Prosenjit Bagchi

List of Publications by Year in Descending Order

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	A computational study of red blood cell deformability effect on hemodynamic alteration in capillary vessel networks.. *Scientific Reports*, **2022**, 12, 4304	4.9	2
45	Investigation of red blood cell partitioning in an in vitro microvascular bifurcation. *Artificial Organs*, **2021**, 45, 1083-1096	2.6	4
44	A computational study of amoeboid motility in 3D: the role of extracellular matrix geometry, cell deformability, and cell-matrix adhesion. *Biomechanics and Modeling in Mechanobiology*, **2021**, 20, 167-191	3.8	1
43	Motion of a capsule in a curved tube. *Journal of Fluid Mechanics*, **2021**, 907,	3.7	4
42	The cell-free layer in simulated microvascular networks. *Journal of Fluid Mechanics*, **2019**, 864, 768-806	3.7	13
41	Three-dimensional distribution of wall shear stress and its gradient in red cell-resolved computational modeling of blood flow in in vivo-like microvascular networks. *Physiological Reports*, **2019**, 7, e14067	2.6	16
40	High-fidelity Modeling of Blood Flow in Physiologically Realistic Microvascular Networks. *FASEB Journal*, **2019**, 33, 521.2	0.9	
39	Analysis of red blood cell partitioning at bifurcations in simulated microvascular networks. *Physics of Fluids*, **2018**, 30, 051902	4.4	44
38	A computational model of amoeboid cell motility in the presence of obstacles. *Soft Matter*, **2018**, 14, 5741-5763	3.6	10
37	A computational approach to modeling cellular-scale blood flow in complex geometry. *Journal of Computational Physics*, **2017**, 334, 280-307	4.1	53
36	On the shape memory of red blood cells. *Physics of Fluids*, **2017**, 29, 041901	4.4	22
35	A computational model of amoeboid cell swimming. *Physics of Fluids*, **2017**, 29, 101902	4.4	21
34	Direct Numerical Simulation of Cellular-Scale Blood Flow in 3D Microvascular Networks. *Biophysical Journal*, **2017**, 113, 2815-2826	2.9	42
33	Flow-Induced Damage to Blood Cells in Aortic Valve Stenosis. *Annals of Biomedical Engineering*, **2016**, 44, 2724-36	4.7	21
32	Flow of Red Blood Cells in Stenosed Microvessels. *Scientific Reports*, **2016**, 6, 28194	4.9	37
31	Dynamics of red blood cells in oscillating shear flow. *Journal of Fluid Mechanics*, **2016**, 800, 484-516	3.7	14
30	Microparticle shape effects on margination, near-wall dynamics and adhesion in a three-dimensional simulation of red blood cell suspension. *Soft Matter*, **2015**, 11, 2097-109	3.6	71

29	Comparison of erythrocyte dynamics in shear flow under different stress-free configurations. *Physics of Fluids*, **2014**, 26, 041902	4.4	59
28	Platelet dynamics in three-dimensional simulation of whole blood. *Biophysical Journal*, **2014**, 106, 2529-40	3.9	69
27	Intermittency and synchronized motion of red blood cell dynamics in shear flow. *Journal of Fluid Mechanics*, **2014**, 759, 472-488	3.7	19
26	Hydrodynamic interaction between a platelet and an erythrocyte: effect of erythrocyte deformability, dynamics, and wall proximity. *Journal of Biomechanical Engineering*, **2013**, 135, 51002	2.1	8
25	Orbital drift of capsules and red blood cells in shear flow. *Physics of Fluids*, **2013**, 25, 091902	4.4	46
24	Influence of membrane viscosity on capsule dynamics in shear flow. *Journal of Fluid Mechanics*, **2013**, 718, 569-595	3.7	82
23	Analysis of membrane tank-tread of nonspherical capsules and red blood cells. *European Physical Journal E*, **2012**, 35, 103	1.5	6
22	Three-dimensional numerical simulation of vesicle dynamics using a front-tracking method. *Physical Review E*, **2012**, 85, 056308	2.4	59
21	Phase diagram and breathing dynamics of a single red blood cell and a biconcave capsule in dilute shear flow. *Physical Review E*, **2011**, 84, 026314	2.4	77
20	Dynamic rheology of a dilute suspension of elastic capsules: effect of capsule tank-treading, swinging and tumbling. *Journal of Fluid Mechanics*, **2011**, 669, 498-526	3.7	27
19	Dynamics of microcapsules in oscillating shear flow. *Physics of Fluids*, **2011**, 23, 111901	4.4	25
18	Tank-treading and tumbling frequencies of capsules and red blood cells. *Physical Review E*, **2011**, 83, 046305	2.4	47
17	Rheology of a dilute suspension of liquid-filled elastic capsules. *Physical Review E*, **2010**, 81, 056320	2.4	36
16	Large-Scale Simulation of Blood Flow in Microvessels **2010**, 321-339		
15	Dynamics of nonspherical capsules in shear flow. *Physical Review E*, **2009**, 80, 016307	2.4	87
14	Three-dimensional computational modeling of multiple deformable cells flowing in microvessels. *Physical Review E*, **2009**, 79, 046318	2.4	133
13	Effect of freestream isotropic turbulence on heat transfer from a sphere. *Physics of Fluids*, **2008**, 20, 073305	1.9	18
12	A computational study of leukocyte adhesion and its effect on flow pattern in microvessels. *Journal of Theoretical Biology*, **2008**, 254, 483-98	2.3	43

11	Effect of inertia on the hydrodynamic interaction between two liquid capsules in simple shear flow. *International Journal of Multiphase Flow*, **2008**, 34, 375-392	3.6	33
10	Lateral migration of a capsule in a plane Poiseuille flow in a channel. *International Journal of Multiphase Flow*, **2008**, 34, 966-986	3.6	140
9	3D computational modeling and simulation of leukocyte rolling adhesion and deformation. *Computers in Biology and Medicine*, **2008**, 38, 738-53	7	53
8	Mesoscale simulation of blood flow in small vessels. *Biophysical Journal*, **2007**, 92, 1858-77	2.9	215
7	Flow Past a Sphere With Surface Blowing and Suction. *Journal of Fluids Engineering, Transactions of the ASME*, **2007**, 129, 1547-1558	2.1	4
6	Hydrodynamic interaction between erythrocytes and leukocytes affects rheology of blood in microvessels. *Biorheology*, **2007**, 44, 191-215	1.7	8
5	Computational fluid dynamic simulation of aggregation of deformable cells in a shear flow. *Journal of Biomechanical Engineering*, **2005**, 127, 1070-80	2.1	120
4	Response of the wake of an isolated particle to an isotropic turbulent flow. *Journal of Fluid Mechanics*, **2004**, 518, 95-123	3.7	82
3	Inertial and viscous forces on a rigid sphere in straining flows at moderate Reynolds numbers. *Journal of Fluid Mechanics*, **2003**, 481, 105-148	3.7	41
2	Shear versus vortex-induced lift force on a rigid sphere at moderate Re. *Journal of Fluid Mechanics*, **2002**, 473, 379-388	3.7	54
1	Steady planar straining flow past a rigid sphere at moderate Reynolds number. *Journal of Fluid Mechanics*, **2002**, 466, 365-407	3.7	68