

Alejandro Garc a

List of Publications by Year in descending order

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94
papers

3,961
citations

109321

35
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123424

61
g-index

98
all docs

98
docs citations

98
times ranked

1564
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermal fluctuations in the dissipation range of homogeneous isotropic turbulence. <i>Journal of Fluid Mechanics</i> , 2022, 939, .	3.4	15
2	Discrete ion stochastic continuum overdamped solvent algorithm for modeling electrolytes. <i>Physical Review Fluids</i> , 2021, 6, .	2.5	12
3	Validity of path thermodynamics in reactive systems. <i>Physical Review E</i> , 2020, 101, 052135.	2.1	4
4	Low Mach number fluctuating hydrodynamics model for ionic liquids. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	4
5	On the suppression and distortion of non-equilibrium fluctuations by transpiration. <i>Physics of Fluids</i> , 2019, 31, .	4.0	5
6	Fluctuating Hydrodynamics and Debye-Hückel-Onsager Theory for Electrolytes. <i>Current Opinion in Electrochemistry</i> , 2019, 13, 1-10.	4.8	18
7	Fluctuating hydrodynamics of electrolytes at electroneutral scales. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	15
8	Fluctuating hydrodynamics of reactive liquid mixtures. <i>Journal of Chemical Physics</i> , 2018, 149, 084113.	3.0	11
9	Stochastic simulation of reaction-diffusion systems: A fluctuating-hydrodynamics approach. <i>Journal of Chemical Physics</i> , 2017, 146, 124110.	3.0	35
10	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
11	A horizontal vane radiometer: Experiment, theory, and simulation. <i>Physics of Fluids</i> , 2016, 28, .	4.0	9
12	Low Mach number fluctuating hydrodynamics for electrolytes. <i>Physical Review Fluids</i> , 2016, 1, .	2.5	20
13	Low Mach number fluctuating hydrodynamics of multispecies liquid mixtures. <i>Physics of Fluids</i> , 2015, 27, .	4.0	27
14	Fluctuating hydrodynamics of multi-species reactive mixtures. <i>Journal of Chemical Physics</i> , 2015, 142, 224107.	3.0	32
15	Fluctuating hydrodynamics of multispecies nonreactive mixtures. <i>Physical Review E</i> , 2014, 89, 013017.	2.1	23
16	Modeling multiphase flow using fluctuating hydrodynamics. <i>Physical Review E</i> , 2014, 90, 033014.	2.1	33
17	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
18	Fluctuating hydrodynamics and direct simulation Monte Carlo. , 2012, , .		2

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19	Principles of animation physics. , 2012, , .		1
20	Diffusive Transport by Thermal Velocity Fluctuations. Physical Review Letters, 2011, 106, 204501.	7.8	48
21	Enhancement of diffusive transport by non-equilibrium thermal fluctuations. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P06014.	2.3	35
22	Physics for Animation Artists. Physics Teacher, 2011, 49, 478-480.	0.3	1
23	Hydrodynamic fluctuations in a particle-continuum hybrid for complex fluids. , 2011, , .		0
24	Preface for the RGD Proceedings. , 2011, , .		0
25	On the accuracy of finite-volume schemes for fluctuating hydrodynamics. Communications in Applied Mathematics and Computational Science, 2010, 5, 149-197.	1.8	102
26	Computational fluctuating fluid dynamics. ESAIM: Mathematical Modelling and Numerical Analysis, 2010, 44, 1085-1105.	1.9	33
27	A Hybrid Particle-Continuum Method for Hydrodynamics of Complex Fluids. Multiscale Modeling and Simulation, 2010, 8, 871-911.	1.6	63
28	A thermodynamically consistent non-ideal stochastic hard-sphere fluid. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P11008.	2.3	13
29	Stochastic Event-Driven Molecular Dynamics. Journal of Computational Physics, 2008, 227, 2644-2665.	3.8	45
30	Algorithm Refinement for Fluctuating Hydrodynamics. Multiscale Modeling and Simulation, 2008, 6, 1256-1280.	1.6	27
31	Stochastic Hard-Sphere Dynamics for Hydrodynamics of Nonideal Fluids. Physical Review Letters, 2008, 101, 075902.	7.8	20
32	Numerical methods for the stochastic Landau-Lifshitz Navier-Stokes equations. Physical Review E, 2007, 76, 016708.	2.1	68
33	Algorithm refinement for the stochastic Burgers's equation. Journal of Computational Physics, 2007, 223, 451-468.	3.8	15
34	Estimating hydrodynamic quantities in the presence of microscopic fluctuations. Communications in Applied Mathematics and Computational Science, 2006, 1, 53-78.	1.8	15
35	Generation of the Maxwellian inflow distribution. Journal of Computational Physics, 2006, 217, 693-708.	3.8	31
36	Hydrodynamic description of the adiabatic piston. Physical Review E, 2006, 73, 016121.	2.1	14

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37	Algorithm refinement for stochastic partial differential equations: II. Correlated systems. Journal of Computational Physics, 2005, 207, 769-787.	3.8	25
38	Non-equilibrium behaviour of equilibrium reservoirs in molecular simulations. International Journal for Numerical Methods in Fluids, 2005, 48, 1337-1349.	1.6	28
39	Noise in Algorithm Refinement Methods. Computing in Science and Engineering, 2005, 7, 32-38.	1.2	12
40	Measurement bias of fluid velocity in molecular simulations. Journal of Computational Physics, 2004, 196, 173-183.	3.8	23
41	Three-dimensional Hybrid Continuum-Atomistic Simulations For Multiscale Hydrodynamics. Journal of Fluids Engineering, Transactions of the ASME, 2004, 126, 768-777.	1.5	88
42	Statistical error in particle simulations of hydrodynamic phenomena. Journal of Computational Physics, 2003, 187, 274-297.	3.8	239
43	Inverted velocity profile in the cylindrical Couette flow of a rarefied gas. Physical Review E, 2003, 68, 016302.	2.1	51
44	Direct simulation Monte Carlo method for the Uehling-Uhlenbeck-Boltzmann equation. Physical Review E, 2003, 68, 056703.	2.1	16
45	Projectile motion in perspective. Physics Education, 2003, 38, 193-195.	0.5	1
46	Comparison of Kinetic Theory and Hydrodynamics for Poiseuille Flow. AIP Conference Proceedings, 2003, , .	0.4	3
47	Algorithm Refinement for Stochastic Partial Differential Equations. AIP Conference Proceedings, 2003, , .	0.4	2
48	Numerical Study of a Direct Simulation Monte Carlo Method for the Uehling-Uhlenbeck-Boltzmann Equation. AIP Conference Proceedings, 2003, , .	0.4	0
49	SOME NEW PROPERTIES OF THE KINETIC EQUATION FOR THE CONSISTENT BOLTZMANN ALGORITHM. Transport Theory and Statistical Physics, 2002, 31, 579-594.	0.4	8
50	Comment on "Stress-density ratio slip-corrected Reynolds equation for ultra-thin film gas bearing lubrication" [Phys. Fluids 14, 1450 (2002)]. Physics of Fluids, 2002, 14, 3748-3748.	4.0	0
51	Algorithm Refinement for Stochastic Partial Differential Equations. Journal of Computational Physics, 2002, 182, 47-66.	3.8	53
52	Comparison of Kinetic Theory and Hydrodynamics for Poiseuille Flow. Journal of Statistical Physics, 2002, 109, 495-505.	1.2	96
53	Molecular simulations of sound wave propagation in simple gases. Physics of Fluids, 2001, 13, 1040-1046.	4.0	65
54	A new kinetic equation for dense gases. AIP Conference Proceedings, 2001, , .	0.4	0

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55	Statistical error in particle simulations of low Mach number flows. , 2001, , 853-856.		4
56	Time step truncation error in direct simulation Monte Carlo. Physics of Fluids, 2000, 12, 2621.	4.0	110
57	The surface properties of a van der Waals fluid. Physica A: Statistical Mechanics and Its Applications, 2000, 281, 337-347.	2.6	19
58	The Limiting Kinetic Equation of the Consistent Boltzmann Algorithm for Dense Gases. Journal of Statistical Physics, 2000, 101, 1065-1086.	1.2	13
59	Burnett description for plane Poiseuille flow. Physical Review E, 1999, 60, 4063-4078.	2.1	78
60	Adaptive Mesh and Algorithm Refinement Using Direct Simulation Monte Carlo. Journal of Computational Physics, 1999, 154, 134-155.	3.8	237
61	Long-Ranged Correlations in Bounded Nonequilibrium Fluids. Journal of Statistical Physics, 1998, 90, 1489-1492.	1.2	6
62	Generation of the Chapman-Enskog Distribution. Journal of Computational Physics, 1998, 140, 66-70.	3.8	112
63	Cell size dependence of transport coefficients in stochastic particle algorithms. Physics of Fluids, 1998, 10, 1540-1542.	4.0	179
64	Simulations of Air Slider Bearings With Realistic Gas-Surface Scattering. Journal of Tribology, 1998, 120, 639-641.	1.9	10
65	Three-dimensional direct simulation Monte Carlo method for slider air bearings. Physics of Fluids, 1997, 9, 1764-1769.	4.0	79
66	The Direct Simulation Monte Carlo Method. Computers in Physics, 1997, 11, 588.	0.5	172
67	Anomalous flow profile due to the curvature effect on slip length. Physical Review E, 1997, 56, 2282-2283.	2.1	52
68	The consistent Boltzmann algorithm for the van der Waals equation of state. Physica A: Statistical Mechanics and Its Applications, 1997, 240, 196-201.	2.6	24
69	On the validity of hydrodynamics in plane Poiseuille flows. Physica A: Statistical Mechanics and Its Applications, 1997, 240, 255-267.	2.6	89
70	A particle method with adjustable transport properties—the generalized consistent Boltzmann algorithm. Journal of Statistical Physics, 1997, 89, 403-409.	1.2	13
71	A hydrodynamically correct thermal lattice Boltzmann model. Journal of Statistical Physics, 1997, 87, 1111-1121.	1.2	62
72	A simple model for nonequilibrium fluctuations in a fluid. American Journal of Physics, 1996, 64, 1488-1495.	0.7	7

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73	Fortran 90 Language Guide. Computers in Physics, 1996, 10, 135.	0.5	1
74	Particle Simulation of Complex Flows in Dilute Systems. Journal of Computational Physics, 1995, 119, 94-104.	3.8	14
75	Stabilization of thermal lattice Boltzmann models. Journal of Statistical Physics, 1995, 81, 395-408.	1.2	195
76	Comment on "Simulation of a two-dimensional Rayleigh-Bénard system using the direct simulation Monte Carlo method". Physical Review E, 1995, 51, 3784-3785.	2.1	4
77	A Consistent Boltzmann Algorithm. Physical Review Letters, 1995, 74, 5212-5215.	7.8	110
78	Microscopic simulation of dilute gases with adjustable transport coefficients. Physical Review E, 1994, 49, 3512-3515.	2.1	7
79	Direct simulation Monte Carlo for thin film bearings. Physics of Fluids, 1994, 6, 3854-3860.	4.0	123
80	Slip length in a dilute gas. Physical Review A, 1992, 46, 5279-5281.	2.5	75
81	Nonequilibrium processes in polymers undergoing interchange reactions. 2. Reaction-diffusion processes. The Journal of Physical Chemistry, 1991, 95, 5655-5660.	2.9	4
82	Fluctuating hydrodynamics and principal oscillation pattern analysis. Journal of Statistical Physics, 1991, 64, 1121-1132.	1.2	58
83	Hydrodynamic Fluctuations and the Direct Simulation Monte Carlo Method. NATO ASI Series Series B: Physics, 1990, , 177-188.	0.2	11
84	On the scattering function of simple fluids in finite systems. Journal of Statistical Physics, 1988, 52, 295-309.	1.2	13
85	Hydrodynamic fluctuations in a dilute gas under shear. Physical Review A, 1987, 36, 4348-4355.	2.5	54
86	Fluctuating hydrodynamics in a dilute gas. Physical Review Letters, 1987, 58, 874-877.	7.8	76
87	A Monte Carlo simulation of coagulation. Physica A: Statistical Mechanics and Its Applications, 1987, 143, 535-546.	2.6	87
88	Numerical integration of the fluctuating hydrodynamic equations. Journal of Statistical Physics, 1987, 47, 209-228.	1.2	79
89	Correlation functions for simple fluids in a finite system under nonequilibrium constraints. Journal of Statistical Physics, 1987, 48, 1157-1186.	1.2	25
90	Thermal fluctuations in a Knudsen flow system. Physics Letters, Section A: General, Atomic and Solid State Physics, 1987, 119, 379-382.	2.1	8

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91	Nonequilibrium fluctuations studied by a rarefied-gas simulation. <i>Physical Review A</i> , 1986, 34, 1454-1457.	2.5	34
92	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
93	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
94	Studies of Thermal Fluctuations in Nonequilibrium Systems by Monte Carlo Computer Simulations. , 1984, , 189-195.		0