Santosh Ansumali

List of Publications by Year
in descending order

68 papers	2,514 citations	218592 26 h-index	197736 49 g-index
72 all docs	72 docs citations	72 times ranked	1500 citing authors

#	Article	IF	Citations
1	A Model-Free Entropic Lattice Boltzmann Method for Cavity Aeroacoustics at Transonic Speeds. , 2022, , .		0
2	LES/DNS of flow past T106 LPT cascade using a higher-order LB model. , 2021, , .		1
3	Using High Effective Risk of Adult–Senior Duo in Multigenerational Homes to Prioritize COVID-19 Vaccination. Current Science, 2021, 120, 1698.	0.4	1
4	Modelling a pandemic with asymptomatic patients, impact of lockdown and herd immunity, with applications to SARS-CoV-2. Annual Reviews in Control, 2020, 50, 432-447.	4.4	59
5	Fokker–Planck model for binary mixtures. Journal of Fluid Mechanics, 2020, 899, .	1.4	4
6	Minimal and adaptive numerical strategy for critical resource planning in a pandemic. Physical Review E, 2020, 102, 021301.	0.8	7
7	Discrete differential operators on a class of lattices. Journal of Computational Science, 2020, 44, 101172.	1.5	3
8	The lattice Fokker–Planck equation for models of wealth distribution. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190401.	1.6	1
9	Fluid dynamics, soft matter and complex systems: recent results and new methods. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190395.	1.6	1
10	Extended BGK model for diatomic gases. Journal of Computational Science, 2020, 45, 101179.	1.5	4
11	Lattice Boltzmann model for weakly compressible flows. Physical Review E, 2020, 101, 013309.	0.8	9
12	Estimating the herd immunity threshold by accounting for the hidden asymptomatics using a COVID-19 specific model. PLoS ONE, 2020, 15, e0242132.	1.1	12
13	Modelling the COVID-19 Pandemic: Asymptomatic Patients, Lockdown and Herd Immunity. IFAC-PapersOnLine, 2020, 53, 823-828.	0.5	3
14	Molecular dice: Random number generators à la Boltzmann. Physical Review E, 2018, 98, .	0.8	2
15	Higher-order lattice Boltzmann model for thermohydrodynamics. Physical Review E, 2018, 98, .	0.8	26
16	Lattice Boltzmann Method for Wave Propagation in Elastic Solids. Communications in Computational Physics, 2018, 23, .	0.7	13
17	Isotropic finite-difference discretization of stochastic conservation laws preserving detailed balance. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 103202.	0.9	6
18	Essentially Entropic Lattice Boltzmann Model. Physical Review Letters, 2017, 119, 240602.	2.9	40

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19	Gaseous microflow modeling using the Fokker-Planck equation. Physical Review E, 2016, 94, 063307.	0.8	12
20	Crystallographic Lattice Boltzmann Method. Scientific Reports, 2016, 6, 27172.	1.6	26
21	Fokker-Planck model of hydrodynamics. Physical Review E, 2015, 91, 033303.	0.8	18
22	Three-Dimensional Lattice Pseudo-Potentials for Multiphase Flow Simulations at High Density Ratios. Journal of Statistical Physics, 2015, 161, 1404-1419.	0.5	35
23	DIRECT SIMULATION MONTE CARLO FOR DENSE HARD SPHERES. International Journal of Modern Physics C, 2014, 25, 1340023.	0.8	2
24	Shock waves in a dilute granular gas. , 2014, , .		5
25	Diffused bounce-back condition and refill algorithm for the lattice Boltzmann method. Physical Review E, 2014, 89, 033313.	0.8	26
26	Delayed Difference Scheme for Large Scale Scientific Simulations. Physical Review Letters, 2014, 113, 218701.	2.9	8
27	Data structure and movement for lattice-based simulations. Physical Review E, 2013, 88, 013314.	0.8	37
28	Universal mechanism for saturation of vorticity growth in fully developed fluid turbulence. Journal of Fluid Mechanics, 2013, 728, .	1.4	9
29	Lattice differential operators for computational physics. Europhysics Letters, 2013, 101, 50006.	0.7	24
30	Isotropic discrete Laplacian operators from lattice hydrodynamics. Journal of Computational Physics, 2013, 234, 1-7.	1.9	62
31	Lattice Fokker Planck for dilute polymer dynamics. Physical Review E, 2013, 88, 013301.	0.8	11
32	QUASIEQUILIBRIUM LATTICE BOLTZMANN MODELS WITH TUNABLE PRANDTL NUMBER FOR INCOMPRESSIBLE HYDRODYNAMICS. International Journal of Modern Physics C, 2013, 24, 1340004.	0.8	19
33	ON VECTORIZATION FOR LATTICE BASED SIMULATIONS. International Journal of Modern Physics C, 2013, 24, 1340011.	0.8	14
34	Energy Conserving Lattice Boltzmann Models for Incompressible Flow Simulations. Communications in Computational Physics, 2013, 13, 603-613.	0.7	11
35	Extended BGK Boltzmann for Dense Gases. Communications in Computational Physics, 2013, 13, 629-648.	0.7	8
36	Lattice Boltzmann method for multi-dimensional population balance models in crystallization. Chemical Engineering Science, 2012, 70, 121-134.	1.9	31

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37	Lattice Boltzmann method for population balance equations with simultaneous growth, nucleation, aggregation and breakage. Chemical Engineering Science, 2012, 69, 316-328.	1.9	27
38	Efficient lattice Boltzmann algorithm for Brownian suspensions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 2237-2245.	1.6	7
39	Mean-Field Model Beyond Boltzmann-Enskog Picture for Dense Gases. Communications in Computational Physics, 2011, 9, 1106-1116.	0.7	10
40	Microflow Simulations via the Lattice Boltzmann Method. Communications in Computational Physics, 2011, 9, 1128-1136.	0.7	9
41	A lattice Boltzmann method for dilute polymer solutions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 2301-2310.	1.6	10
42	Global Potential of Rice Husk as a Renewable Feedstock for Ethanol Biofuel Production. Bioenergy Research, 2010, 3, 328-334.	2.2	139
43	Entropic lattice Boltzmann method for crystallization processes. Chemical Engineering Science, 2010, 65, 3928-3936.	1.9	17
44	Higher-order Galilean-invariant lattice Boltzmann model for microflows: Single-component gas. Physical Review E, 2010, 82, 046701.	0.8	49
45	Fast High-Resolution Method for Solving Multidimensional Population Balances in Crystallization. Industrial & Engineering Chemistry Research, 2010, 49, 3862-3872.	1.8	27
46	Hydrodynamics beyond Navier-Stokes: The slip flow model. Physical Review E, 2008, 78, 016705.	0.8	42
47	Renormalization of the lattice Boltzmann hierarchy. Physical Review E, 2007, 76, 025701.	0.8	17
48	Kinetically reduced local Navier-Stokes equations for simulation of incompressible viscous flows. Physical Review E, 2007, 76, 066704.	0.8	26
49	Hydrodynamics beyond Navier-Stokes: Exact Solution to the Lattice Boltzmann Hierarchy. Physical Review Letters, 2007, 98, 124502.	2.9	136
50	Quasi-equilibrium lattice Boltzmann method. European Physical Journal B, 2007, 56, 135-139.	0.6	45
51	Entropic Lattice Boltzmann Models for Hydrodynamics in Three Dimensions. Physical Review Letters, 2006, 97, 010201.	2.9	116
52	Grad's approximation for missing data in lattice Boltzmann simulations. Europhysics Letters, 2006, 74, 215-221.	0.7	59
53	Entropic lattice Boltzmann method for microflows. Physica A: Statistical Mechanics and Its Applications, 2006, 359, 289-305.	1.2	69
54	Entropic lattice Boltzmann method for simulation of binary mixtures. Mathematics and Computers in Simulation, 2006, 72, 79-83.	2.4	18

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55	Entropic lattice Boltzmann method for simulation of thermal flows. Mathematics and Computers in Simulation, 2006, 72, 179-183.	2.4	23
56	Lattice Boltzmann Method and Kinetic Theory. , 2006, , 403-422.		1
57	Simulation of binary mixtures with the lattice Boltzman method. Physical Review E, 2006, 74, 056707.	0.8	26
58	Kinetically reduced local Navier-Stokes equations: An alternative approach to hydrodynamics. Physical Review E, 2006, 74, 035702.	0.8	19
59	Consistent Lattice Boltzmann Method. Physical Review Letters, 2005, 95, 260605.	2.9	92
60	Thermodynamic Theory of Incompressible Hydrodynamics. Physical Review Letters, 2005, 94, 080602.	2.9	34
61	ENTROPIC LATTICE BOLTZMANN SIMULATION OF THE FLOW PAST SQUARE CYLINDER. International Journal of Modern Physics C, 2004, 15, 435-445.	0.8	30
62	Kinetic theory of turbulence modeling: smallness parameter, scaling and microscopic derivation of Smagorinsky model. Physica A: Statistical Mechanics and Its Applications, 2004, 338, 379-394.	1.2	46
63	Minimal entropic kinetic models for hydrodynamics. Europhysics Letters, 2003, 63, 798-804.	0.7	242
64	Kinetic boundary conditions in the lattice Boltzmann method. Physical Review E, 2002, 66, 026311.	0.8	303
65	Single relaxation time model for entropic lattice Boltzmann methods. Physical Review E, 2002, 65, 056312.	0.8	106
66	Entropy Function Approach to the Lattice Boltzmann Method. Journal of Statistical Physics, 2002, 107, 291-308.	0.5	103
67	Stabilization of the lattice Boltzmann method by theHtheorem:â€,Anumerical test. Physical Review E, 2000, 62, 7999-8003.	0.8	83
68	A Steady Trickle-Down from Metro Districts and Improving Epidemic-Parameters Characterize the Increasing COVID-19 Cases in India. SSRN Electronic Journal, 0, , .	0.4	2