Andrea Montessori

List of Publications by Year
in descending order

64 papers	1,139 citations	361045 20 h-index	414034 32 g-index
65 all docs	65 docs citations	65 times ranked	983 citing authors

#	Article	IF	Citations
1	Stochastic Jetting and Dripping in Confined Soft Granular Flows. Physical Review Letters, 2022, 128, 128001.	2.9	9
2	LBcuda: A high-performance CUDA port of LBsoft for simulation of colloidal systems. Computer Physics Communications, 2022, 277, 108380.	3.0	6
3	Computational droplets: Where we stand and how far we can go. Europhysics Letters, 2022, 138, 67001.	0.7	2
4	The vortex-driven dynamics of droplets within droplets. Nature Communications, 2021, 12, 82.	5.8	26
5	Mesoscale modelling of dropletsâ€™ self-assembly in microfluidic channels. Soft Matter, 2021, 17, 2374-2383.	1.2	11
6	Wet to dry self-transitions in dense emulsions: From order to disorder and back. Physical Review Fluids, 2021, 6, .	1.0	11
7	Shear dynamics of polydisperse double emulsions. Physics of Fluids, 2021, 33, .	1.6	10
8	Lattice Boltzmann multicomponent model for direct-writing printing. Physics of Fluids, 2021, 33, .	1.6	6
9	Dam-Break Modeling: LBM as the Way towards Fully 3D, Large-Scale Applications. Journal of Hydraulic Engineering, 2021, 147, .	0.7	10
10	Translocation Dynamics of High-Internal Phase Double Emulsions in Narrow Channels. Langmuir, 2021, 37, 9026-9033.	1.6	11
11	Microscale modelling of dielectrophoresis assembly processes. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200407.	1.6	2
12	Tracking droplets in soft granular flows with deep learning techniques. European Physical Journal Plus, 2021, 136, 864.	1.2	8
13	Deformation and breakup dynamics of droplets within a tapered channel. Physics of Fluids, 2021, 33, .	1.6	9
14	A fast and efficient deep learning procedure for tracking droplet motion in dense microfluidic emulsions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200400.	1.6	10
15	Dynamics of polydisperse multiple emulsions in microfluidic channels. Physical Review E, 2021, 104, 065112.	0.8	1
16	Toward exascale design of soft mesoscale materials. Journal of Computational Science, 2020, 46, 101175.	1.5	6
17	LBsoft: A parallel open-source software for simulation of colloidal systems. Computer Physics Communications, 2020, 256, 107455.	3.0	10
18	Shear dynamics of confined bijels. AIP Advances, 2020, 10, 095304.	0.6	8

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19	Multiparticle collision dynamics for fluid interfaces with near-contact interactions. Journal of Chemical Physics, 2020, 152, 144101.	1.2	4
20	A coupled lattice Boltzmann-Multiparticle collision method for multi-resolution hydrodynamics. Journal of Computational Science, 2020, 44, 101160.	1.5	1
21	A Multiresolution Mesoscale Approach for Microscale Hydrodynamics. Advanced Theory and Simulations, 2020, 3, 1900250.	1.3	2
22	Depth averaged modelling of loose rectangular granular piles collapsing in water. Advances in Water Resources, 2020, 143, 103663.	1.7	7
23	Novel nonequilibrium steady states in multiple emulsions. Physics of Fluids, 2020, 32, .	1.6	20
24	Lattice Boltzmann simulations capture the multiscale physics of soft flowing crystals. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190406.	1.6	6
25	Concentrated phase emulsion with multicore morphology under shear: A numerical study. Physical Review Fluids, 2020, 5, .	1.0	10
26	Dynamic symmetry-breaking in mutually annihilating fluids with selective interfaces. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 083215.	0.9	0
27	Microvorticity fluctuations affect the structure of thin fluid films. Physical Review E, 2019, 100, 042606.	0.8	2
28	Discrete Boltzmann Equation model of polydisperse shallow granular flows. International Journal of Multiphase Flow, 2019, 113, 107-116.	1.6	4
29	Mesoscale modelling of near-contact interactions for complex flowing interfaces. Journal of Fluid Mechanics, 2019, 872, 327-347.	1.4	48
30	Modeling realistic multiphase flows using a non-orthogonal multiple-relaxation-time lattice Boltzmann method. Physics of Fluids, 2019, 31, .	1.6	67
31	Mesoscale modelling of soft flowing crystals. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180149.	1.6	16
32	Curvature dynamics and long-range effects on fluidâ€"fluid interfaces with colloids. Soft Matter, 2019, 15, 2848-2862.	1.2	7
33	Jetting to dripping transition: Critical aspect ratio in step emulsifiers. Physics of Fluids, 2019, 31, .	1.6	25
34	Towards a mean-field kinetic model of electroweak baryogenesis. Journal of Physics: Conference Series, 2019, 1354, 012001.	0.3	0
35	Disordered interfaces in soft fluids with suspended colloids. International Journal of Modern Physics C, 2019, 30, 1941004.	0.8	1
36	Towards Exascale Lattice Boltzmann computing. Computers and Fluids, 2019, 181, 107-115.	1.3	40

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37	Modeling pattern formation in soft flowing crystals. Physical Review Fluids, 2019, 4, .	1.0	30
38	Regularized lattice Boltzmann multicomponent models for low capillary and Reynolds microfluidics flows. Computers and Fluids, 2018, 167, 33-39.	1.3	33
39	A discrete Boltzmann equation model for two-phase shallow granular flows. Computers and Mathematics With Applications, 2018, 75, 2814-2824.	1.4	6
40	Multicomponent Lattice Boltzmann Models for Biological Applications. , 2018, , 357-370.		1
41	Entropic lattice Boltzmann model for charged leaky dielectric multiphase fluids in electrified jets. Physical Review E, 2018, 97, 033308.	0.8	19
42	Lattice Boltzmann simulations of gravity currents. European Journal of Mechanics, B/Fluids, 2018, 67, 125-136.	1.2	34
43	Elucidating the mechanism of step emulsification. Physical Review Fluids, 2018, 3, .	1.0	27
44	Mesoscopic model for soft flowing systems with tunable viscosity ratio. Physical Review Fluids, 2018, 3, .	1.0	20
45	On the Effects of Reactant Flow Rarefaction on Heterogeneous Catalysis: a Regularized Lattice Boltzmann Study. Communications in Computational Physics, 2018, 23, .	0.7	2
46	Effect of nanoscale flows on the surface structure of nanoporous catalysts. Journal of Chemical Physics, 2017, 146, 214703.	1.2	24
47	Role of Oxygen Functionalities in Graphene Oxide Architectural Laminate Subnanometer Spacing and Water Transport. Environmental Science & Technology, 2017, 51, 4280-4288.	4.6	72
48	Heterogeneous catalysis in pulsed-flow reactors with nanoporous gold hollow spheres. Chemical Engineering Science, 2017, 166, 274-282.	1.9	33
49	Entropic lattice pseudo-potentials for multiphase flow simulations at high Weber and Reynolds numbers. Physics of Fluids, 2017, 29, .	1.6	34
50	Extended friction elucidates the breakdown of fast water transport in graphene oxide membranes. Europhysics Letters, 2016, 116, 54002.	0.7	17
51	Effects of Knudsen diffusivity on the effective reactivity of nanoporous catalyst media. Journal of Computational Science, 2016, 17, 377-383.	1.5	41
52	Lattice Boltzmann approach for hydro-acoustic waves generated by tsunamigenic sea bottom displacement. Ocean Modelling, 2016, 107, 14-20.	1.0	2
53	Simulation of arrested salt wedges with a multi-layer Shallow Water Lattice Boltzmann model. Advances in Water Resources, 2016, 96, 282-289.	1.7	6
54	Mapping reactive flow patterns in monolithic nanoporous catalysts. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	46

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55	Lattice kinetic approach to non-equilibrium flows. AIP Conference Proceedings, 2016, , .	0.3	3
56	Reassessing the single relaxation time Lattice Boltzmann method for the simulation of Darcyâ€™s flows. International Journal of Modern Physics C, 2016, 27, 1650037.	0.8	23
57	Two dimensional Lattice Boltzmann numerical simulation of a buoyant jet. , 2016, , 996-1002.		1
58	Lattice Boltzmann approach for complex nonequilibrium flows. Physical Review E, 2015, 92, 043308.	0.8	75
59	Paradoxical ratcheting in cornstarch. Physics of Fluids, 2015, 27, 103101.	1.6	3
60	Three-Dimensional Lattice Pseudo-Potentials for Multiphase Flow Simulations at High Density Ratios. Journal of Statistical Physics, 2015, 161, 1404-1419.	0.5	35
61	A multispeed Discrete Boltzmann Model for transcritical 2D shallow water flows. Journal of Computational Physics, 2015, 284, 117-132.	1.9	39
62	Regularized lattice BGK versus highly accurate spectral methods for cavity flow simulations. International Journal of Modern Physics C, 2014, 25, 1441003.	0.8	16
63	Regularized lattice Bhatnagar-Gross-Krook model for two- and three-dimensional cavity flow simulations. Physical Review E, 2014, 89, 053317.	0.8	72
64	A gas-kinetic model for 2D transcritical shallow water flows propagating over dry bed. Computers and Mathematics With Applications, 2014, 68, 439-453.	1.4	6