Junfeng Zhang

List of Publications by Year
in descending order

62 papers	2,174 citations	331259 21 h-index	223531 46 g-index
62 all docs	62 docs citations	62 times ranked	1660 citing authors

#	Article	IF	Citations
1	Lateral migration of viscoelastic capsules in tube flow. Physics of Fluids, 2022, 34, .	1.6	9
2	Boundary and Interface Treatments for One-Unit Pore-Scale Simulations of Heat and Mass Transfer in Porous Materials: A Mini-Review. Archives of Computational Methods in Engineering, 2022, 29, 5569-5578.	6.0	1
3	A Counter-Extrapolation Approach for the Boundary Velocity Calculation in Immersed Boundary Simulations. International Journal of Computational Fluid Dynamics, 2021, 35, 248-268.	0.5	1
4	The generalized periodic boundary condition for microscopic simulations of heat transfer in heterogeneous materials. International Journal of Heat and Mass Transfer, 2021, 173, 121200.	2.5	8
5	An immersed membrane method for mass transfer across flexible semipermeable membranes in flows. International Communications in Heat and Mass Transfer, 2021, 128, 105601.	2.9	4
6	Similar but Distinct Roles of Membrane and Interior Fluid Viscosities in Capsule Dynamics in Shear Flows. Cardiovascular Engineering and Technology, 2021, 12, 232-249.	0.7	15
7	Effects of Microscopic Properties on Macroscopic Thermal Conductivity for Convective Heat Transfer in Porous Materials. Micromachines, 2021, 12, 1369.	1.4	5
8	Accuracy improvement for immersed boundary method using Lagrangian velocity interpolation. Journal of Computational Physics, 2020, 423, 109800.	1.9	6
9	Finite-difference and integral schemes for Maxwell viscous stress calculation in immersed boundary simulations of viscoelastic membranes. Biomechanics and Modeling in Mechanobiology, 2020, 19, 2667-2681.	1.4	12
10	The temperature decomposition method for periodic thermal flows with conjugate heat transfer. International Journal of Heat and Mass Transfer, 2020, 150, 119288.	2.5	7
11	Dynamic modelling and simulation of the sulphur dioxide converter in an industrial smelter. Canadian Journal of Chemical Engineering, 2019, 97, 1838-1847.	0.9	4
12	Two-Phase Dynamic Modeling and Simulation of Transport and Reaction in Catalytic Sulfur Dioxide Converters. Industrial & Engineering Chemistry Research, 2019, 58, 10963-10974.	1.8	2
13	A finite difference method with subsampling for immersed boundary simulations of the capsule dynamics with viscoelastic membranes. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3200.	1.0	20
14	Simulating anisotropic flows with isotropic lattice models via coordinate and velocity transformation. International Journal of Modern Physics C, 2019, 30, 1941001.	0.8	6
15	A Physics-Based Estimation of Mean Curvature Normal Vector for Triangulated Surfaces. Proceedings of the International Geometry Center, 2019, 12, 70-78.	0.5	1
16	The temperature decomposition method for periodic thermal flows with general wall conditions. Numerical Heat Transfer, Part B: Fundamentals, 2018, 74, 559-577.	0.6	6
17	Simulating Heat Transfer Through Periodic Structures With Different Wall Temperatures: A Temperature Decomposition Method. Journal of Heat Transfer, 2018, 140, .	1.2	7
18	Evaluation of thermal and power performances of nanofluid flows through square in-line cylinder arrays. Journal of Thermal Analysis and Calorimetry, 2017, 129, 1923-1934.	2.0	8

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19	A soft sensor for the sulphur dioxide converter in an industrial smelter. Canadian Journal of Chemical Engineering, 2017, 95, 1093-1100.	0.9	5
20	Counter-extrapolation method for conjugate heat and mass transfer with interfacial discontinuity. International Journal of Numerical Methods for Heat and Fluid Flow, 2017, 27, 2231-2258.	1.6	13
21	Lattice Boltzmann simulations of heat transfer in fully developed periodic incompressible flows. Physical Review E, 2017, 95, 063309.	0.8	14
22	Thermal and power performance analysis for heat transfer applications of nanofluids in flows around cylinder. Applied Thermal Engineering, 2017, 112, 61-72.	3.0	17
23	Effects of shear rate and suspending viscosity on deformation and frequency of red blood cells tank-treading in shear flows. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 648-662.	0.9	16
24	Temporal and Spatial Variations of Wall Shear Stress in the Entrance Region of Microvessels. Journal of Biomechanical Engineering, 2015, 137, 061008.	0.6	4
25	Counter-extrapolation method for conjugate interfaces in computational heat and mass transfer. Physical Review E, 2015, 91, 033306.	0.8	42
26	Effects of Reynolds and Prandtl Numbers on Heat Transfer Around a Circular Cylinder by the Simplified Thermal Lattice Boltzmann Model. Communications in Computational Physics, 2015, 17, 937-959.	0.7	24
27	On the origin of numerical errors in the bounce-back boundary treatment of the lattice Boltzmann method: A remedy for artificial boundary slip and mass leakage. European Journal of Mechanics, B/Fluids, 2015, 53, 11-23.	1.2	5
28	Cell-free layer development process in the entrance region of microvessels. Biomechanics and Modeling in Mechanobiology, 2015, 14, 783-794.	1.4	6
29	A non-iterative mathematical description of three-dimensional bifurcation geometry for biofluid simulations. Applied Mathematical Modelling, 2015, 39, 654-666.	2.2	3
30	Multiple red blood cell flows through microvascular bifurcations: Cell free layer, cell trajectory, and hematocrit separation. Microvascular Research, 2013, 89, 47-56.	1.1	68
31	Shear Stress Variation and Plasma Viscosity Effect in Microcirculation. , 2013, , 349-390.		0
32	Improved treatments for general boundary conditions in the lattice Boltzmann method for convection-diffusion and heat transfer processes. Physical Review E, 2013, 88, 033304.	0.8	84
33	Accurate boundary treatments for lattice Boltzmann simulations of electric fields and electro-kinetic applications. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 475501.	0.7	11
34	Modeling the dynamic flowâ€"fiber interaction for microscopic biofluid systems. Journal of Biomechanics, 2013, 46, 314-318.	0.9	4
35	Effect of deformability difference between two erythrocytes on their aggregation. Physical Biology, 2013, 10, 036001.	0.8	18
36	Lattice Boltzmann Method (LBM). , 2013, , 1-8.		1

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37	Mass and momentum transfer across solid-fluid boundaries in the lattice-Boltzmann method. Physical Review E, 2012, 86, 026701.	0.8	25
38	Cell-free layer and wall shear stress variation in microvessels. Biorheology, 2012, 49, 261-270.	1.2	16
39	Two-dimensional lattice Boltzmann study of red blood cell motion through microvascular bifurcation: cell deformability and suspending viscosity effects. Biomechanics and Modeling in Mechanobiology, 2012, 11, 575-583.	1.4	44
40	An improved bounce-back scheme for complex boundary conditions in lattice Boltzmann method. Journal of Computational Physics, 2012, 231, 4295-4303.	1.9	94
41	A General Poissonâ˘Boltzmann Model with Position-Dependent Dielectric Permittivity for Electric Double Layer Analysis. Langmuir, 2011, 27, 5366-5370.	1.6	10
42	Effect of plasma viscosity on blood flow behaviors in microvessels. , 2011, , .		0
43	Roughness Effects on Continuous and Discrete Flows in Superhydrophobic Microchannels. Communications in Computational Physics, 2011, 9, 1094-1105.	0.7	1
44	Effect of Suspending Viscosity on Red Blood Cell Dynamics and Blood Flows in Microvessels. Microcirculation, 2011, 18, 562-573.	1.0	32
45	Lattice Boltzmann method for microfluidics: models and applications. Microfluidics and Nanofluidics, 2011, 10, 1-28.	1.0	336
46	A two-dimensional lattice Boltzmann model for uniform channel flows. Computers and Mathematics With Applications, 2011, 61, 3453-3460.	1.4	14
47	Shear Stress Variation Induced by Red Blood Cell Motion in Microvessel. Annals of Biomedical Engineering, 2010, 38, 2649-2659.	1.3	47
48	Study of force-dependent and time-dependent transition of secondary flow in a rotating straight channel by the lattice Boltzmann method. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 288-294.	1.2	8
49	Boundary slip from the immersed boundary lattice Boltzmann models. Physical Review E, 2009, 79, 026701.	0.8	84
50	Effects of erythrocyte deformability and aggregation on the cell free layer and apparent viscosity of microscopic blood flows. Microvascular Research, 2009, 77, 265-272.	1.1	185
51	Red blood cell aggregation and dissociation in shear flows simulated by lattice Boltzmann method. Journal of Biomechanics, 2008, 41, 47-55.	0.9	225
52	A bottom-up approach to non-ideal fluids in the lattice Boltzmann method. Europhysics Letters, 2008, 81, 66005.	0.7	31
53	An immersed boundary lattice Boltzmann approach to simulate deformable liquid capsules and its application to microscopic blood flows. Physical Biology, 2007, 4, 285-295.	0.8	161
54	ELECTROKINETIC SLIP FLOW OF MICROFLUIDICS IN TERMS OF STREAMING POTENTIAL BY A LATTICE BOLTZMANN METHOD: A BOTTOM-UP APPROACH. International Journal of Modern Physics C, 2007, 18, 693-700.	0.8	8

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55	Contact Line and Contact Angle Dynamics in Superhydrophobic Channels. Langmuir, 2006, 22, 4998-5004.	1.6	90
56	Pressure boundary condition of the lattice Boltzmann method for fully developed periodic flows. Physical Review E, 2006, 73, 047702.	0.8	42
57	A 2D lattice Boltzmann study on electrohydrodynamic drop deformation with the leaky dielectric theory. Journal of Computational Physics, 2005, 206, 150-161.	1.9	83
58	On the validity of the Cassie equation via a mean-field free-energy lattice Boltzmann approach. Journal of Colloid and Interface Science, 2005, 282, 434-438.	5.0	22
59	Apparent slip over a solid-liquid interface with a no-slip boundary condition. Physical Review E, 2004, 70, 056701.	0.8	51
60	Lattice Boltzmann Study on the Contact Angle and Contact Line Dynamics of Liquidâ^'Vapor Interfaces. Langmuir, 2004, 20, 8137-8141.	1.6	49
61	Mean-field free-energy approach to the lattice Boltzmann method for liquid-vapor and solid-fluid interfaces. Physical Review E, 2004, 69, 032602.	0.8	59
62	Liquid Wettability and Micro-droplet Self-Movements on Heterogeneous Solid Surfaces. , 0, , .		0