

Amir Riaz

List of Publications by Year in descending order

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36
papers

1,120
citations

430874

18
h-index

395702

33
g-index

37
all docs

37
docs citations

37
times ranked

868
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct numerical simulation of taylor bubble with phase change. International Journal of Heat and Mass Transfer, 2022, 194, 123039.	4.8	3
2	An efficient, robust and high accuracy framework for direct numerical simulation of 2D and 2D axisymmetric immiscible flow with large property contrast. Computers and Fluids, 2021, 229, 105083.	2.5	0
3	An investigation of the gravity effects on pool boiling heat transfer via high-fidelity simulations. International Journal of Heat and Mass Transfer, 2021, 180, 121826.	4.8	8
4	Continuum Modeling and Simulation of Robotic Appendage Interaction With Granular Material. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	2.2	3
5	Effect of inertia on capillary-driven breakup of drops surrounded by another fluid. Physics of Fluids, 2021, 33, .	4.0	2
6	Smooth particle hydrodynamics studies of wet granular column collapses. Acta Geotechnica, 2020, 15, 1205-1217.	5.7	19
7	A locally second order symmetric method for discontinuous solution of Poisson's equation on uniform cartesian grids. Computers and Fluids, 2020, 198, 104397.	2.5	4
8	Wettability and capillary effects: Dynamics of pinch-off in unconstricted straight capillary tubes. Physical Review E, 2020, 102, 023109.	2.1	7
9	Pore-scale study of water salinity effect on thin-film stability for a moving oil droplet. Journal of Colloid and Interface Science, 2020, 569, 366-377.	9.4	19
10	Two-phase multiscale numerical framework for modeling thin films on curved solid surfaces in porous media. Journal of Computational Physics, 2020, 413, 109464.	3.8	15
11	A formulation for high-fidelity simulations of pool boiling in low gravity. International Journal of Multiphase Flow, 2019, 120, 103099.	3.4	17
12	Effect of CO_2 solubility on dissolution rate of calcite in saline aquifers for temperature range of $50\text{--}100\text{ }^\circ\text{C}$ and pressures up to 600 bar: alterations of fractures geometry in carbonate rocks by CO_2 -acidified brines. Environmental Earth Sciences, 2017, 76, 1.	2.7	5
13	Direct numerical simulation of incompressible multiphase flow with phase change. Journal of Computational Physics, 2017, 344, 381-418.	3.8	31
14	A data driven model for the impact of IFT and density variations on CO_2 storage capacity in geologic formations. Advances in Water Resources, 2017, 107, 83-92.	3.8	6
15	Multiscale level-set method for accurate modeling of immiscible two-phase flow with deposited thin films on solid surfaces. Journal of Computational Physics, 2017, 333, 297-320.	3.8	31
16	Convective mixing in vertically-layered porous media: The linear regime and the onset of convection. Physics of Fluids, 2017, 29, .	4.0	9
17	Computational Studies on Interactions between Robot Leg and Deformable Terrain. Procedia Engineering, 2017, 199, 2439-2444.	1.2	4
18	Waves and instabilities in high quality adiabatic flow in microgap channels. International Journal of Multiphase Flow, 2016, 83, 62-76.	3.4	10

#	ARTICLE	IF	CITATIONS
19	Onset of natural convection in layered aquifers. <i>Journal of Fluid Mechanics</i> , 2015, 767, 763-781.	3.4	17
20	Eigenspectra and mode coalescence of temporal instability in two-phase channel flow. <i>Physics of Fluids</i> , 2015, 27, 042101.	4.0	14
21	Topology preserving advection of implicit interfaces on Cartesian grids. <i>Journal of Computational Physics</i> , 2015, 290, 219-238.	3.8	23
22	Carbon dioxide sequestration in saline formations: Part 2â€”Review of multiphase flow modeling. <i>Journal of Petroleum Science and Engineering</i> , 2014, 124, 381-398.	4.2	49
23	Effect of viscosity contrast on gravitationally unstable diffusive layers in porous media. <i>Physics of Fluids</i> , 2014, 26, .	4.0	19
24	Carbon dioxide sequestration in saline formations: Part 1â€”Review of the modeling of solubility trapping. <i>Journal of Petroleum Science and Engineering</i> , 2014, 124, 367-380.	4.2	84
25	A new model for the density of saturated solutions of CO ₂ â€”H ₂ Oâ€”NaCl in saline aquifers. <i>International Journal of Greenhouse Gas Control</i> , 2014, 31, 192-204.	4.6	20
26	The initial transient period of gravitationally unstable diffusive boundary layers developing in porous media. <i>Physics of Fluids</i> , 2013, 25, .	4.0	47
27	Optimal perturbations of gravitationally unstable, transient boundary layers in porous media. <i>Journal of Fluid Mechanics</i> , 2013, 727, 456-487.	3.4	34
28	Convective dissolution of carbon dioxide in saline aquifers. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	266
29	Experimental Study of CO ₂ Injection Into Saline Formations. <i>SPE Journal</i> , 2009, 14, 588-594.	3.1	57
30	Forced imbibition in natural porous media: Comparison between experiments and continuum models. <i>Physical Review E</i> , 2007, 75, 036305.	2.1	49
31	Stability of two-phase vertical flow in homogeneous porous media. <i>Physics of Fluids</i> , 2007, 19, .	4.0	14
32	Numerical simulation of immiscible two-phase flow in porous media. <i>Physics of Fluids</i> , 2006, 18, 014104.	4.0	76
33	Influence of Relative Permeability on the Stability Characteristics of Immiscible Flow in Porous Media. <i>Transport in Porous Media</i> , 2006, 64, 315-338.	2.6	48
34	Linear stability analysis of immiscible two-phase flow in porous media with capillary dispersion and density variation. <i>Physics of Fluids</i> , 2004, 16, 4727-4737.	4.0	77
35	Miscible, Porous Media Displacements with Density Stratification. <i>Annals of the New York Academy of Sciences</i> , 2004, 1027, 342-359.	3.8	6
36	Radial source flows in porous media: Linear stability analysis of axial and helical perturbations in miscible displacements. <i>Physics of Fluids</i> , 2003, 15, 938-946.	4.0	24