Amaresh Dalal

List of Publications by Citations

101 papers	1,641 citations	25 h-index	36 g-index
112 ext. papers	1,888 ext. citations	3.2 avg, IF	5.28 L-index

#	Paper	IF	Citations
101	A numerical study of natural convection around a square, horizontal, heated cylinder placed in an enclosure. *International Journal of Heat and Mass Transfer*, **2006**, 49, 4608-4623	4.9	130
100	Influence of wavy wall and non-uniform heating on natural convection heat transfer and entropy generation inside porous complex enclosure. *Energy*, **2015**, 79, 467-481	7.9	95
99	Numerical simulation of unconfined flow past a triangular cylinder. *International Journal for Numerical Methods in Fluids*, **2006**, 52, 801-821	1.9	94
98	Heatline method for the visualization of natural convection in a complicated cavity. *International Journal of Heat and Mass Transfer*, **2008**, 51, 263-272	4.9	71
97	A Finite-Volume Method for Navier-Stokes Equations on Unstructured Meshes. *Numerical Heat Transfer, Part B: Fundamentals*, **2008**, 54, 238-259	1.3	57
96	Unsteady wake dynamics and heat transfer in forced and mixed convection past a circular cylinder in cross flow for high Prandtl numbers. *International Journal of Heat and Mass Transfer*, **2011**, 54, 3536-3551	4.9	51
95	Laminar natural convection in an inclined complicated cavity with spatially variable wall temperature. *International Journal of Heat and Mass Transfer*, **2005**, 48, 3833-3854	4.9	50
94	Numerical Study of Laminar Forced Convection Fluid Flow and Heat Transfer From a Triangular Cylinder Placed in a Channel. *Journal of Heat Transfer*, **2007**, 129, 646-656	1.8	49
93	Mixed convective flow stability of nanofluids past a square cylinder by dynamic mode decomposition. *International Journal of Heat and Fluid Flow*, **2013**, 44, 624-634	2.4	47
92	Buoyancy driven flow and heat transfer of nanofluids past a square cylinder in vertically upward flow. *International Journal of Heat and Mass Transfer*, **2013**, 59, 433-450	4.9	44
91	Analysis of natural convection heat transfer and entropy generation inside porous right-angled triangular enclosure. *International Journal of Heat and Mass Transfer*, **2013**, 65, 500-513	4.9	42
90	Flow over and forced convection heat transfer around a semi-circular cylinder at incidence. *International Journal of Heat and Mass Transfer*, **2012**, 55, 5171-5184	4.9	42
89	Analysis of Entropy Generation During Mixed Convective Heat Transfer of Nanofluids Past a Square Cylinder in Vertically Upward Flow. *Journal of Heat Transfer*, **2012**, 134,	1.8	35
88	Natural Convection in a Cavity With a Wavy Wall Heated From Below and Uniformly Cooled From the Top and Both Sides. *Journal of Heat Transfer*, **2006**, 128, 717-725	1.8	34
87	Natural Convection in a Rectangular Cavity Heated from Below and Uniformly Cooled from the Top and Both Sides. *Numerical Heat Transfer; Part A: Applications*, **2006**, 49, 301-322	2.3	34
86	Mixed convective heat transfer from two identical square cylinders in cross flow at Re = 100. *International Journal of Heat and Mass Transfer*, **2010**, 53, 2628-2642	4.9	33
85	Effect of angle of incidence on mixed convective wake dynamics and heat transfer past a square cylinder in cross flow at Re=100. *International Journal of Heat and Mass Transfer*, **2014**, 74, 319-332	4.9	32

84	The regime of large bubble entrapment during a single drop impact on a liquid pool. *Physics of Fluids*, **2017**, 29, 092101	4.4	31
83	Effects of the inclination angle on natural convection heat transfer and entropy generation in a square porous enclosure. *Numerical Heat Transfer; Part A: Applications*, **2016**, 70, 1271-1296	2.3	29
82	Design and performance of a three-dimensional micromixer with curved ribs. *Chemical Engineering Research and Design*, **2018**, 136, 761-775	5.5	29
81	A Numerical Study of Fluid Flow and Heat Transfer around a Square Cylinder at Incidence using Unstructured Grids. *Numerical Heat Transfer; Part A: Applications*, **2008**, 54, 890-913	2.3	27
80	Thermo-hydraulic transport characteristics of non-Newtonian fluid flows through corrugated channels. *International Journal of Thermal Sciences*, **2018**, 129, 201-208	4.1	26
79	Analysis of Entropy Generation During Mixed Convective Heat Transfer of Nanofluids Past a Rotating Circular Cylinder. *Journal of Heat Transfer*, **2014**, 136,	1.8	25
78	Effect of superheat and electric field on saturated film boiling. *Physics of Fluids*, **2016**, 28, 052102	4.4	25
77	Coalescence dynamics of unequal sized drops. *Physics of Fluids*, **2019**, 31, 012105	4.4	25
76	Coalescence dynamics of a compound drop on a deep liquid pool. *Journal of Fluid Mechanics*, **2019**, 866,	3.7	21
75	Saturated film boiling at various gravity levels under the influence of electrohydrodynamic forces. *Physics of Fluids*, **2017**, 29, 032104	4.4	20
74	Effect of Undulations on the Natural Convection Heat Transfer and Entropy Generation Inside a Porous Right-Angled Triangular Enclosure. *Numerical Heat Transfer; Part A: Applications*, **2015**, 67, 972-991	2.3	20
73	Numerical study of laminar natural convection in a complicated cavity heated from top with sinusoidal temperature and cooled from other sides. *Computers and Fluids*, **2007**, 36, 680-700	2.8	20
72	Numerical assessment of mixing performances in cross-T microchannel with curved ribs. *Microsystem Technologies*, **2018**, 24, 1949-1963	1.7	18
71	Laminar natural convection in an inclined complicated cavity with spatially variable wall temperature. *International Journal of Heat and Mass Transfer*, **2005**, 48, 2986-3007	4.9	18
70	Cross-stream migration of drops suspended in Poiseuille flow in the presence of an electric field. *Physical Review E*, **2018**, 97, 063106	2.4	17
69	Probing the influence of superhydrophobicity and mixed wettability on droplet displacement behavior. *Microfluidics and Nanofluidics*, **2014**, 17, 657-674	2.8	17
68	Critical assessment of numerical algorithms for convective-radiative heat transfer in enclosures with different geometries. *International Journal of Heat and Mass Transfer*, **2017**, 108, 627-644	4.9	16
67	Numerical investigation of mixing enhancement for multi-species flows in wavy channels. *Chemical Engineering and Processing: Process Intensification*, **2018**, 127, 191-205	3.7	15

66	Wettability effects on contact line dynamics of droplet motion in an inclined channel. *Physical Review E*, **2015**, 91, 053006	2.4	14
65	Analysis of droplet dynamics in a partially obstructed confinement in a three-dimensional channel. *Physics of Fluids*, **2018**, 30, 102102	4.4	14
64	Migration of a droplet in a cylindrical tube in the creeping flow regime. *Physical Review E*, **2017**, 95, 033110	2.4	13
63	A generic algorithm for three-dimensional multiphase flows on unstructured meshes. *International Journal of Multiphase Flow*, **2018**, 106, 228-242	3.6	12
62	Understanding flow dynamics, viability and metastatic potency of cervical cancer (HeLa) cells through constricted microchannel. *Scientific Reports*, **2018**, 8, 17357	4.9	12
61	Influence of viscosity ratio and wettability on droplet displacement behavior: A mesoscale analysis. *Computers and Fluids*, **2014**, 102, 15-31	2.8	11
60	Capillarity-induced resonance of blobs in a 3-D duct: lattice Boltzmann modelling. *International Journal of Heat and Mass Transfer*, **2013**, 65, 635-648	4.9	11
59	Field induced anomalous spreading, oscillation, ejection, spinning, and breaking of oil droplets on a strongly slipping water surface. *Faraday Discussions*, **2017**, 199, 115-128	3.6	10
58	Influence of electric field on deformation of a drop in shear flow. *Physics of Fluids*, **2019**, 31, 042102	4.4	10
57	Effects of specularity and particle-particle restitution coefficients on the hydrodynamic behavior of dispersed gas-particle flows through horizontal channels. *Advanced Powder Technology*, **2018**, 29, 874-889	4.6	10
56	The influence of partitions on predicting heat transfer due to the combined effects of convection and thermal radiation in cubical enclosures. *International Journal of Heat and Mass Transfer*, **2018**, 121, 1179-1200	4.9	10
55	Bubble Lifecycle During Heterogeneous Nucleate Boiling. *Journal of Heat Transfer*, **2018**, 140,	1.8	9
54	Effect of Channel Confinement on Mixed Convective Flow Past an Equilateral Triangular Cylinder. *Journal of Heat Transfer*, **2015**, 137,	1.8	9
53	Effect of channel confinement on wake dynamics and forced convective heat transfer past a blunt headed cylinder. *International Journal of Thermal Sciences*, **2018**, 124, 467-476	4.1	9
52	Effects of specularity and particle-particle restitution coefficients on the recirculation characteristics of dispersed gas-particle flows through a sudden expansion. *Advanced Powder Technology*, **2018**, 29, 2463-2475	4.6	8
51	Deciphering Hydrodynamic and Drug-Resistant Behaviors of Metastatic EMT Breast Cancer Cells Moving in a Constricted Microcapillary. *Journal of Clinical Medicine*, **2019**, 8,	5.1	8
50	Effect of surface wettability and electric field on transition of film boiling to nucleate boiling. *Numerical Heat Transfer; Part A: Applications*, **2018**, 74, 1105-1120	2.3	8
49	Dynamics of tongue shaped cavity generated during the impact of high-speed microdrops. *Physics of Fluids*, **2018**, 30, 042103	4.4	7

48	Magnetowetting dynamics of sessile ferrofluid drops on soft surfaces. *Soft Matter*, **2020**, 16, 970-982	3.6	7
47	A new Green□Gauss reconstruction on unstructured meshes. Part I: Gradient reconstruction. *Journal of Computational Physics*, **2020**, 422, 108325	4.1	7
46	Forced convective flow and heat transfer past an unconfined blunt headed cylinder. *Numerical Heat Transfer; Part A: Applications*, **2017**, 72, 372-388	2.3	6
45	Dynamics of formation and oscillation of non-spherical drops. *Chemical Engineering Science*, **2019**, 201, 413-423	4.4	5
44	Evaluation of Thermophysical Properties of Menthol-Based Deep Eutectic Solvent as a Thermal Fluid: Forced Convection and Numerical Studies. *Industrial & Engineering Chemistry Research*, **2019**, 58, 20125-20133	3.9	5
43	Interfacial dynamics of viscous droplets impacting a superhydrophobic candle soot surface: Overview and comparison. *Physics of Fluids*, **2022**, 34, 012121	4.4	5
42	Unified framework for buoyancy induced radiative-convective flow and heat transfer on hybrid unstructured meshes. *International Journal of Heat and Mass Transfer*, **2018**, 126, 908-925	4.9	5
41	Mesoscopic Analysis of Dynamic Droplet Behavior on Wetted Flat and Grooved Surface for Low Viscosity Ratio. *Journal of Heat Transfer*, **2017**, 139,	1.8	4
40	Mesoscale understanding of capillarity driven two-phase flow in a packed bed architecture. *International Journal of Heat and Mass Transfer*, **2019**, 136, 116-127	4.9	4
39	Flow past an Equilateral Triangular Bluff Obstacle: Computational Study of the Effect of Thermal Buoyancy on Flow Physics and Heat Transfer. *Numerical Heat Transfer; Part A: Applications*, **2015**, 67, 476-495	2.3	4
38	Numerical investigation of two dimensional natural convection and entropy generation inside a porous square enclosure with sinusoidally heated wall. *Progress in Computational Fluid Dynamics*, **2016**, 16, 88	0.7	4
37	A computational analysis of the role of particle diameter on the fluidization behavior in a bubbling gas□olid fluidized bed. *Computational Particle Mechanics*, **2020**, 7, 555-565	3	4
36	Sweeping of the entrapped fluid out of the groove in a three-dimensional channel using lattice Boltzmann method. *European Journal of Mechanics, B/Fluids*, **2018**, 72, 328-339	2.4	4
35	Temporal linear stability analysis of an entry flow in a channel with viscous heating. *International Journal of Heat and Mass Transfer*, **2017**, 109, 922-929	4.9	3
34	Bubble Formation in Film Boiling Including Electrohydrodynamic Forces. *Procedia IUTAM*, **2015**, 15, 86-94		3
33	Influence of geometry on mobilization of trapped blob. *European Journal of Mechanics, B/Fluids*, **2015**, 53, 1-10	2.4	3
32	Towards an improved conservative approach for simulating electrohydrodynamic two-phase flows using volume-of-fluid. *Journal of Computational Physics*, **2018**, 367, 391-398	4.1	3
31	Mesoscopic analysis of three-dimensional droplet displacement on wetted grooved wall of a rectangular channel. *European Journal of Mechanics, B/Fluids*, **2018**, 67, 35-53	2.4	3

30	Investigations of turbulence-radiation interaction in non-Oberbeck-Boussinesq buoyancy-driven flows. *International Journal of Thermal Sciences*, **2018**, 134, 298-316	4.1	3
29	Lattice Boltzmann modeling of two-phase behavior under acoustic excitation: Capillarity–wettability interaction. *International Journal of Heat and Mass Transfer*, **2014**, 74, 460-472	4.9	3
28	Laminar Natural Convection in a Complicated Cavity With Spatially Variable Upper Wall Temperature **2003**, 633		3
27	Evolution of jets during drop impact on a deep liquid pool. *Physics of Fluids*, **2022**, 34, 022110	4.4	3
26	LESSONS FROM ANUPRAVAHA: TOWARDS A GENERAL PURPOSE COMPUTATIONAL FRAMEWORK ON HYBRID UNSTRUCTURED MESHES FOR MULTI-PHYSICS APPLICATIONS **2017**,		3
25	Electrohydrodynamic-induced interactions between droplets. *Journal of Fluid Mechanics*, **2021**, 915,	3.7	3
24	Probing the influence of confinement and wettability on droplet displacement behavior: A mesoscale analysis. *European Journal of Mechanics, B/Fluids*, **2019**, 75, 327-338	2.4	3
23	A parametric study of dispersed laminar gas-particle flows through vertical and horizontal channels. *Advanced Powder Technology*, **2018**, 29, 1072-1084	4.6	2
22	Numerical appraisal of three low Mach number algorithms for radiative–convective flows in enclosures. *Computers and Mathematics With Applications*, **2019**, 77, 2162-2181	2.7	2
21	Discerning the self-healing, shear-thinning characteristics and therapeutic efficacy of hydrogel drug carriers migrating through constricted microchannel resembling blood microcapillary. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2021**, 626, 127070	5.1	2
20	Mesoscopic Modeling of Capillarity-Induced Two-Phase Transport in a Microfluidic Porous Structure. *Transport in Porous Media*, **2018**, 122, 673-691	3.1	1
19	Experimental characterization of the growth dynamics during capillarity-driven droplet generation. *Physical Review E*, **2019**, 100, 013106	2.4	1
18	Simplified Mathematical Model to Evaluate the Performance of the All-Vanadium Redox Flow Battery **2013**,		1
17	Numerical Investigation of Free Convection in a Porous Corrugated Cavity Filled With Silver (Ag) Dispersed Nano-Fluid. *Journal of Thermal Science and Engineering Applications*, **2021**, 13,	1.9	1
16	Comment on "Modifications to the gradient schemes on unstructured cell centered grids for the accurate determination of gradients near conductivity changes" [Phys. Fluids 31, 047104 (2019)]. *Physics of Fluids*, **2019**, 31, 129101	4.4	1
15	Electric-Discharge-Mediated Jetting, Crowning, Bursting, and Atomization of a Droplet. *Physical Review Applied*, **2021**, 15,	4.3	1
14	A parametric study on the droplet detachment process from the ceiling under the effect of gravity. *Engineering Computations*, **2019**, 36, 445-465	1.4	0
13	Mesoscopic simulation of blob resonance in a model porous pathway. *Microfluidics and Nanofluidics*, **2015**, 18, 215-232	2.8	

List of Publications

12	Lattice Boltzmann simulations of coalescence of two droplets on a rectangular channel wall considering wetting effects. *Progress in Computational Fluid Dynamics*, **2017**, 17, 281	0.7
11	Numerical Simulation of Solidification and Melting Problems on Unstructured Grid. *Lecture Notes in Mechanical Engineering*, **2017**, 439-448	0.4
10	A Hybrid Grid Based Algebraic Volume of Fluid Method for Interfacial Flows. *Lecture Notes in Mechanical Engineering*, **2017**, 1111-1119	0.4
9	3D Unsteady Numerical Simulation of All-Vanadium Redox Flow Battery. *Lecture Notes in Mechanical Engineering*, **2017**, 457-466	0.4
8	Laminar Natural Convection Inside a Wavy Enclosure Heated From Top and Uniformly Cooled From the Bottom and Both Sides **2005**, 123	
7	Study of Pool Boiling Through Numerical Approach **2020**, 607-644	
6	Computation of Flow Coupled with the Electric Field on Unstructured Grid. *Lecture Notes in Mechanical Engineering*, **2017**, 467-476	0.4
5	Lattice Boltzmann Modelling of Capillarity-Induced Resonance of Blob Inside a Circular Tube. *Lecture Notes in Mechanical Engineering*, **2017**, 1121-1130	0.4
4	Eulerian-Eulerian Modeling of Dispersed Laminar Gas-Particle Flows over an Unstructured Grid. *Lecture Notes in Mechanical Engineering*, **2017**, 1101-1110	0.4
3	Computation of Variable Density Flows on Hybrid Unstructured Grids. *Lecture Notes in Mechanical Engineering*, **2017**, 431-437	0.4
2	Numerical Analysis of Conjugate Heat Transfer in a Planar Sudden Expansion Flow. *Journal of the Institution of Engineers (India): Series C*, **2021**, 102, 981	0.9
1	Development of a phase change solver for concentrated energy beam applications. *International Communications in Heat and Mass Transfer*, **2021**, 126, 105469	5.8