Xiao-Jun Gu

List of Publications by Year
in descending order

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Version: 2024-02-01

40 papers	1,077 citations	567281 15 h-index	395702 33 g-index
40 all docs	40 docs citations	40 times ranked	699 citing authors

#	Article	IF	Citations
1	A hybrid approach to couple the discrete velocity method and Method of Moments for rarefied gas flows. Journal of Computational Physics, 2020, 410, 109397.	3.8	15
2	On the accuracy of macroscopic equations for linearized rarefied gas flows. Advances in Aerodynamics, 2020, 2, .	2.5	13
3	Effect of surface modification on steady flow past a stationary circular micro-cylinder. AIP Conference Proceedings, 2019, , .	0.4	0
4	Modelling Thermally Induced Non-Equilibrium Gas Flows by Coupling Kinetic and Extended Thermodynamic Methods. Entropy, 2019, 21, 816.	2.2	4
5	Comparative study of the discrete velocity and the moment method for rarefied gas flows. AIP Conference Proceedings, 2019, , .	0.4	0
6	Lattice Boltzmann modeling of fluid-particle interaction based on a two-phase mixture representation. Physical Review E, 2019, 100, 063311.	2.1	4
7	Non-equilibrium effects on flow past a circular cylinder in the slip and early transition regime. Journal of Fluid Mechanics, 2019, 860, 654-681.	3.4	23
8	Analysis of non-physical slip velocity in lattice Boltzmann simulations using the bounce-back scheme. Journal of Computational Science, 2018, 28, 476-482.	2.9	13
9	Computation of Aerodynamic Forces Under Nonequilibrium Conditions: Flow Past a Spinning Cylinder. AIAA Journal, 2018, 56, 4219-4224.	2.6	3
10	Discrete Boltzmann model of shallow water equations with polynomial equilibria. International Journal of Modern Physics C, 2018, 29, 1850080.	1.7	4
11	A comparative study of boundary conditions for lattice Boltzmann simulations of high Reynolds number flows. Computers and Fluids, 2017, 156, 1-8.	2.5	10
12	On the apparent permeability of porous media in rarefied gas flows. Journal of Fluid Mechanics, 2017, 822, 398-417.	3.4	68
13	KNUDSEN'S PERMEABILITY CORRECTION FOR GAS FLOW IN TIGHT POROUS MEDIA USING THE R26 MOMENT METHOD. Journal of Porous Media, 2017, 20, 787-805.	1.9	9
14	On the inverse Magnus effect for flow past a rotating cylinder. AIP Conference Proceedings, 2016, , .	0.4	3
15	High-Speed Rarefied Flow Past a Rotating Cylinder: The Inverse Magnus Effect. AIAA Journal, 2016, 54, 1670-1681.	2.6	19
16	Jet flame heights, lift-off distances, and mean flame surface density for extensive ranges of fuels and flow rates. Combustion and Flame, 2016, 164, 400-409.	5.2	92
17	A new extended Reynolds equation for gas bearing lubrication based on the method of moments. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	10
18	Parallel Navierâ€“Stokes simulations for high speed compressible flow past arbitrary geometries using FLASH. Computers and Fluids, 2015, 110, 27-35.	2.5	3

#	Article	IF	Citations
19	High Speed Aerodynamic Characteristics of Rarefied Flow past Stationary and Rotating Cylinders. , 2015, , .		4
20	Simulation of thermal transpiration flow using a high-order moment method. International Journal of Modern Physics C, 2014, 25, 1450061.	1.7	17
21	Linearized-moment analysis of the temperature jump and temperature defect in the Knudsen layer of a rarefied gas. Physical Review E, 2014, 89, 063020.	2.1	6
22	Nonequilibrium gaseous heat transfer in pressure-driven plane Poiseuille flow. Physical Review E, 2013, 88, 013018.	2.1	11
23	Parallel Compressible Viscous Flow Simulations Using FLASH Code: Implementation for Arbitrary 3D Geometries. Procedia Engineering, 2013, 61, 52-56.	1.2	3
24	Extended Thermodynamic Approach for Non-Equilibrium Gas Flow. Communications in Computational Physics, 2013, 13, 1330-1356.	1.7	8
25	NUMERICAL INVESTIGATIONS OF CAVITATION AROUND A HIGH SPEED SUBMARINE USING OPENFOAM WITH LES. International Journal of Computational Methods, 2012, 09, 1250040.	1.3	13
26	TELEMAC: An efficient hydrodynamics suite for massively parallel architectures. Computers and Fluids, 2011, 51, 30-34.	2.5	36
27	Modeling oscillatory flows in the transition regime using a high-order moment method. Microfluidics and Nanofluidics, 2011, 10, 389-401.	2.2	12
28	Effects of incomplete surface accommodation on non-equilibrium heat transfer in cavity flow: A parallel DSMC study. Computers and Fluids, 2011, 45, 197-201.	2.5	58
29	Recent advances in computational fluid dynamics relevant to the modelling of pesticide flow on leaf surfaces. Pest Management Science, 2010, 66, 2-9.	3.4	31
30	Analysis of the slip coefficient and defect velocity in the Knudsen layer of a rarefied gas using the linearized moment equations. Physical Review E, 2010, 81, 016313.	2.1	36
31	Investigation of Heat and Mass Transfer in a Lid-Driven Cavity Under Nonequilibrium Flow Conditions. Numerical Heat Transfer, Part B: Fundamentals, 2010, 58, 287-303.	0.9	87
32	MODELING VISCOUS FLUID DAMPING IN OSCILLATING MICROSTRUCTURES. Modern Physics Letters B, 2009, 23, 241-244.	1.9	0
33	Kramersâ€™ problem and the Knudsen minimum: a theoretical analysis using a linearized 26-moment approach. Continuum Mechanics and Thermodynamics, 2009, 21, 345-360.	2.2	26
34	A high-order moment approach for capturing non-equilibrium phenomena in the transition regime. Journal of Fluid Mechanics, 2009, 636, 177-216.	3.4	186
35	Computational framework for the regularized 20â€moment equations for nonâ€equilibrium gas flows. International Journal for Numerical Methods in Fluids, 2008, 56, 1433-1439.	1.6	7
36	Lattice Boltzmann modelling Knudsen layer effect in non-equilibrium flows. Europhysics Letters, 2008, 83, 40008.	2.0	56

#	Article	IF	Citations
37	Application of a High-Order Macroscopic Approach to Force-Driven Poiseuille Flow in the Slip and Transition Regimes. , 2008, , .		1
38	How Far Can 13 Moments Go in Modeling Microscale Gas Phenomena?. Nanoscale and Microscale Thermophysical Engineering, 2007, 11, 85-97.	2.6	10
39	Nonplanar oscillatory shear flow: From the continuum to the free-molecular regime. Physics of Fluids, 2007, 19, .	4.0	49
40	Capturing Knudsen layer phenomena using a lattice Boltzmann model. Physical Review E, 2006, 74, 046704.	2.1	127