JosÃ© M Reynolds-Barredo

List of Publications by Year
in descending order

| 57 papers | 1,205 citations | 430874

18 h-index | 377865

34 g-index |
|---|---|---|---|

| 57 all docs | 57 docs citations | 57 times ranked | 965 citing authors |

#	Article	IF	Citations
1	Physics of the compact advanced stellarator NCSX. Plasma Physics and Controlled Fusion, 2001, 43, A237-A249.	2.1	161
2	Physics issues of compact drift optimized stellarators. Nuclear Fusion, 2001, 41, 711-716.	3.5	86
3	Confinement transitions in TJ-II under Li-coated wall conditions. Nuclear Fusion, 2009, 49, 104018.	3.5	75
4	Probabilistic finite-size transport models for fusion: Anomalous transport and scaling laws. Physics of Plasmas, 2004, 11, 2272-2285.	1.9	72
5	SIESTA: A scalable iterative equilibrium solver for toroidal applications. Physics of Plasmas, 2011, 18, .	1.9	69
6	Obtaining Statistics of Cascading Line Outages Spreading in an Electric Transmission Network From Standard Utility Data. IEEE Transactions on Power Systems, 2016, 31, 4831-4841.	6.5	59
7	COBRA: An Optimized Code for Fast Analysis of Ideal Ballooning Stability of Three-Dimensional Magnetic Equilibria. Journal of Computational Physics, 2000, 161, 576-588.	3.8	55
8	Mixed SOC diffusive dynamics as a paradigm for transport in fusion devices. Nuclear Fusion, 2001, 41, 247-256.	3.5	55
9	Nature of Transport across Sheared Zonal Flows in Electrostatic Ion-Temperature-Gradient Gyrokinetic Plasma Turbulence. Physical Review Letters, 2008, 101, 205002.	7.8	45
10	Self-organized criticality and the dynamics of near-marginal turbulent transport in magnetically confined fusion plasmas. Plasma Physics and Controlled Fusion, 2015, 57, 123002.	2.1	44
11	Renormalization of tracer turbulence leading to fractional differential equations. Physical Review E, 2006, 74, 016305.	2.1	43
12	Parallelization in time of numerical simulations of fully-developed plasma turbulence using the parareal algorithm. Journal of Computational Physics, 2010, 229, 6558-6573.	3.8	43
13	Mechanisms for the convergence of time-parallelized, parareal turbulent plasma simulations. Journal of Computational Physics, 2012, 231, 7851-7867.	3.8	32
14	Event-based parareal: A data-flow based implementation of parareal. Journal of Computational Physics, 2012, 231, 5945-5954.	3.8	31
15	Transport equation describing fractional Lévy motion of suprathermal ions in TORPEX. Nuclear Fusion, 2014, 54, 104009.	3.5	31
16	Characterization of Nondiffusive Transport in Plasma Turbulence via a Novel Lagrangian Method. Physical Review Letters, 2008, 101, 165001.	7.8	24
17	Overview of TJ-II experiments. Nuclear Fusion, 2011, 51, 094022.	3.5	24
18	Fractional Lévy motion through path integrals. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 055003.	2.1	20

#	Article	IF	Citations
19	An analytic model for the convergence of turbulent simulations time-parallelized via the parareal algorithm. Journal of Computational Physics, 2013, 255, 293-315.	3.8	18
20	On the nature of radial transport across sheared zonal flows in electrostatic ion-temperature-gradient gyrokinetic tokamak plasma turbulence. Physics of Plasmas, 2009, 16, 055905.	1.9	17
21	On the nature of transport in near-critical dissipative-trapped-electron-mode turbulence: Effect of a subdominant diffusive channel. Physics of Plasmas, 2008, 15, 112301.	1.9	16
22	Nature of turbulent transport across sheared zonal flows: insights from gyrokinetic simulations. Plasma Physics and Controlled Fusion, 2011, 53, 074018.	2.1	16
23	Ion Orbits and Ion Confinement Studies on ECRH Plasmas in TJ-II Stellarator. Fusion Science and Technology, 2006, 50, 412-418.	1.1	15
24	The interplay of network structure and dispatch solutions in power grid cascading failures. Chaos, 2016, 26, 113111.	2.5	15
25	Extension of the SIESTA MHD equilibrium code to free-plasma-boundary problems. Physics of Plasmas, 2017, 24, .	1.9	13
26	Study of the interaction between diffusive and avalanche-like transport in near-critical dissipative-trapped-electron-mode turbulence. Physics of Plasmas, 2006, 13, 102308.	1.9	12
27	Determination of the parametric region in which runaway electron energy losses are dominated by bremsstrahlung radiation in tokamaks. Physics of Plasmas, 2007, 14, 072503.	1.9	9
28	Pitch angle scattering and synchrotron radiation of relativistic runaway electrons in tokamak stochastic magnetic fields. Physics of Plasmas, 2008, 15, .	1.9	8
29	Effects of demand control on the complex dynamics of electric power system blackouts. Chaos, 2020, 30, 113121.	2.5	8
30	Impact of 3D features on ion collisional transport in ITER. Nuclear Fusion, 2010, 50, 125007.	3.5	7
31	The role of magnetic islands in modifying long range temporal correlations of density fluctuations and local heat transport. Nuclear Fusion, 2016, 56, 016013.	3.5	7
32	Pseudochaotic poloidal transport in the laminar regime of the resistive ballooning instabilities. Physics of Plasmas, 2008, 15, 042302.	1.9	6
33	Magnetic Resonances in ECR‐Heated Plasmas of the TJ‐II Heliac. Contributions To Plasma Physics, 2010, 50, 600-604.	1.1	6
34	PB3D: A new code for edge 3-D ideal linear peeling-ballooning stability. Journal of Computational Physics, 2017, 330, 997-1009.	3.8	6
35	A positioning algorithm for SPH ghost particles in smoothly curved geometries. Journal of Computational and Applied Mathematics, 2019, 353, 140-153.	2.0	6
36	Plasma drift-kinetic equation calculations in three-dimensional magnetic geometries. Physics of Plasmas, 2010, 17, 072504.	1.9	5

#	Article	IF	Citations
37	Critical behavior of power transmission network complex dynamics in the OPA model. Chaos, 2019, 29, 033103.	2.5	5
38	Grid‑based metaheuristics to improve a nuclear fusion device. Concurrency Computation Practice and Experience, 2010, 22, 1476-1493.	2.2	4
39	Dynamic Simulation of the Electron Bernstein Wave Heating Under NBI Conditions in TJ‑II Plasmas. Contributions To Plasma Physics, 2011, 51, 83-91.	1.1	4
40	Three-dimensional linear peeling-ballooning theory in magnetic fusion devices. Physics of Plasmas, 2014, 21, 042507.	1.9	4
41	Bootstrap current control studies in the Wendelstein 7-X stellarator using the free-plasma-boundary version of the SIESTA MHD equilibrium code. Plasma Physics and Controlled Fusion, 2018, 60, 025023.	2.1	4
42	Fourier signature of filamentary vorticity structures in two-dimensional turbulence. Europhysics Letters, 2016, 115, 34002.	2.0	3
43	Magneto-hydrodynamical nonlinear simulations of magnetically confined plasmas using smooth particle hydrodynamics (SPH). Physics of Plasmas, 2019, 26, 012511.	1.9	3
44	A new code for collisional drift kinetic equation solving. , 2008, , .		2
45	Modelling parareal convergence in 2D drift wave plasma turbulence. , 2012, , .		2
46	Quasi-symmetry and the nature of radial turbulent transport in quasi-poloidal stellarators. Physics of Plasmas, 2016, 23, 102308.	1.9	2
47	The Impact of Local Power Balance and Link Reliability on Blackout Risk in Heterogeneous Power Transmission Grids. , 2016, , .		2
48	Effect of non-axisymmetric perturbations on the ambipolar E_r and neoclassical particle flux inside the ITER pedestal region. Nuclear Fusion, 2020, 60, 086017.	3.5	2
49	Statistical description of collisionless α-particle transport in cases of broken symmetry: from ITER to quasi-toroidally symmetric stellarators. Nuclear Fusion, 2020, 60, 056009.	3.5	2
50	Scale-free transport in fusion plasmas: theory and applications. , 2008, , .		1
51	Computationally advantageous expressions for 3-D MHD stability. Computer Physics Communications, 2019, 242, 60-71.	7.5	1
52	A novel efficient solver for Ampere's equation in general toroidal topologies based on singular value decomposition techniques. Journal of Computational Physics, 2020, 406, 109214.	3.8	1
53	Non-diffusive nature of collisionless **α**-particle transport: Dependence on toroidal symmetry in stellarator geometries. Physics of Plasmas, 2020, 27, .	1.9	1
54	Optimized implementation of power dispatch in the OPA model and its implications for dispatch sensitivity for the WECC power network. Electric Power Systems Research, 2020, 182, 106260.	3.6	1

#	Article	IF	Citations
55	Grid Computing for Fusion Research. , 0, , .		1
56	Optimizing the Impact of Incorporating Wind Energy on the Electric Grid. Journal of Strategic Innovation and Sustainability, 2020, 15, .	0.0	1
57	NON-DIFFUSIVE TRANSPORT IN NUMERICAL SIMULATIONS OF MAGNETICALLY-CONFINED TURBULENT PLASMAS. , 2008, , .		0