

Ali Mani

List of Publications by Year in descending order

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43
papers

2,138
citations

218677

26
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254184

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docs citations

43
times ranked

1298
citing authors

#	ARTICLE	IF	CITATIONS
1	On the Propagation of Concentration Polarization from Microchannel~Nanochannel Interfaces Part I: Analytical Model and Characteristic Analysis. <i>Langmuir</i> , 2009, 25, 3898-3908.	3.5	209
2	Physics and Computation of Aero-Optics. <i>Annual Review of Fluid Mechanics</i> , 2012, 44, 299-321.	25.0	183
3	Direct numerical simulation of electroconvective instability and hydrodynamic chaos near an ion-selective surface. <i>Physics of Fluids</i> , 2013, 25, .	4.0	167
4	Deionization shocks in microstructures. <i>Physical Review E</i> , 2011, 84, 061504.	2.1	125
5	On the Dynamical Regimes of Pattern-Accelerated Electroconvection. <i>Scientific Reports</i> , 2016, 6, 22505.	3.3	120
6	Accurate calculation of Stokes drag for point~particle tracking in two-way coupled flows. <i>Journal of Computational Physics</i> , 2016, 318, 85-109.	3.8	112
7	Chaotic Induced-Charge Electro-Osmosis. <i>Physical Review Letters</i> , 2014, 112, 128302.	7.8	103
8	Pressure fluctuations and interfacial robustness~in turbulent flows over superhydrophobic surfaces. <i>Journal of Fluid Mechanics</i> , 2015, 783, 448-473.	3.4	74
9	Simulation of chaotic electrokinetic transport: Performance of commercial software versus custom-built direct numerical simulation codes. <i>Journal of Colloid and Interface Science</i> , 2015, 446, 67-76.	9.4	68
10	On the scaling of the slip velocity in turbulent flows over superhydrophobic surfaces. <i>Physics of Fluids</i> , 2016, 28, .	4.0	65
11	Coherent clusters of inertial particles in homogeneous turbulence. <i>Journal of Fluid Mechanics</i> , 2017, 833, 364-398.	3.4	64
12	Ion transport through electrolyte/polyelectrolyte multi-layers. <i>Scientific Reports</i> , 2015, 5, 11583.	3.3	57
13	Turbulent flows over superhydrophobic surfaces: flow-induced capillary waves, and robustness of air~water interfaces. <i>Journal of Fluid Mechanics</i> , 2018, 835, 45-85.	3.4	57
14	Correction scheme for point-particle models applied to a nonlinear drag law in simulations of particle-fluid interaction. <i>International Journal of Multiphase Flow</i> , 2018, 101, 74-84.	3.4	56
15	Statistical analysis of electroconvection near an ion-selective membrane in the highly chaotic regime. <i>Physical Review Fluids</i> , 2016, 1, .	2.5	56
16	Settling of heated particles in homogeneous turbulence. <i>Journal of Fluid Mechanics</i> , 2016, 792, 869-893.	3.4	51
17	Coupling between Buoyancy Forces and Electroconvective Instability near Ion-Selective Surfaces. <i>Physical Review Letters</i> , 2016, 116, 194501.	7.8	50
18	Effects of Preferential Concentration on Heat Transfer in Particle-Based Solar Receivers. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2017, 139, .	1.8	45

#	ARTICLE	IF	CITATIONS
19	A direct comparison of particle-resolved and point-particle methods in decaying turbulence. <i>Journal of Fluid Mechanics</i> , 2018, 850, 336-369.	3.4	44
20	2D Patterned Ion-Exchange Membranes Induce Electroconvection. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801309.	3.7	40
21	A conservative diffuse interface method for two-phase flows with provable boundedness properties. <i>Journal of Computational Physics</i> , 2020, 401, 109006.	3.8	39
22	Multiscale Model for Electrokinetic Transport in Networks of Pores, Part I: Model Derivation. <i>Langmuir</i> , 2017, 33, 6205-6219.	3.5	34
23	Confinement effects on electroconvective instability. <i>Electrophoresis</i> , 2017, 38, 702-711.	2.4	34
24	Turbulent thermal convection driven by heated inertial particles. <i>Journal of Fluid Mechanics</i> , 2016, 809, 390-437.	3.4	29
25	Statistical description of the free-space propagation of highly aberrated optical beams. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2006, 23, 3027.	1.5	27
26	Impact of network heterogeneity on electrokinetic transport in porous media. <i>Journal of Colloid and Interface Science</i> , 2019, 553, 451-464.	9.4	26
27	Analysis of the clustering of inertial particles in turbulent flows. <i>Physical Review Fluids</i> , 2016, 1, .	2.5	26
28	Effect of texture randomization on the slip and interfacial robustness in turbulent flows over superhydrophobic surfaces. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	20
29	A scalable geometric multigrid solver for nonsymmetric elliptic systems with application to variable-density flows. <i>Journal of Computational Physics</i> , 2018, 357, 142-158.	3.8	19
30	A benchmark for particle-laden turbulent duct flow: A joint computational and experimental study. <i>International Journal of Multiphase Flow</i> , 2020, 132, 103410.	3.4	18
31	Multiscale Model for Electrokinetic Transport in Networks of Pores, Part II: Computational Algorithms and Applications. <i>Langmuir</i> , 2017, 33, 6220-6231.	3.5	16
32	Direct 3D observation and unraveling of electroconvection phenomena during concentration polarization at ion-exchange membranes. <i>Journal of Membrane Science</i> , 2021, 640, 119846.	8.2	15
33	Birth of microbubbles in turbulent breaking waves. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	15
34	Spectral analysis of energy transfer in turbulent flows laden with heated particles. <i>Journal of Fluid Mechanics</i> , 2017, 813, 1156-1175.	3.4	12
35	Atomistic and Molecular Effects in Electric Double Layers at High Surface Charges. <i>Langmuir</i> , 2015, 31, 7496-7502.	3.5	10
36	Two-way coupled particle-turbulence interaction: Effect of numerics and resolution on fluid and particle statistics. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	10

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37	Transitional stages of thin air film entrapment in drop-pool impact events. <i>Journal of Fluid Mechanics</i> , 2020, 901, .	3.4	9
38	Predictive model for convective flows induced by surface reactivity contrast. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	9
39	Overlimiting Current in Nonuniform Arrays of Microchannels: Recirculating Flow and Anticrystallization. <i>Nano Letters</i> , 2021, 21, 5438-5446.	9.1	7
40	The discrete Green's function paradigm for two-way coupled Euler–Lagrange simulation. <i>Journal of Fluid Mechanics</i> , 2022, 931, .	3.4	7
41	Investigation on the Stability of Random Vortices in an Ion Concentration Polarization Layer with Imposed Normal Fluid Flow. <i>Micromachines</i> , 2020, 11, 529.	2.9	6
42	Settling of two-way momentum and energy coupled particles subject to Boussinesq and non-Boussinesq heating. <i>Theoretical and Computational Fluid Dynamics</i> , 2021, 35, 539.	2.2	3
43	A filtering strategy for the numerical convergence of radiation transport through purely absorbing particle clouds. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2020, 247, 106941.	2.3	1