Ali Mani

List of Publications by Year
in descending order

43 papers	2,138 citations	218677 26 h-index	254184 43 g-index
43 all docs	43 docs citations	43 times ranked	1298 citing authors

#	Article	IF	Citations
1	The discrete Green's function paradigm for two-way coupled Eulerâ€“Lagrange simulation. Journal of Fluid Mechanics, 2022, 931, .	3.4	7
2	Overlimiting Current in Nonuniform Arrays of Microchannels: Recirculating Flow and Anticrystallization. Nano Letters, 2021, 21, 5438-5446.	9.1	7
3	Settling of two-way momentum and energy coupled particles subject to Boussinesq and non-Boussinesq heating. Theoretical and Computational Fluid Dynamics, 2021, 35, 539.	2.2	3
4	Direct 3D observation and unraveling of electroconvection phenomena during concentration polarization at ion-exchange membranes. Journal of Membrane Science, 2021, 640, 119846.	8.2	15
5	A conservative diffuse interface method for two-phase flows with provable boundedness properties. Journal of Computational Physics, 2020, 401, 109006.	3.8	39
6	A benchmark for particle-laden turbulent duct flow: A joint computational and experimental study. International Journal of Multiphase Flow, 2020, 132, 103410.	3.4	18
7	Transitional stages of thin air film entrapment in drop-pool impact events. Journal of Fluid Mechanics, 2020, 901, .	3.4	9
8	Investigation on the Stability of Random Vortices in an Ion Concentration Polarization Layer with Imposed Normal Fluid Flow. Micromachines, 2020, 11, 529.	2.9	6
9	A filtering strategy for the numerical convergence of radiation transport through purely absorbing particle clouds. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 247, 106941.	2.3	1
10	Two-way coupled particle-turbulence interaction: Effect of numerics and resolution on fluid and particle statistics. Physical Review Fluids, 2020, 5, .	2.5	10
11	Impact of network heterogeneity on electrokinetic transport in porous media. Journal of Colloid and Interface Science, 2019, 553, 451-464.	9.4	26
12	2D Patterned Ionâ€Exchange Membranes Induce Electroconvection. Advanced Materials Interfaces, 2019, 6, 1801309.	3.7	40
13	Birth of microbubbles in turbulent breaking waves. Physical Review Fluids, 2019, 4, .	2.5	15
14	Correction scheme for point-particle models applied to a nonlinear drag law in simulations of particle-fluid interaction. International Journal of Multiphase Flow, 2018, 101, 74-84.	3.4	56
15	A scalable geometric multigrid solver for nonsymmetric elliptic systems with application to variable-density flows. Journal of Computational Physics, 2018, 357, 142-158.	3.8	19
16	Turbulent flows over superhydrophobic surfaces: flow-induced capillary waves, and robustness of airâ€“water interfaces. Journal of Fluid Mechanics, 2018, 835, 45-85.	3.4	57
17	A direct comparison of particle-resolved and point-particle methods in decaying turbulence. Journal of Fluid Mechanics, 2018, 850, 336-369.	3.4	44
18	Effect of texture randomization on the slip and interfacial robustness in turbulent flows over superhydrophobic surfaces. Physical Review Fluids, 2018, 3, .	2.5	20

#	Article	IF	Citations
19	Predictive model for convective flows induced by surface reactivity contrast. Physical Review Fluids, 2018, 3, .	2.5	9
20	Spectral analysis of energy transfer in turbulent flows laden with heated particles. Journal of Fluid Mechanics, 2017, 813, 1156-1175.	3.4	12
21	Effects of Preferential Concentration on Heat Transfer in Particle-Based Solar Receivers. Journal of Solar Energy Engineering, Transactions of the ASME, 2017, 139, .	1.8	45
22	Multiscale Model for Electrokinetic Transport in Networks of Pores, Part I: Model Derivation. Langmuir, 2017, 33, 6205-6219.	3.5	34
23	Multiscale Model for Electrokinetic Transport in Networks of Pores, Part II: Computational Algorithms and Applications. Langmuir, 2017, 33, 6220-6231.	3.5	16
24	Coherent clusters of inertial particles in homogeneous turbulence. Journal of Fluid Mechanics, 2017, 833, 364-398.	3.4	64
25	Confinement effects on electroconvective instability. Electrophoresis, 2017, 38, 702-711.	2.4	34
26	Turbulent thermal convection driven by heated inertial particles. Journal of Fluid Mechanics, 2016, 809, 390-437.	3.4	29
27	On the Dynamical Regimes of Pattern-Accelerated Electroconvection. Scientific Reports, 2016, 6, 22505.	3.3	120
28	On the scaling of the slip velocity in turbulent flows over superhydrophobic surfaces. Physics of Fluids, 2016, 28, .	4.0	65
29	Accurate calculation of Stokes drag for pointâ€“particle tracking in two-way coupled flows. Journal of Computational Physics, 2016, 318, 85-109.	3.8	112
30	Settling of heated particles in homogeneous turbulence. Journal of Fluid Mechanics, 2016, 792, 869-893.	3.4	51
31	Coupling between Buoyancy Forces and Electroconvective Instability near Ion-Selective Surfaces. Physical Review Letters, 2016, 116, 194501.	7.8	50
32	Statistical analysis of electroconvection near an ion-selective membrane in the highly chaotic regime. Physical Review Fluids, 2016, 1, .	2.5	56
33	Analysis of the clustering of inertial particles in turbulent flows. Physical Review Fluids, 2016, 1, .	2.5	26
34	Pressure fluctuations and interfacial robustnessÂin turbulent flows over superhydrophobic surfaces. Journal of Fluid Mechanics, 2015, 783, 448-473.	3.4	74
35	Simulation of chaotic electrokinetic transport: Performance of commercial software versus custom-built direct numerical simulation codes. Journal of Colloid and Interface Science, 2015, 446, 67-76.	9.4	68
36	Ion transport through electrolyte/polyelectrolyte multi-layers. Scientific Reports, 2015, 5, 11583.	3.3	57

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37	Atomistic and Molecular Effects in Electric Double Layers at High Surface Charges. Langmuir, 2015, 31, 7496-7502.	3.5	10
38	Chaotic Induced-Charge Electro-Osmosis. Physical Review Letters, 2014, 112, 128302.	7.8	103
39	Direct numerical simulation of electroconvective instability and hydrodynamic chaos near an ion-selective surface. Physics of Fluids, 2013, 25, .	4.0	167
40	Physics and Computation of Aero-Optics. Annual Review of Fluid Mechanics, 2012, 44, 299-321.	25.0	183
41	Deionization shocks in microstructures. Physical Review E, 2011, 84, 061504.	2.1	125
42	On the Propagation of Concentration Polarization from Microchannelâ^'Nanochannel Interfaces Part I: Analytical Model and Characteristic Analysis. Langmuir, 2009, 25, 3898-3908.	3.5	209
43	Statistical description of the free-space propagation of highly aberrated optical beams. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2006, 23, 3027.	1.5	27