

Prosenjit Bagchi

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

46
papers

2,035
citations

26
h-index

45
g-index

52
ext. papers

2,277
ext. citations

3.2
avg. IF

5.62
L-index

#	Paper	IF	Citations
46	Mesoscale simulation of blood flow in small vessels. <i>Biophysical Journal</i> , 2007 , 92, 1858-77	2.9	215
45	Lateral migration of a capsule in a plane Poiseuille flow in a channel. <i>International Journal of Multiphase Flow</i> , 2008 , 34, 966-986	3.6	140
44	Three-dimensional computational modeling of multiple deformable cells flowing in microvessels. <i>Physical Review E</i> , 2009 , 79, 046318	2.4	133
43	Computational fluid dynamic simulation of aggregation of deformable cells in a shear flow. <i>Journal of Biomechanical Engineering</i> , 2005 , 127, 1070-80	2.1	120
42	Dynamics of nonspherical capsules in shear flow. <i>Physical Review E</i> , 2009 , 80, 016307	2.4	87
41	Influence of membrane viscosity on capsule dynamics in shear flow. <i>Journal of Fluid Mechanics</i> , 2013 , 718, 569-595	3.7	82
40	Response of the wake of an isolated particle to an isotropic turbulent flow. <i>Journal of Fluid Mechanics</i> , 2004 , 518, 95-123	3.7	82
39	Phase diagram and breathing dynamics of a single red blood cell and a biconcave capsule in dilute shear flow. <i>Physical Review E</i> , 2011 , 84, 026314	2.4	77
38	Microparticle shape effects on margination, near-wall dynamics and adhesion in a three-dimensional simulation of red blood cell suspension. <i>Soft Matter</i> , 2015 , 11, 2097-109	3.6	71
37	Platelet dynamics in three-dimensional simulation of whole blood. <i>Biophysical Journal</i> , 2014 , 106, 2529-409	4.0	69
36	Steady planar straining flow past a rigid sphere at moderate Reynolds number. <i>Journal of Fluid Mechanics</i> , 2002 , 466, 365-407	3.7	68
35	Comparison of erythrocyte dynamics in shear flow under different stress-free configurations. <i>Physics of Fluids</i> , 2014 , 26, 041902	4.4	59
34	Three-dimensional numerical simulation of vesicle dynamics using a front-tracking method. <i>Physical Review E</i> , 2012 , 85, 056308	2.4	59
33	Shear versus vortex-induced lift force on a rigid sphere at moderate Re. <i>Journal of Fluid Mechanics</i> , 2002 , 473, 379-388	3.7	54
32	A computational approach to modeling cellular-scale blood flow in complex geometry. <i>Journal of Computational Physics</i> , 2017 , 334, 280-307	4.1	53
31	3D computational modeling and simulation of leukocyte rolling adhesion and deformation. <i>Computers in Biology and Medicine</i> , 2008 , 38, 738-53	7	53
30	Tank-treading and tumbling frequencies of capsules and red blood cells. <i>Physical Review E</i> , 2011 , 83, 046305	2.4	47

29	Orbital drift of capsules and red blood cells in shear flow. <i>Physics of Fluids</i> , 2013 , 25, 091902	4.4	46
28	Analysis of red blood cell partitioning at bifurcations in simulated microvascular networks. <i>Physics of Fluids</i> , 2018 , 30, 051902	4.4	44
27	A computational study of leukocyte adhesion and its effect on flow pattern in microvessels. <i>Journal of Theoretical Biology</i> , 2008 , 254, 483-98	2.3	43
26	Direct Numerical Simulation of Cellular-Scale Blood Flow in 3D Microvascular Networks. <i>Biophysical Journal</i> , 2017 , 113, 2815-2826	2.9	42
25	Inertial and viscous forces on a rigid sphere in straining flows at moderate Reynolds numbers. <i>Journal of Fluid Mechanics</i> , 2003 , 481, 105-148	3.7	41
24	Flow of Red Blood Cells in Stenosed Microvessels. <i>Scientific Reports</i> , 2016 , 6, 28194	4.9	37
23	Rheology of a dilute suspension of liquid-filled elastic capsules. <i>Physical Review E</i> , 2010 , 81, 056320	2.4	36
22	Effect of inertia on the hydrodynamic interaction between two liquid capsules in simple shear flow. <i>International Journal of Multiphase Flow</i> , 2008 , 34, 375-392	3.6	33
21	Dynamic rheology of a dilute suspension of elastic capsules: effect of capsule tank-treading, swinging and tumbling. <i>Journal of Fluid Mechanics</i> , 2011 , 669, 498-526	3.7	27
20	Dynamics of microcapsules in oscillating shear flow. <i>Physics of Fluids</i> , 2011 , 23, 111901	4.4	25
19	On the shape memory of red blood cells. <i>Physics of Fluids</i> , 2017 , 29, 041901	4.4	22
18	A computational model of amoeboid cell swimming. <i>Physics of Fluids</i> , 2017 , 29, 101902	4.4	21
17	Flow-Induced Damage to Blood Cells in Aortic Valve Stenosis. <i>Annals of Biomedical Engineering</i> , 2016 , 44, 2724-36	4.7	21
16	Intermittency and synchronized motion of red blood cell dynamics in shear flow. <i>Journal of Fluid Mechanics</i> , 2014 , 759, 472-488	3.7	19
15	Effect of freestream isotropic turbulence on heat transfer from a sphere. <i>Physics of Fluids</i> , 2008 , 20, 073305	4.05	18
14	Three-dimensional distribution of wall shear stress and its gradient in red cell-resolved computational modeling of blood flow in <i>in vivo</i> -like microvascular networks. <i>Physiological Reports</i> , 2019 , 7, e14067	2.6	16
13	Dynamics of red blood cells in oscillating shear flow. <i>Journal of Fluid Mechanics</i> , 2016 , 800, 484-516	3.7	14
12	The cell-free layer in simulated microvascular networks. <i>Journal of Fluid Mechanics</i> , 2019 , 864, 768-806	3.7	13

11	A computational model of amoeboid cell motility in the presence of obstacles. <i>Soft Matter</i> , 2018 , 14, 5741-5763	3.6	10
10	Hydrodynamic interaction between a platelet and an erythrocyte: effect of erythrocyte deformability, dynamics, and wall proximity. <i>Journal of Biomechanical Engineering</i> , 2013 , 135, 51002	2.1	8
9	Hydrodynamic interaction between erythrocytes and leukocytes affects rheology of blood in microvessels. <i>Biorheology</i> , 2007 , 44, 191-215	1.7	8
8	Analysis of membrane tank-tread of nonspherical capsules and red blood cells. <i>European Physical Journal E</i> , 2012 , 35, 103	1.5	6
7	Flow Past a Sphere With Surface Blowing and Suction. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2007 , 129, 1547-1558	2.1	4
6	Investigation of red blood cell partitioning in an in vitro microvascular bifurcation. <i>Artificial Organs</i> , 2021 , 45, 1083-1096	2.6	4
5	Motion of a capsule in a curved tube. <i>Journal of Fluid Mechanics</i> , 2021 , 907,	3.7	4
4	A computational study of red blood cell deformability effect on hemodynamic alteration in capillary vessel networks.. <i>Scientific Reports</i> , 2022 , 12, 4304	4.9	2
3	A computational study of amoeboid motility in 3D: the role of extracellular matrix geometry, cell deformability, and cell-matrix adhesion. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021 , 20, 167-194 ^{3.8}		1
2	Large-Scale Simulation of Blood Flow in Microvessels 2010 , 321-339		
1	High-fidelity Modeling of Blood Flow in Physiologically Realistic Microvascular Networks. <i>FASEB Journal</i> , 2019 , 33, 521.2	0.9	