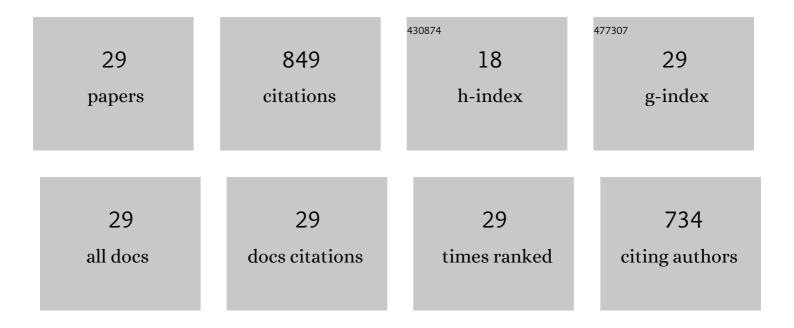
Amneet Pal Singh Bhalla

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	A unified mathematical framework and an adaptive numerical method for fluid–structure interaction with rigid, deforming, and elastic bodies. Journal of Computational Physics, 2013, 250, 446-476.	3.8	119
2	Energy efficiency and allometry of movement of swimming and flying animals. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7517-7521.	7.1	80
3	An immersed boundary method for rigid bodies. Communications in Applied Mathematics and Computational Science, 2016, 11, 79-141.	1.8	70
4	A robust incompressible Navier-Stokes solver for high density ratio multiphase flows. Journal of Computational Physics, 2019, 390, 548-594.	3.8	60
5	A Forced Damped Oscillation Framework for Undulatory Swimming Provides New Insights into How Propulsion Arises in Active and Passive Swimming. PLoS Computational Biology, 2013, 9, e1003097.	3.2	47
6	Undulating fins produce off-axis thrust and flow structures. Journal of Experimental Biology, 2014, 217, 201-13.	1.7	43
7	Convergent Evolution of Mechanically Optimal Locomotion in Aquatic Invertebrates and Vertebrates. PLoS Biology, 2015, 13, e1002123.	5.6	41
8	A DLM immersed boundary method based wave-structure interaction solver for high density ratio multiphase flows. Journal of Computational Physics, 2019, 398, 108804.	3.8	37
9	Simulating water-entry/exit problems using Eulerian–Lagrangian and fully-Eulerian fictitious domain methods within the open-source IBAMR library. Applied Ocean Research, 2020, 94, 101932.	4.1	33
10	A fully resolved active musculo-mechanical model for esophageal transport. Journal of Computational Physics, 2015, 298, 446-465.	3.8	31
11	An immersed interface method for discrete surfaces. Journal of Computational Physics, 2020, 400, 108854.	3.8	30
12	Comparison of wave–structure interaction dynamics of a submerged cylindrical point absorber with three degrees of freedom using potential flow and computational fluid dynamics models. Physics of Fluids, 2020, 32, .	4.0	30
13	Separability of drag and thrust in undulatory animals and machines. Scientific Reports, 2014, 4, 7329.	3.3	27
14	Fully resolved immersed electrohydrodynamics for particle motion, electrolocation, and self-propulsion. Journal of Computational Physics, 2014, 256, 88-108.	3.8	25
15	A moving control volume approach to computing hydrodynamic forces and torques on immersed bodies. Journal of Computational Physics, 2017, 347, 437-462.	3.8	23
16	Transition in swimming direction in a model self-propelled inertial swimmer. Physical Review Fluids, 2019, 4, .	2.5	23
17	The inertial sea wave energy converter (ISWEC) technology: Device-physics, multiphase modeling and simulations. Ocean Engineering, 2021, 229, 108879.	4.3	21
18	Gray's paradox: A fluid mechanical perspective. Scientific Reports, 2014, 4, 5904.	3.3	19

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#	Article	IF	CITATIONS
19	An adaptive and energy-maximizing control optimization of wave energy converters using an extremum-seeking approach. Physics of Fluids, 2020, 32, .	4.0	19
20	Hydrodynamic optimality of balistiform and gymnotiform locomotion. European Journal of Computational Mechanics, 2017, 26, 31-43.	0.6	13
21	A new constraint-based formulation for hydrodynamically resolved computational neuromechanics of swimming animals. Journal of Computational Physics, 2018, 375, 684-716.	3.8	13
22	A minimally-resolved immersed boundary model for reaction-diffusion problems. Journal of Chemical Physics, 2013, 139, 214112.	3.0	10
23	Brownian dynamics of fully confined suspensions of rigid particles without Green's functions. Journal of Chemical Physics, 2019, 150, 164116.	3.0	8
24	Critique on "Volume penalization for inhomogeneous Neumann boundary conditions modeling scalar flux in complicated geometry― Journal of Computational Physics, 2021, 433, 110163.	3.8	7
25	Controlling microchannel gas flow rates through time-modulated pressure pulsation. Journal of Applied Physics, 2007, 102, 114910.	2.5	6
26	A subcycling/non-subcycling time advancement scheme-based DLM immersed boundary method framework for solving single and multiphase fluid–structure interaction problems on dynamically adaptive grids. Computers and Fluids, 2022, 238, 105358.	2.5	6
27	Handling Neumann and Robin boundary conditions in a fictitious domain volume penalization framework. Journal of Computational Physics, 2022, 448, 110726.	3.8	4
28	A one-sided direct forcing immersed boundary method using moving least squares. Journal of Computational Physics, 2021, 440, 110359.	3.8	2
29	A coupled distributed Lagrange multiplier (DLM) and discrete element method (DEM) approach to simulate particulate flow with collisions. Powder Technology. 2022, 398, 117091.	4.2	2