Guangye Chen

List of Publications by Year
in descending order

23 papers	698 citations	687363 13 h-index	713466 21 g-index
26 all docs	26 docs citations	26 times ranked	450 citing authors

#	Article	IF	Citations
1	An energy- and charge-conserving, implicit, electrostatic particle-in-cell algorithm. Journal of Computational Physics, 2011, 230, 7018-7036.	3.8	188
2	A charge- and energy-conserving implicit, electrostatic particle-in-cell algorithm on mapped computational meshes. Journal of Computational Physics, 2013, 233, 1-9.	3.8	82
3	A multi-dimensional, energy- and charge-conserving, nonlinearly implicit, electromagnetic Vlasovâ€“Darwin particle-in-cell algorithm. Computer Physics Communications, 2015, 197, 73-87.	7.5	65
4	An energy- and charge-conserving, nonlinearly implicit, electromagnetic 1D-3V Vlasovâ€“Darwin particle-in-cell algorithm. Computer Physics Communications, 2014, 185, 2391-2402.	7.5	44
5	Temporal resolution criterion for correctly simulating relativistic electron motion in a high-intensity laser field. Physics of Plasmas, 2015, 22, .	1.9	44
6	An efficient mixed-precision, hybrid CPUâ€“GPU implementation of a nonlinearly implicit one-dimensional particle-in-cell algorithm. Journal of Computational Physics, 2012, 231, 5374-5388.	3.8	43
7	Multiscale high-order/low-order (HOLO) algorithms and applications. Journal of Computational Physics, 2017, 330, 21-45.	3.8	37
8	A curvilinear, fully implicit, conservative electromagnetic PIC algorithm in multiple dimensions. Journal of Computational Physics, 2016, 316, 578-597.	3.8	36
9	Development of a Consistent and Stable Fully Implicit Moment Method for Vlasov--AmpÃ¨re Particle in Cell (PIC) System. SIAM Journal of Scientific Computing, 2013, 35, S126-S149.	2.8	29
10	Fluid preconditioning for Newtonâ€“Krylov-based, fully implicit, electrostatic particle-in-cell simulations. Journal of Computational Physics, 2014, 258, 555-567.	3.8	28
11	A semi-implicit, energy- and charge-conserving particle-in-cell algorithm for the relativistic Vlasov-Maxwell equations. Journal of Computational Physics, 2020, 407, 109228.	3.8	21
12	A fully implicit, conservative, non-linear, electromagnetic hybrid particle-ion/fluid-electron algorithm. Journal of Computational Physics, 2019, 376, 597-616.	3.8	19
13	Enabling particle applications for exascale computing platforms. International Journal of High Performance Computing Applications, 2021, 35, 572-597.	3.7	15
14	A multigroup moment-accelerated deterministic particle solver for 1-D time-dependent thermal radiative transfer problems. Journal of Computational Physics, 2019, 388, 416-438.	3.8	11
15	Particle integrator for particle-in-cell simulations of ultra-high intensity laser-plasma interactions. Journal of Computational Physics, 2021, 434, 110233.	3.8	8
16	An unsupervised machine-learning checkpoint-restart algorithm using Gaussian mixtures for particle-in-cell simulations. Journal of Computational Physics, 2021, 436, 110185.	3.8	7
17	Energy-conserving perfect-conductor boundary conditions for an implicit, curvilinear Darwin particle-in-cell algorithm. Journal of Computational Physics, 2019, 391, 216-225.	3.8	6
18	An analytical particle mover for the charge- and energy-conserving, nonlinearly implicit, electrostatic particle-in-cell algorithm. Journal of Computational Physics, 2013, 247, 79-87.	3.8	5

#	Article	IF	Citations
19	Fast nonlinear iterative solver for an implicit, energy-conserving, asymptotic-preserving charged-particle orbit integrator. Journal of Computational Physics, 2022, 459, 111146.	3.8	4
20	Analysis of Vector Particle-In-Cell (VPIC) memory usage optimizations on cutting-edge computer architectures. Journal of Computational Science, 2022, 60, 101566.	2.9	3
21	Criterion for correctly simulating relativistic electron motion in a high-intensity laser field. AIP Conference Proceedings, 2016, , .	0.4	2
22	Computational Co-design of a Multiscale Plasma Application: A Process and Initial Results. , 2014, , .		1
23	Optimize Memory Usage in Vector Particle-In-Cell (VPIC) to Break the 10 Trillion Particle Barrier in Plasma Simulations. Lecture Notes in Computer Science, 2021, , 452-465.	1.3	0