Irina Ginzburg

List of Publications by Year
in descending order

34 papers	3,745 citations	361413 20 h-index	377865 34 g-index
34 all docs	34 docs citations	34 times ranked	1944 citing authors

#	Article	IF	Citations
1	Multipleâ€"relaxationâ€"time lattice Boltzmann models in three dimensions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2002, 360, 437-451.	3.4	1,494
2	Multireflection boundary conditions for lattice Boltzmann models. Physical Review E, 2003, 68, 066614.	2.1	418
3	Equilibrium-type and link-type lattice Boltzmann models for generic advection and anisotropic-dispersion equation. Advances in Water Resources, 2005, 28, 1171-1195.	3.8	367
4	Viscosity independent numerical errors for Lattice Boltzmann models: From recurrence equations to â€œmagicâ€• collision numbers. Computers and Mathematics With Applications, 2009, 58, 823-840.	2.7	163
5	Optimal Stability of Advection-Diffusion Lattice Boltzmann Models with Two Relaxation Times forÂPositive/Negative Equilibrium. Journal of Statistical Physics, 2010, 139, 1090-1143.	1.2	150
6	Generic boundary conditions for lattice Boltzmann models and their application to advection and anisotropic dispersion equations. Advances in Water Resources, 2005, 28, 1196-1216.	3.8	149
7	Lattice Boltzmann model for free-surface flow and its application to filling process in casting. Journal of Computational Physics, 2003, 185, 61-99.	3.8	110
8	Coarse- and fine-grid numerical behavior of MRT/TRT lattice-Boltzmann schemes in regular and random sphere packings. Journal of Computational Physics, 2015, 281, 708-742.	3.8	109
9	Truncation Errors, Exact And Heuristic Stability Analysis Of Two-Relaxation-Times Lattice Boltzmann Schemes For Anisotropic Advection-Diffusion Equation. Communications in Computational Physics, 2012, 11, 1439-1502.	1.7	84
10	Lattice Boltzmann modeling with discontinuous collision components: Hydrodynamic and Advection-Diffusion Equations. Journal of Statistical Physics, 2007, 126, 157-206.	1.2	74
11	Variably saturated flow described with the anisotropic Lattice Boltzmann methods. Computers and Fluids, 2006, 35, 831-848.	2.5	72
12	Consistent lattice Boltzmann schemes for the Brinkman model of porous flow and infinite Chapman-Enskog expansion. Physical Review E, 2008, 77, 066704.	2.1	63
13	A free-surface lattice Boltzmann method for modelling the filling of expanding cavities by Bingham fluids. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2002, 360, 453-466.	3.4	59
14	Analysis and improvement of Brinkman lattice Boltzmann schemes: Bulk, boundary, interface. Similarity and distinctness with finite elements in heterogeneous porous media. Physical Review E, 2015, 91, 023307.	2.1	49
15	Multiple anisotropic collisions for advectionâ€"diffusion Lattice Boltzmann schemes. Advances in Water Resources, 2013, 51, 381-404.	3.8	48
16	Lattice Boltzmann and analytical modeling of flow processes in anisotropic and heterogeneous stratified aquifers. Advances in Water Resources, 2007, 30, 2202-2234.	3.8	47
17	Taylor dispersion in heterogeneous porous media: Extended method of moments, theory, and modelling with two-relaxation-times lattice Boltzmann scheme. Physics of Fluids, 2014, 26, .	4.0	31
18	Comment on â€œAn improved gray Lattice Boltzmann model for simulating fluid flow in multi-scale porous mediaâ€: Intrinsic links between LBE Brinkman schemes. Advances in Water Resources, 2016, 88, 241-249.	3.8	27

#	Article	IF	Citations
19	Low- and high-order accurate boundary conditions: From Stokes to Darcy porous flow modeled with standard and improved Brinkman lattice Boltzmann schemes. Journal of Computational Physics, 2017, 335, 50-83.	3.8	27
20	Truncation effect on Taylorâ€“Aris dispersion in lattice Boltzmann schemes: Accuracy towards stability. Journal of Computational Physics, 2015, 299, 974-1003.	3.8	26
21	Field-scale modeling of subsurface tile-drained soils using an equivalent-medium approach. Journal of Hydrology, 2007, 341, 105-115.	5.4	21
22	Prediction of the moments in advection-diffusion lattice Boltzmann method. II. Attenuation of the boundary layers via double-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="normal">Î›</mml:mi></mml:math>bounce-back flux scheme. Physical Review E, 2017, 95, 013305.	2.1	21
23	Local boundary reflections in lattice Boltzmann schemes: Spurious boundary layers and their impact on the velocity, diffusion and dispersion. Comptes Rendus - Mecanique, 2015, 343, 518-532.	2.1	19
24	Prediction of the moments in advection-diffusion lattice Boltzmann method. I. Truncation dispersion, skewness, and kurtosis. Physical Review E, 2017, 95, 013304.	2.1	17
25	Stokesâ€“Brinkmanâ€“Darcy Solutions of Bimodal Porous Flow Across Periodic Array of Permeable Cylindrical Inclusions: Cell Model, Lubrication Theory and LBM/FEM Numerical Simulations. Transport in Porous Media, 2016, 111, 795-825.	2.6	16
26	Steady-state two-relaxation-time lattice Boltzmann formulation for transport and flow, closed with the compact multi-reflection boundary and interface-conjugate schemes. Journal of Computational Science, 2021, 54, 101215.	2.9	13
27	The permeability and quality of velocity field in a square array of solid and permeable cylindrical obstacles with the TRTâ€“LBM and FEM Brinkman schemes. Comptes Rendus - Mecanique, 2015, 343, 545-558.	2.1	12
28	Enhanced single-node lattice Boltzmann boundary condition for fluid flows. Physical Review E, 2021, 103, 053308.	2.1	11
29	Reviving the local second-order boundary approach within the two-relaxation-time lattice Boltzmann modelling. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190404.	3.4	10
30	Mass-balance and locality versus accuracy with the new boundary and interface-conjugate approaches in advection-diffusion lattice Boltzmann method. Physics of Fluids, 2021, 33, 057104.	4.0	10
31	Lattice Boltzmann approach to Richards' equation. Developments in Water Science, 2004, , 583-595.	0.1	8
32	Spurious interface and boundary behaviour beyond physical solutions in lattice Boltzmann schemes. Journal of Computational Physics, 2021, 431, 109986.	3.8	8
33	Determination of the diffusivity, dispersion, skewness and kurtosis in heterogeneous porous flow. Part I: Analytical solutions with the extended method of moments.. Advances in Water Resources, 2018, 115, 60-87.	3.8	6
34	Determination of the diffusivity, dispersion, skewness and kurtosis in heterogeneous porous flow. Part II: Lattice Boltzmann schemes with implicit interface. Advances in Water Resources, 2018, 118, 49-82.	3.8	6