

Alejandro Garc a

List of Publications by Year in descending order

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94
papers

3,961
citations

109321

35
h-index

123424

61
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98
all docs

98
docs citations

98
times ranked

1564
citing authors

#	ARTICLE	IF	CITATIONS
1	Statistical error in particle simulations of hydrodynamic phenomena. Journal of Computational Physics, 2003, 187, 274-297.	3.8	239
2	Adaptive Mesh and Algorithm Refinement Using Direct Simulation Monte Carlo. Journal of Computational Physics, 1999, 154, 134-155.	3.8	237
3	Stabilization of thermal lattice Boltzmann models. Journal of Statistical Physics, 1995, 81, 395-408.	1.2	195
4	Cell size dependence of transport coefficients in stochastic particle algorithms. Physics of Fluids, 1998, 10, 1540-1542.	4.0	179
5	The Direct Simulation Monte Carlo Method. Computers in Physics, 1997, 11, 588.	0.5	172
6	Direct simulation Monte Carlo for thin film bearings. Physics of Fluids, 1994, 6, 3854-3860.	4.0	123
7	Generation of the Chapman-Enskog Distribution. Journal of Computational Physics, 1998, 140, 66-70.	3.8	112
8	A Consistent Boltzmann Algorithm. Physical Review Letters, 1995, 74, 5212-5215.	7.8	110
9	Time step truncation error in direct simulation Monte Carlo. Physics of Fluids, 2000, 12, 2621.	4.0	110
10	On the accuracy of finite-volume schemes for fluctuating hydrodynamics. Communications in Applied Mathematics and Computational Science, 2010, 5, 149-197.	1.8	102
11	Comparison of Kinetic Theory and Hydrodynamics for Poiseuille Flow. Journal of Statistical Physics, 2002, 109, 495-505.	1.2	96
12	On the validity of hydrodynamics in plane Poiseuille flows. Physica A: Statistical Mechanics and Its Applications, 1997, 240, 255-267.	2.6	89
13	Three-dimensional Hybrid Continuum-Atomistic Simulations For Multiscale Hydrodynamics. Journal of Fluids Engineering, Transactions of the ASME, 2004, 126, 768-777.	1.5	88
14	A Monte Carlo simulation of coagulation. Physica A: Statistical Mechanics and Its Applications, 1987, 143, 535-546.	2.6	87
15	Numerical integration of the fluctuating hydrodynamic equations. Journal of Statistical Physics, 1987, 47, 209-228.	1.2	79
16	Three-dimensional direct simulation Monte Carlo method for slider air bearings. Physics of Fluids, 1997, 9, 1764-1769.	4.0	79
17	Burnett description for plane Poiseuille flow. Physical Review E, 1999, 60, 4063-4078.	2.1	78
18	Fluctuating hydrodynamics in a dilute gas. Physical Review Letters, 1987, 58, 874-877.	7.8	76

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19	Slip length in a dilute gas. <i>Physical Review A</i> , 1992, 46, 5279-5281.	2.5	75
20	Numerical methods for the stochastic Landau-Lifshitz Navier-Stokes equations. <i>Physical Review E</i> , 2007, 76, 016708.	2.1	68
21	Molecular simulations of sound wave propagation in simple gases. <i>Physics of Fluids</i> , 2001, 13, 1040-1046.	4.0	65
22	Acoustic backscattering at low grazing angles from the ocean bottom. Part II. Statistical characteristics of bottom backscatter at a shallow water site. <i>Journal of the Acoustical Society of America</i> , 1985, 77, 975-982.	1.1	63
23	A Hybrid Particle-Continuum Method for Hydrodynamics of Complex Fluids. <i>Multiscale Modeling and Simulation</i> , 2010, 8, 871-911.	1.6	63
24	A hydrodynamically correct thermal lattice Boltzmann model. <i>Journal of Statistical Physics</i> , 1997, 87, 1111-1121.	1.2	62
25	Fluctuating hydrodynamics and principal oscillation pattern analysis. <i>Journal of Statistical Physics</i> , 1991, 64, 1121-1132.	1.2	58
26	Hydrodynamic fluctuations in a dilute gas under shear. <i>Physical Review A</i> , 1987, 36, 4348-4355.	2.5	54
27	Algorithm Refinement for Stochastic Partial Differential Equations. <i>Journal of Computational Physics</i> , 2002, 182, 47-66.	3.8	53
28	Anomalous flow profile due to the curvature effect on slip length. <i>Physical Review E</i> , 1997, 56, 2282-2283.	2.1	52
29	Inverted velocity profile in the cylindrical Couette flow of a rarefied gas. <i>Physical Review E</i> , 2003, 68, 016302.	2.1	51
30	Diffusive Transport by Thermal Velocity Fluctuations. <i>Physical Review Letters</i> , 2011, 106, 204501.	7.8	48
31	Stochastic Event-Driven Molecular Dynamics. <i>Journal of Computational Physics</i> , 2008, 227, 2644-2665.	3.8	45
32	Acoustic backscattering at low grazing angles from the ocean bottom. Part I. Bottom backscattering strength. <i>Journal of the Acoustical Society of America</i> , 1985, 77, 962-974.	1.1	42
33	Low Mach number fluctuating hydrodynamics of diffusively mixing fluids. <i>Communications in Applied Mathematics and Computational Science</i> , 2014, 9, 47-105.	1.8	36
34	Enhancement of diffusive transport by non-equilibrium thermal fluctuations. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011, 2011, P06014.	2.3	35
35	Stochastic simulation of reaction-diffusion systems: A fluctuating-hydrodynamics approach. <i>Journal of Chemical Physics</i> , 2017, 146, 124110.	3.0	35
36	Nonequilibrium fluctuations studied by a rarefied-gas simulation. <i>Physical Review A</i> , 1986, 34, 1454-1457.	2.5	34

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37	Computational fluctuating fluid dynamics. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2010, 44, 1085-1105.	1.9	33
38	Modeling multiphase flow using fluctuating hydrodynamics. <i>Physical Review E</i> , 2014, 90, 033014.	2.1	33
39	Fluctuating hydrodynamics of multi-species reactive mixtures. <i>Journal of Chemical Physics</i> , 2015, 142, 224107.	3.0	32
40	Generation of the Maxwellian inflow distribution. <i>Journal of Computational Physics</i> , 2006, 217, 693-708.	3.8	31
41	Non-equilibrium behaviour of equilibrium reservoirs in molecular simulations. <i>International Journal for Numerical Methods in Fluids</i> , 2005, 48, 1337-1349.	1.6	28
42	Algorithm Refinement for Fluctuating Hydrodynamics. <i>Multiscale Modeling and Simulation</i> , 2008, 6, 1256-1280.	1.6	27
43	Low Mach number fluctuating hydrodynamics of multispecies liquid mixtures. <i>Physics of Fluids</i> , 2015, 27, .	4.0	27
44	Fluctuation-enhanced electric conductivity in electrolyte solutions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 10829-10833.	7.1	26
45	Correlation functions for simple fluids in a finite system under nonequilibrium constraints. <i>Journal of Statistical Physics</i> , 1987, 48, 1157-1186.	1.2	25
46	Algorithm refinement for stochastic partial differential equations: II. Correlated systems. <i>Journal of Computational Physics</i> , 2005, 207, 769-787.	3.8	25
47	The consistent Boltzmann algorithm for the van der Waals equation of state. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1997, 240, 196-201.	2.6	24
48	Measurement bias of fluid velocity in molecular simulations. <i>Journal of Computational Physics</i> , 2004, 196, 173-183.	3.8	23
49	Fluctuating hydrodynamics of multispecies nonreactive mixtures. <i>Physical Review E</i> , 2014, 89, 013017.	2.1	23
50	Stochastic Hard-Sphere Dynamics for Hydrodynamics of Nonideal Fluids. <i>Physical Review Letters</i> , 2008, 101, 075902.	7.8	20
51	Low Mach number fluctuating hydrodynamics for electrolytes. <i>Physical Review Fluids</i> , 2016, 1, .	2.5	20
52	The surface properties of a van der Waals fluid. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2000, 281, 337-347.	2.6	19
53	Fluctuating Hydrodynamics and Debye-Hückel-Onsager Theory for Electrolytes. <i>Current Opinion in Electrochemistry</i> , 2019, 13, 1-10.	4.8	18
54	Direct simulation Monte Carlo method for the Uehling-Uhlenbeck-Boltzmann equation. <i>Physical Review E</i> , 2003, 68, 056703.	2.1	16

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55	Estimating hydrodynamic quantities in the presence of microscopic fluctuations. <i>Communications in Applied Mathematics and Computational Science</i> , 2006, 1, 53-78.	1.8	15
56	Algorithm refinement for the stochastic Burgers's equation. <i>Journal of Computational Physics</i> , 2007, 223, 451-468.	3.8	15
57	Fluctuating hydrodynamics of electrolytes at electroneutral scales. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	15
58	Thermal fluctuations in the dissipation range of homogeneous isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2022, 939, .	3.4	15
59	Particle Simulation of Complex Flows in Dilute Systems. <i>Journal of Computational Physics</i> , 1995, 119, 94-104.	3.8	14
60	Hydrodynamic description of the adiabatic piston. <i>Physical Review E</i> , 2006, 73, 016121.	2.1	14
61	On the scattering function of simple fluids in finite systems. <i>Journal of Statistical Physics</i> , 1988, 52, 295-309.	1.2	13
62	A particle method with adjustable transport properties—the generalized consistent Boltzmann algorithm. <i>Journal of Statistical Physics</i> , 1997, 89, 403-409.	1.2	13
63	The Limiting Kinetic Equation of the Consistent Boltzmann Algorithm for Dense Gases. <i>Journal of Statistical Physics</i> , 2000, 101, 1065-1086.	1.2	13
64	A thermodynamically consistent non-ideal stochastic hard-sphere fluid. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2009, 2009, P11008.	2.3	13
65	Noise in Algorithm Refinement Methods. <i>Computing in Science and Engineering</i> , 2005, 7, 32-38.	1.2	12
66	Discrete ion stochastic continuum overdamped solvent algorithm for modeling electrolytes. <i>Physical Review Fluids</i> , 2021, 6, .	2.5	12
67	Fluctuating hydrodynamics of reactive liquid mixtures. <i>Journal of Chemical Physics</i> , 2018, 149, 084113.	3.0	11
68	Hydrodynamic Fluctuations and the Direct Simulation Monte Carlo Method. <i>NATO ASI Series Series B: Physics</i> , 1990, , 177-188.	0.2	11
69	Simulations of Air Slider Bearings With Realistic Gas-Surface Scattering. <i>Journal of Tribology</i> , 1998, 120, 639-641.	1.9	10
70	A horizontal vane radiometer: Experiment, theory, and simulation. <i>Physics of Fluids</i> , 2016, 28, .	4.0	9
71	Thermal fluctuations in a Knudsen flow system. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1987, 119, 379-382.	2.1	8
72	SOME NEW PROPERTIES OF THE KINETIC EQUATION FOR THE CONSISTENT BOLTZMANN ALGORITHM. <i>Transport Theory and Statistical Physics</i> , 2002, 31, 579-594.	0.4	8

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73	Microscopic simulation of dilute gases with adjustable transport coefficients. <i>Physical Review E</i> , 1994, 49, 3512-3515.	2.1	7
74	A simple model for nonequilibrium fluctuations in a fluid. <i>American Journal of Physics</i> , 1996, 64, 1488-1495.	0.7	7
75	Long-Ranged Correlations in Bounded Nonequilibrium Fluids. <i>Journal of Statistical Physics</i> , 1998, 90, 1489-1492.	1.2	6
76	On the suppression and distortion of non-equilibrium fluctuations by transpiration. <i>Physics of Fluids</i> , 2019, 31, .	4.0	5
77	Nonequilibrium processes in polymers undergoing interchange reactions. 2. Reaction-diffusion processes. <i>The Journal of Physical Chemistry</i> , 1991, 95, 5655-5660.	2.9	4
78	Comment on "Simulation of a two-dimensional Rayleigh-Bénard system using the direct simulation Monte Carlo method". <i>Physical Review E</i> , 1995, 51, 3784-3785.	2.1	4
79	Validity of path thermodynamics in reactive systems. <i>Physical Review E</i> , 2020, 101, 052135.	2.1	4
80	Statistical error in particle simulations of low Mach number flows. , 2001, , 853-856.		4
81	Low Mach number fluctuating hydrodynamics model for ionic liquids. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	4
82	Comparison of Kinetic Theory and Hydrodynamics for Poiseuille Flow. <i>AIP Conference Proceedings</i> , 2003, , .	0.4	3
83	Algorithm Refinement for Stochastic Partial Differential Equations. <i>AIP Conference Proceedings</i> , 2003, , .	0.4	2
84	Fluctuating hydrodynamics and direct simulation Monte Carlo. , 2012, , .		2
85	Fortran 90 Language Guide. <i>Computers in Physics</i> , 1996, 10, 135.	0.5	1
86	Projectile motion in perspective. <i>Physics Education</i> , 2003, 38, 193-195.	0.5	1
87	Physics for Animation Artists. <i>Physics Teacher</i> , 2011, 49, 478-480.	0.3	1
88	Principles of animation physics. , 2012, , .		1
89	A new kinetic equation for dense gases. <i>AIP Conference Proceedings</i> , 2001, , .	0.4	0
90	Comment on "Stress-density ratio slip-corrected Reynolds equation for ultra-thin film gas bearing lubrication". [<i>Phys. Fluids</i> 14, 1450 (2002)]. <i>Physics of Fluids</i> , 2002, 14, 3748-3748.	4.0	0

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91	Numerical Study of a Direct Simulation Monte Carlo Method for the Uehling-Uhlenbeck-Boltzmann Equation. AIP Conference Proceedings, 2003, , .	0.4	0
92	Hydrodynamic fluctuations in a particle-continuum hybrid for complex fluids. , 2011, , .		0
93	Preface for the RGD Proceedings. , 2011, , .		0
94	Studies of Thermal Fluctuations in Nonequilibrium Systems by Monte Carlo Computer Simulations. , 1984, , 189-195.		0