

# Gautam Biswas

## List of Publications by Year in descending order

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84  
papers

3,090  
citations

186209

28  
h-index

168321

53  
g-index

92  
all docs

92  
docs citations

92  
times ranked

2229  
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-dimensional study of flow past a square cylinder at low Reynolds numbers. International Journal of Heat and Fluid Flow, 2003, 24, 54-66.	1.1	229
2	Comparison of volume-of-fluid methods for surface tension-dominant two-phase flows. International Journal of Heat and Mass Transfer, 2006, 49, 740-754.	2.5	220
3	Flow past a square cylinder at low Reynolds numbers. International Journal for Numerical Methods in Fluids, 2011, 67, 1160-1174.	0.9	155
4	Steady separated flow past a circular cylinder at low Reynolds numbers. Journal of Fluid Mechanics, 2009, 620, 89-119.	1.4	152
5	Nanoscale study of boiling and evaporation in a liquid Ar film on a Pt heater using molecular dynamics simulation. International Journal of Heat and Mass Transfer, 2014, 71, 303-312.	2.5	134
6	Regimes during liquid drop impact on a liquid pool. Journal of Fluid Mechanics, 2015, 768, 492-523.	1.4	121
7	Large-eddy simulation of flow and heat transfer in an impinging slot jet. International Journal of Heat and Fluid Flow, 2001, 22, 500-508.	1.1	108
8	Quasi-static bubble formation on submerged orifices. International Journal of Heat and Mass Transfer, 2005, 48, 425-438.	2.5	108
9	Laminar-to-turbulent transition of pipe flows through puffs and slugs. Journal of Fluid Mechanics, 2008, 614, 425-446.	1.4	107
10	Heat transfer enhancement in cross-flow heat exchangers using oval tubes and multiple delta winglets. International Journal of Heat and Mass Transfer, 2003, 46, 2841-2856.	2.5	104
11	Effect of thermal buoyancy on vortex shedding past a circular cylinder in cross-flow at low Reynolds numbers. International Journal of Heat and Mass Transfer, 2009, 52, 1897-1912.	2.5	97
12	Numerical simulation of flow past row of square cylinders for various separation ratios. Computers and Fluids, 2010, 39, 49-59.	1.3	75
13	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.	2.5	67
14	Mixed convective heat transfer of nanofluids past a circular cylinder in cross flow in unsteady regime. International Journal of Heat and Mass Transfer, 2012, 55, 4783-4799.	2.5	66
15	Coalescence dynamics of unequal sized drops. Physics of Fluids, 2019, 31, 012105.	1.6	54
16	Vortex structures and kinetic energy budget in two-dimensional flow past a square cylinder. Computers and Fluids, 2000, 29, 669-694.	1.3	52
17	Numerical prediction of flow and heat transfer in a channel in the presence of a built-in circular tube with and without an integral wake splitter. International Journal of Heat and Mass Transfer, 2005, 48, 439-453.	2.5	51
18	The Effect of Aiding/Opposing Buoyancy on Two-Dimensional Laminar Flow Across a Circular Cylinder. Numerical Heat Transfer; Part A: Applications, 2010, 58, 385-402.	1.2	50

#	ARTICLE	IF	CITATIONS
19	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.	2.5	46
20	The regime of large bubble entrapment during a single drop impact on a liquid pool. Physics of Fluids, 2017, 29, .	1.6	43
21	Numerical investigation of forced convection heat transfer in unsteady flow past a row of square cylinders. International Journal of Heat and Fluid Flow, 2009, 30, 1114-1128.	1.1	41
22	Dynamics of deformation and pinch-off of a migrating compound droplet in a tube. Physical Review E, 2018, 97, 043112.	0.8	39
23	Direct simulation of film boiling including electrohydrodynamic forces. Physics of Fluids, 2007, 19, 012106.	1.6	38
24	Effect of superheat and electric field on saturated film boiling. Physics of Fluids, 2016, 28, .	1.6	37
25	Coalescence dynamics of a compound drop on a deep liquid pool. Journal of Fluid Mechanics, 2019, 866, .	1.4	35
26	Thermal hydraulics of the spallation target module of an accelerator driven sub-critical system: A numerical study. International Journal of Heat and Mass Transfer, 2006, 49, 4633-4652.	2.5	34
27	Saturated film boiling at various gravity levels under the influence of electrohydrodynamic forces. Physics of Fluids, 2017, 29, .	1.6	33
28	The Effects of Reynolds and Prandtl Numbers on Flow and Heat Transfer Across Tandem Square Cylinders in the Steady Flow Regime. Numerical Heat Transfer; Part A: Applications, 2011, 59, 421-437.	1.2	31
29	Analysis of interfacial instability and multimode bubble formation in saturated boiling using coupled level set and volume-of-fluid approach. Physics of Fluids, 2014, 26, .	1.6	29
30	Dynamic behavior of flow around rows of square cylinders kept in staggered arrangement. Journal of Wind Engineering and Industrial Aerodynamics, 2015, 136, 1-11.	1.7	29
31	Understanding flow dynamics, viability and metastatic potency of cervical cancer (HeLa) cells through constricted microchannel. Scientific Reports, 2018, 8, 17357.	1.6	29
32	Bubble pinch-off and scaling during liquid drop impact on liquid pool. Physics of Fluids, 2012, 24, .	1.6	28
33	Electric field mediated spraying of miniaturized droplets inside microchannel. Electrophoresis, 2017, 38, 1450-1457.	1.3	28
34	Surface instability of a thin electrolyte film undergoing coupled electroosmotic and electrophoretic flows in a microfluidic channel. Electrophoresis, 2011, 32, 3257-3267.	1.3	26
35	Evaporation of water droplets on Pt-surface in presence of external electric field—A molecular dynamics study. Journal of Chemical Physics, 2015, 143, 094702.	1.2	26
36	Selection of Graphite Pencil Grades for the Design of Suitable Electrodes for Stacking Multiple Single-Inlet Paper Pencil Fuel Cells. ChemistrySelect, 2019, 4, 152-159.	0.7	26

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37	Coalescence of drops on the free-surface of a liquid pool at elevated temperatures. <i>Physics of Fluids</i> , 2020, 32, .	1.6	24
38	Analysis of flow in the spiral casing using a streamline upwind Petrov Galerkin method. <i>International Journal for Numerical Methods in Engineering</i> , 1999, 45, 147-174.	1.5	23
39	Bubble formation and dynamics in a quiescent high-density liquid. <i>AIChE Journal</i> , 2015, 61, 3996-4012.	1.8	23
40	Instabilities in free-surface electroosmotic flows. <i>Theoretical and Computational Fluid Dynamics</i> , 2012, 26, 311-318.	0.9	22
41	Formation of liquid drops at an orifice and dynamics of pinch-off in liquid jets. <i>Physical Review E</i> , 2017, 96, 013115.	0.8	22
42	Migration of a droplet in a cylindrical tube in the creeping flow regime. <i>Physical Review E</i> , 2017, 95, 033110.	0.8	21
43	Surface Tension Driven Filling in a Soft Microchannel: Role of Streaming Potential. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 3839-3853.	1.8	21
44	Numerical study of the turbulent unsteady wake behind a partially enclosed square cylinder using RANS. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1999, 178, 323-341.	3.4	20
45	Wettability effects on contact line dynamics of droplet motion in an inclined channel. <i>Physical Review E</i> , 2015, 91, 053006.	0.8	20
46	Investigation of coherent structures in a turbulent channel with built-in longitudinal vortex generators. <i>International Journal of Heat and Mass Transfer</i> , 2017, 104, 178-198.	2.5	20
47	Dynamics of drop formation from submerged orifices under the influence of electric field. <i>Physics of Fluids</i> , 2018, 30, 122104.	1.6	20
48	Analysis of droplet dynamics in a partially obstructed confinement in a three-dimensional channel. <i>Physics of Fluids</i> , 2018, 30, .	1.6	20
49	Cross-stream migration of drops suspended in Poiseuille flow in the presence of an electric field. <i>Physical Review E</i> , 2018, 97, 063106.	0.8	19
50	Magnetic-field-driven alteration in capillary filling dynamics in a narrow fluidic channel. <i>Physical Review E</i> , 2017, 96, 013113.	0.8	18
51	A study of two unequal-sized droplets undergoing oblique collision. <i>Physics of Fluids</i> , 2021, 33, .	1.6	18
52	Electrocapillary filling in a microchannel under the influence of magnetic and electric fields. <i>Canadian Journal of Chemical Engineering</i> , 2021, 99, 725-741.	0.9	16
53	Influence of electric field on deformation of a drop in shear flow. <i>Physics of Fluids</i> , 2019, 31, .	1.6	15
54	Molecular dynamics study of sessile ionic nanodroplet under external electric field. <i>Chemical Engineering Science</i> , 2021, 229, 116143.	1.9	14

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55	Evolution of jets during drop impact on a deep liquid pool. <i>Physics of Fluids</i> , 2022, 34, .	1.6	13
56	Electric field induced dynamics of viscoplastic droplets in shear flow. <i>Physics of Fluids</i> , 2020, 32, .	1.6	12
57	Bubble Lifecycle During Heterogeneous Nucleate Boiling. <i>Journal of Heat Transfer</i> , 2018, 140, .	1.2	11
58	Deciphering Hydrodynamic and Drug-Resistant Behaviors of Metastatic EMT Breast Cancer Cells Moving in a Constricted Microcapillary. <i>Journal of Clinical Medicine</i> , 2019, 8, 1194.	1.0	11
59	Dynamics of an arched liquid jet under the influence of gravity. <i>European Journal of Mechanics, B/Fluids</i> , 2019, 74, 1-9.	1.2	11
60	Analysis of flow in the plate-spiral of a reaction turbine using a streamline upwind Petrov-Galerkin method. <i>International Journal for Numerical Methods in Fluids</i> , 2000, 34, 113-144.	0.9	10
61	Long-wave interfacial instabilities in a thin electrolyte film undergoing coupled electrokinetic flows: a nonlinear analysis. <i>Microfluidics and Nanofluidics</i> , 2013, 15, 19-33.	1.0	10
62	Dynamics of tongue shaped cavity generated during the impact of high-speed microdrops. <i>Physics of Fluids</i> , 2018, 30, .	1.6	10
63	Dynamics of a compound droplet under the combined influence of electric field and shear flow. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	10
64	Dynamics of two coaxially rising gas bubbles. <i>Physics of Fluids</i> , 2021, 33, .	1.6	10
65	Effect of surface wettability and electric field on transition of film boiling to nucleate boiling. <i>Numerical Heat Transfer; Part A: Applications</i> , 2018, 74, 1105-1120.	1.2	9
66	Analysis and experiments on the spreading dynamics of a viscoelastic drop. <i>Applied Mathematical Modelling</i> , 2019, 75, 201-209.	2.2	8
67	Dynamics of formation and oscillation of non-spherical drops. <i>Chemical Engineering Science</i> , 2019, 201, 413-423.	1.9	8
68	Capillary imbibition of non-Newtonian fluids in a microfluidic channel: analysis and experiments. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, .	1.0	8
69	Bubble Formation in Film Boiling Including Electrohydrodynamic Forces. <i>Procedia IUTAM</i> , 2015, 15, 86-94.	1.2	6
70	Temporal linear stability analysis of an entry flow in a channel with viscous heating. <i>International Journal of Heat and Mass Transfer</i> , 2017, 109, 922-929.	2.5	6
71	Discerning the self-healing, shear-thinning characteristics and therapeutic efficacy of hydrogel drug carriers migrating through constricted microchannel resembling blood microcapillary. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 626, 127070.	2.3	6
72	Insight into molecular rearrangement of a sessile ionic nanodroplet with applied electric field. <i>Chemical Engineering Science</i> , 2022, 247, 117083.	1.9	6

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73	Electric field mediated separation of water-ethanol mixtures in carbon-nanotubes integrated in nanoporous graphene membranes. Faraday Discussions, 2018, 209, 259-271.	1.6	5
74	Pathways from disordered to ordered nanostructures from defect guided dewetting of ultrathin bilayers. Journal of Colloid and Interface Science, 2016, 465, 128-139.	5.0	4
75	Variant of a volume-of-fluid method for surface tension-dominant two-phase flows. Sadhana - Academy Proceedings in Engineering Sciences, 2013, 38, 1127-1133.	0.8	2
76	Dynamics of Growth and Breakup of an Evaporating Pendant Drop. Journal of Heat Transfer, 2020, 142, .	1.2	2
77	Analysis of shock wave-boundary layer interaction in a shock tube using higher order scheme. Computers and Fluids, 2022, 236, 105305.	1.3	2
78	Vortex Ring Formation on Drop Coalescence With Underlying Liquid. , 2013, , .		1
79	Recent Advances in Free Surface Flows. , 2021, , 121-144.		1
80	Transport Behavior of Commercial Anticancer Drug Protein-Bound Paclitaxel (Paclitad) in a Micron-Sized Channel. Langmuir, 2022, 38, 2014-2025.	1.6	1
81	Numerical simulation of the target system of an ADSS. International Journal of Computational Fluid Dynamics, 2006, 20, 513-520.	0.5	0
82	Numerical Simulation of Turbulent Flow in a Rectangular Channel With Periodically Mounted Longitudinal Vortex Generators. , 2010, , .		0
83	Flow and Heat Transfer Characteristics in Ribbed Channel Using Lattice Boltzmann Method. , 2013, , .		0
84	Study of Pool Boiling Through Numerical Approach. , 2020, , 607-644.		0