	Cross-verification of neoclassical transport solutions from XGCa against NEO. Physics of Plasmas, 2019, 26, .	1.9	7
33	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
34	Persistent Data Staging Services for Data Intensive In-situ Scientific Workflows. , 2016, , .		6
35	POSTER: Leveraging deep memory hierarchies for data staging in coupled data-intensive simulation workflows. , 2014, , .		5
36	Improved kinetic neoclassical transport calculation for a low-collisionality QH-mode pedestal. Plasma Physics and Controlled Fusion, 2016, 58, 085009.	2.1	5

#	Article	IF	Citations
37	The Fusion Code XGC. , 2017, , 529-552.		5
38	Analysis of equilibrium and turbulent fluxes across the separatrix in a gyrokinetic simulation. Physics of Plasmas, 2018, 25, 072306.	1.9	4
39	Comparison of edge turbulence characteristics between DIII-D and C-Mod simulations with XGC1. Physics of Plasmas, 2020, 27, .	1.9	4
40	Total fluid pressure imbalance in the scrape-off layer of tokamak plasmas. Nuclear Fusion, 2017, 57, 046029.	3.5	3
41	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
42	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
43	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
44	Kinetic neoclassical calculations of impurity radiation profiles. Nuclear Materials and Energy, 2017, 12, 1130-1135.	1.3	1
45	Pressure balance in a lower collisionality, attached tokamak scrape-off layer. Nuclear Fusion, 2019, 59, 096002.	3.5	1
46	Improving Gyrokinetic Field Solvers toward Whole-Volume Modeling of Stellarators. Plasma and Fusion Research, 2021, 16, 2403054-2403054.	0.7	1
47	Effects of collisional ion orbit loss on neoclassical tokamak radial electric fields. Nuclear Fusion, 2022, 62, 066012.	3.5	1
48	Property of neoclassical GAMs induced by pellet generated plasma perturbations in the gyrokinetic code XGC. Physics of Plasmas, 2021, 28, 044501.	1.9	0