Mauro Sbragaglia

List of Publications by Year
in descending order

125 papers	3,788 citations	34 h-index (117625)	59 g-index (133252)
130 all docs	130 docs citations	130 times ranked	2528 citing authors

#	Article	IF	Citations
1	Mesoscale perspective on the Tolman length. Physical Review E, 2022, 105, 015301.	2.1	6
2	TLBfind: a Thermal Lattice Boltzmann code for concentrated emulsions with FINite-size Droplets. Computer Physics Communications, 2022, 273, 108259.	7.5	2
3	Lattice Boltzmann simulations of plasma wakefield acceleration. Physics of Plasmas, 2022, 29, .	1.9	3
4	Rayleighâ€“BÃ©nard convection of a model emulsion: anomalous heat-flux fluctuations and finite-size droplet effects. Soft Matter, 2021, 17, 3709-3721.	2.7	5
5	Loading and relaxation dynamics of a red blood cell. Soft Matter, 2021, 17, 5978-5990.	2.7	9
6	Immiscible Rayleigh-Taylor turbulence using mesoscopic lattice Boltzmann algorithms. Physical Review Fluids, 2021, 6, .	2.5	6
7	Structure and isotropy of lattice pressure tensors for multirange potentials. Physical Review E, 2021, 103, 063309.	2.1	4
8	Lattice Boltzmann simulations on the tumbling to tank-treading transition: effects of membrane viscosity. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200395.	3.4	10
9	Validation and application of the lattice Boltzmann algorithm for a turbulent immiscible Rayleighâ€“Taylor system. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200396.	3.4	2
10	Stress Overshoots in Simple Yield Stress Fluids. Physical Review Letters, 2021, 127, 148003.	7.8	20
11	Continuum modeling of shear startup in soft glassy materials. Physical Review E, 2021, 104, 034612.	2.1	8
12	A lattice Boltzmann study of particle settling in a fluctuating multicomponent fluid under confinement. European Physical Journal E, 2021, 44, 142.	1.6	2
13	Sub-Kolmogorov droplet dynamics in isotropic turbulence using a multiscale lattice Boltzmann scheme. Journal of Computational Science, 2020, 45, 101178.	2.9	5
14	On the effects of membrane viscosity on transient red blood cell dynamics. Soft Matter, 2020, 16, 6191-6205.	2.7	34
15	A lattice Boltzmann study on Brownian diffusion and friction of a particle in a confined multicomponent fluid. Journal of Computational Science, 2020, 47, 101113.	2.9	7
16	Lattice Boltzmann simulations of droplet breakup in confined and time-dependent flows. Physical Review Fluids, 2020, 5, .	2.5	7
17	Lattice Boltzmann simulations of nonequilibrium fluctuations in a nonideal binary mixture. Physical Review E, 2019, 99, 063302.	2.1	2
18	On the impact of controlled wall roughness shape on the flow of a soft material. Europhysics Letters, 2019, 127, 34005.	2.0	8

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19	Hydrodynamic behavior of the pseudopotential lattice Boltzmann method for interfacial flows. Physical Review E, 2019, 99, 053305.	2.1	15
20	Avalanche statistics during coarsening dynamics. Soft Matter, 2019, 15, 4518-4524.	2.7	11
21	Unified Theoretical and Experimental View on Transient Shear Banding. Physical Review Letters, 2019, 123, 248001.	7.8	18
22	Lattice Boltzmann simulations of droplet dynamics in time-dependent flows. European Physical Journal E, 2018, 41, 6.	1.6	11
23	Wall fluidization in two acts: from stiff to soft roughness. Soft Matter, 2018, 14, 1088-1093.	2.7	7
24	Metastability at the Yield-Stress Transition in Soft Glasses. Physical Review X, 2018, 8, .	8.9	14
25	High-Reynolds-number turbulent cavity flow using the lattice Boltzmann method. Physical Review E, 2018, 98, .	2.1	20
26	A numerical tool for the study of the hydrodynamic recovery of the Lattice Boltzmann Method. Computers and Fluids, 2018, 172, 241-250.	2.5	3
27	Ligament break-up simulation through pseudo-potential lattice Boltzmann method. AIP Conference Proceedings, 2018, , .	0.4	4
28	Effects of thermal fluctuations in the fragmentation of a nanoligament. Physical Review E, 2018, 98, 012802.	2.1	14
29	Response function of a moving contact line. Physical Review Fluids, 2018, 3, .	2.5	1
30	GPU based detection of topological changes in Voronoi diagrams. Computer Physics Communications, 2017, 213, 19-28.	7.5	11
31	Stretching of viscoelastic drops in steady sliding. Soft Matter, 2017, 13, 3116-3124.	2.7	10
32	Fluidization and wall slip of soft glassy materials by controlled surface roughness. Physical Review E, 2017, 95, 052602.	2.1	21
33	Droplet breakup driven by shear thinning solutions in a microfluidic T-junction. Physical Review Fluids, 2017, 2, .	2.5	53
34	Fluidisation and plastic activity in a model soft-glassy material flowing in micro-channels with rough walls. Europhysics Letters, 2016, 114, 64003.	2.0	8
35	Lattice Boltzmann Methods for Nanofluidics. , 2016, , 1771-1777.		0
36	Lattice Boltzmann simulations of droplet formation in confined channels with thermocapillary flows. Physical Review E, 2016, 94, 063302.	2.1	14

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37	Topical issue on Multi-scale phenomena in complex flows and flowing matter. European Physical Journal E, 2016, 39, 56.	1.6	0
38	Thermal fluctuations of an interface near a contact line. Physical Review E, 2016, 94, 052803.	2.1	9
39	Effects of viscoelasticity on droplet dynamics and break-up in microfluidic T-Junctions: a lattice Boltzmann study. European Physical Journal E, 2016, 39, 6.	1.6	8
40	A lattice Boltzmann study of the effects of viscoelasticity on droplet formation in microfluidic cross-junctions. European Physical Journal E, 2016, 39, 2.	1.6	16
41	Cooperativity flows and shear-bandings: a statistical field theory approach. Soft Matter, 2016, 12, 514-530.	2.7	18
42	The importance of chemical potential in the determination of water slip in nanochannels. European Physical Journal E, 2015, 38, 127.	1.6	8
43	Mesoscopic Simulation Study of Wall Roughness Effects in Micro-channel Flows of Dense Emulsions. Journal of Statistical Physics, 2015, 161, 1482-1495.	1.2	2
44	Sliding droplets of Xanthan solutions: A joint experimental and numerical study. European Physical Journal E, 2015, 38, 126.	1.6	16
45	Hybrid Lattice Boltzmann/Finite Difference simulations of viscoelastic multicomponent flows in confined geometries. Journal of Computational Physics, 2015, 291, 177-197.	3.8	35
46	Two-dimensional plastic flow of foams and emulsions in a channel: experiments and lattice Boltzmann simulations. Journal of Fluid Mechanics, 2015, 766, 556-589.	3.4	43
47	Deformation and break-up of Viscoelastic Droplets Using Lattice Boltzmann Models. Procedia IUTAM, 2015, 15, 215-227.	1.2	6
48	Internal dynamics and activated processes in soft-glassy materials. Soft Matter, 2015, 11, 1271-1280.	2.7	18
49	Non-locality and viscous drag effects on the shear localisation in soft-glassy materials. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 473, 133-140.	4.7	6
50	Viscoelastic multicomponent fluids in confined flow-focusing devices. AIP Conference Proceedings, 2015, , .	0.4	0
51	Fluctuating multicomponent lattice Boltzmann model. Physical Review E, 2015, 91, 023313.	2.1	16
52	Pair separation of magnetic elements in the quiet Sun. Astronomy and Astrophysics, 2014, 569, A121.	5.1	24
53	Sliding drops across alternating hydrophobic and hydrophilic stripes. Physical Review E, 2014, 89, 012406.	2.1	59
54	Deformation and breakup of viscoelastic droplets in confined shear flow. Physical Review E, 2014, 90, 023305.	2.1	46

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55	Natural convection with mixed insulating and conducting boundary conditions: low- and high-Rayleigh-number regimes. Journal of Fluid Mechanics, 2014, 742, 636-663.	3.4	38
56	Direct evidence of plastic events and dynamic heterogeneities in soft-glasses. Soft Matter, 2014, 10, 4615.	2.7	23
57	Tuning Drop Motion by Chemical Patterning of Surfaces. Langmuir, 2014, 30, 2401-2409.	3.5	52
58	Stick-Slip Sliding of Water Drops on Chemically Heterogeneous Surfaces. Physical Review Letters, 2013, 111, 066101.	7.8	127
59	Mesoscale structures at complex fluidâ€"fluid interfaces: a novel lattice Boltzmann/molecular dynamics coupling. Soft Matter, 2013, 9, 10092.	2.7	51
60	Regularization of the slip length divergence in water nanoflows by inhomogeneities at the Angstrom scale. Soft Matter, 2013, 9, 8526.	2.7	30
61	An optimized D2Q37 Lattice Boltzmann code on GP-GPUs. Computers and Fluids, 2013, 80, 55-62.	2.5	23
62	Simulations of Boiling Systems Using a Lattice Boltzmann Method. Communications in Computational Physics, 2013, 13, 696-705.	1.7	12
63	Unified framework for a side-by-side comparison of different multicomponent algorithms: Lattice Boltzmann vs. phase field model. Journal of Computational Physics, 2013, 234, 263-279.	3.8	44
64	Interaction pressure tensor for a class of multicomponent lattice Boltzmann models. Physical Review E, 2013, 88, 013306.	2.1	54
65	Rheological properties of soft-glassy flows from hydro-kinetic simulations. Europhysics Letters, 2013, 104, 48006.	2.0	15
66	A Study of Fluid Interfaces and Moving Contact Lines Using the Lattice Boltzmann Method. Communications in Computational Physics, 2013, 13, 725-740.	1.7	18
67	Droplet size distribution in homogeneous isotropic turbulence. Physics of Fluids, 2012, 24, .	4.0	65
68	Convection in Multiphase Fluid Flows Using Lattice Boltzmann Methods. Physical Review Letters, 2012, 108, 104502.	7.8	90
69	The emergence of supramolecular forces from lattice kinetic models of non-ideal fluids: applications to the rheology of soft glassy materials. Soft Matter, 2012, 8, 10773.	2.7	54
70	A Multi-GPU Implementation of a D2Q37 Lattice Boltzmann Code. Lecture Notes in Computer Science, 2012, , 640-650.	1.3	12
71	Angular Momentum and Spin. Unitext, 2012, , 113-144.	0.1	0
72	Summary of Quantum and Statistical Mechanics. Unitext, 2012, , 3-36.	0.1	0

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73	Canonical Ensemble. Unitext, 2012, , 227-288.	0.1	0
74	Kinetic Physics. Unitext, 2012, , 301-313.	0.1	0
75	Thermodynamics and Microcanonical Ensemble. Unitext, 2012, , 193-226.	0.1	0
76	Central Force Field. Unitext, 2012, , 145-162.	0.1	0
77	Bose-Einstein Gases. Unitext, 2012, , 315-335.	0.1	0
78	Fluctuations and Complements. Unitext, 2012, , 363-392.	0.1	0
79	Consistent pseudopotential interactions in lattice Boltzmann models. Physical Review E, 2011, 84, 036703.	2.1	45
80	Front propagation in Rayleigh-Taylor systems with reaction. Journal of Physics: Conference Series, 2011, 318, 092024.	0.4	0
81	A Lattice Boltzmann method for turbulent emulsions. Journal of Physics: Conference Series, 2011, 318, 052017.	0.4	13
82	Second order closure for stratified convection: bulk region and overshooting. Journal of Physics: Conference Series, 2011, 318, 042018.	0.4	0
83	Numerical simulations of Rayleighâ€"Taylor front evolution in turbulent stratified fluids. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 2448-2455.	3.4	2
84	Shear banding from lattice kinetic models with competing interactions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 2439-2447.	3.4	1
85	Heterogeneous diffuse interfaces: A new mechanism for arrested coarsening in binary mixtures. European Physical Journal E, 2011, 34, 93.	1.6	1
86	Optimization of Multi-Phase Compressible Lattice Boltzmann Codes on Massively Parallel Multi-Core Systems. Procedia Computer Science, 2011, 4, 994-1003.	2.0	17
87	Second-order closure in stratified turbulence: Simulations and modeling of bulk and entrainment regions. Physical Review E, 2011, 84, 016305.	2.1	29
88	Phase-Field Model of Long-Time Glasslike Relaxation in Binary Fluid Mixtures. Physical Review Letters, 2011, 106, 164501.	7.8	16
89	Reactive Rayleigh-Taylor systems: Front propagation and non-stationarity. Europhysics Letters, 2011, 94, 54004.	2.0	35
90	Lattice Boltzmann fluid-dynamics on the QPACE supercomputer. Procedia Computer Science, 2010, 1, 1075-1082.	2.0	15

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91	High resolution numerical study of Rayleighâ€“Taylor turbulence using a thermal lattice Boltzmann scheme. Physics of Fluids, 2010, 22, 115112.	4.0	35
92	Herschel-Bulkley rheology from lattice kinetic theory of soft glassy materials. Europhysics Letters, 2010, 91, 14003.	2.0	24
93	Volumetric formulation for a class of kinetic models with energy conservation. Physical Review E, 2010, 82, 046709.	2.1	12
94	Numerical simulations of compressible Rayleighâ€“Taylor turbulence in stratified fluids. Physica Scripta, 2010, T142, 014017.	2.5	4
95	Lattice Boltzmann methods for thermal flows: Continuum limit and applications to compressible Rayleighâ€“Taylor systems. Physics of Fluids, 2010, 22, .	4.0	82
96	Lattice Boltzmann method with self-consistent thermo-hydrodynamic equilibria. Journal of Fluid Mechanics, 2009, 628, 299-309.	3.4	86
97	Mesoscopic lattice Boltzmann modeling of soft-glassy systems: Theory and simulations. Journal of Chemical Physics, 2009, 131, .	3.0	83
98	Cassie-Baxter to Wenzel state wetting transition: Scaling of the front velocity. European Physical Journal E, 2009, 29, 391-397.	1.6	81
99	Capillary filling using lattice Boltzmann equations: The case of multi-phase flows. European Physical Journal: Special Topics, 2009, 166, 111-116.	2.6	45
100	Graphics processing unit implementation of lattice Boltzmann models for flowing soft systems. Physical Review E, 2009, 80, 066707.	2.1	29
101	Continuum free-energy formulation for a class of lattice Boltzmann multiphase models. Europhysics Letters, 2009, 86, 24005.	2.0	34
102	Visco-elastic flows at macro-, micro- and nano-scales. Houille Blanche, 2009, 95, 79-83.	0.3	0
103	Linear shear flow past a hemispherical droplet adhering to a solid surface. Journal of Engineering Mathematics, 2008, 62, 35-50.	1.2	26
104	Multiple time scale dynamics in the breakdown of superhydrophobicity. Europhysics Letters, 2008, 81, 66002.	2.0	52
105	Wetting failure and contact line dynamics in a Couette flow. Journal of Fluid Mechanics, 2008, 614, 471-493.	3.4	41
106	MESOSCOPIC MODELLING OF FLUID FLOWS IN MICRO AND NANO CHANNEL. International Journal of Modern Physics C, 2007, 18, 758-765.	1.7	2
107	A note on the effective slip properties for microchannel flows with ultrahydrophobic surfaces. Physics of Fluids, 2007, 19, 043603.	4.0	183
108	Spontaneous Breakdown of Superhydrophobicity. Physical Review Letters, 2007, 99, 156001.	7.8	142

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109	Generalized lattice Boltzmann method with multirange pseudopotential. Physical Review E, 2007, 75, 026702.	2.1	356
110	Effective velocity boundary condition at a mixed slip surface. Journal of Fluid Mechanics, 2007, 578, 435-451.	3.4	68
111	Boundary induced nonlinearities at small Reynolds numbers. Physica D: Nonlinear Phenomena, 2007, 228, 140-147.	2.8	10
112	Wetting/dewetting transition of two-phase flows in nano-corrugated channels. Journal of Computer-Aided Materials Design, 2007, 14, 447-456.	0.7	6
113	Surface Roughness-Hydrophobicity Coupling in Microchannel and Nanochannel Flows. Physical Review Letters, 2006, 97, 204503.	7.8	181
114	Mesoscopic two-phase model for describing apparent slip in micro-channel flows. Europhysics Letters, 2006, 74, 651-657.	2.0	61
115	Mesoscopic modelling of heterogeneous boundary conditions for microchannel flows. Journal of Fluid Mechanics, 2006, 548, 257.	3.4	68
116	Mesoscopic modeling of a two-phase flow in the presence of boundaries: The contact angle. Physical Review E, 2006, 74, 021509.	2.1	243
117	Mesoscopic modelling of local phase transitions and apparent-slip phenomena in microflows. Mathematics and Computers in Simulation, 2006, 72, 84-88.	4.4	5
118	A note on the lattice Boltzmann method beyond the Chapman-Enskog limits. Europhysics Letters, 2006, 73, 370-376.	2.0	35
119	Dynamical scaling and intermittency in shell models of turbulence. Physical Review E, 2005, 71, 065302.	2.1	4
120	Analytical calculation of slip flow in lattice Boltzmann models with kinetic boundary conditions. Physics of Fluids, 2005, 17, 093602.	4.0	156
121	Inhomogeneous anisotropic passive scalars. Journal of Turbulence, 2005, 6, N10.	1.4	6
122	A Gibbs-Like Measure for Single-Time, Multi-Scale Energy Transfer in Stochastic Signals and Shell Model of Turbulence. Journal of Statistical Physics, 2004, 114, 137-154.	1.2	3
123	A lattice Boltzmann study of non-hydrodynamic effects in shell models of turbulence. Physica D: Nonlinear Phenomena, 2004, 197, 303-312.	2.8	1
124	Anomalous scaling and universality in hydrodynamic systems with power-law forcing. New Journal of Physics, 2004, 6, 37-37.	2.9	26
125	Intermittency in turbulence: Computing the scaling exponents in shell models. Physical Review E, 2003, 68, 046304.	2.1	10