Fang-Bao Tian

List of Publications by Year
in descending order

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107	2,857	172457	189892
papers	citations	29 h-index	50 g-index

108	108	108	1451
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Lattice Boltzmann model for interface capturing of multiphase flows based on Allenâ€“Cahn equation. Chinese Physics B, 2022, 31, 024701.	1.4	3
2	Hydrodynamic behaviors of self-propelled sperms in confined spaces. Engineering Applications of Computational Fluid Mechanics, 2022, 16, 141-160.	3.1	3
3	Influences of serrated trailing edge on the aerodynamic and aeroacoustic performance of a flapping wing during hovering flight. Physics of Fluids, 2022, 34, .	4.0	15
4	Stable Schooling Formations Emerge from the Combined Effect of the Active Control and Passive Self-Organization. Fluids, 2022, 7, 41.	1.7	8
5	An efficient geometry-adaptive mesh refinement framework and its application in the immersed boundary lattice Boltzmann method. Computer Methods in Applied Mechanics and Engineering, 2022, 392, 114662.	6.6	8
6	Numerical study of three-dimensional flapping wings hovering in ultra-low-density atmosphere. Physics of Fluids, 2022, 34, .	4.0	5
7	Sound generated by the flow around an airfoil with an attached flap: From passive fluidâ€“structure interaction to active control. Journal of Fluids and Structures, 2022, 111, 103571.	3.4	2
8	Point-to-Point Navigation of a Fish-Like Swimmer in a Vortical Flow With Deep Reinforcement Learning. Frontiers in Physics, 2022, 10, .	2.1	3
9	Impact of Modelling Surface Roughness in an Arterial Stenosis. Fluids, 2022, 7, 179.	1.7	1
10	Review on bio-inspired flight systems and bionic aerodynamics. Chinese Journal of Aeronautics, 2021, 34, 170-186.	5.3	67
11	Numerical study of the sound generated by two tandem arranged wings in forward flight. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2021, 235, 265-279.	2.1	3
12	A numerical study of fish adaption behaviors in complex environments with a deep reinforcement learning and immersed boundaryâ€“lattice Boltzmann method. Scientific Reports, 2021, 11, 1691.	3.3	25
13	Numerical simulations of biological flows and their engineering applications. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2021, 235, 205-207.	2.1	1
14	Dynamic Behaviours of a Filament in a Viscoelastic Uniform Flow. Fluids, 2021, 6, 90.	1.7	4
15	Numerical Modeling of Sperm Swimming. Fluids, 2021, 6, 73.	1.7	7
16	A Computational Analysis of the Influence of a Pressure Wire in Evaluating Coronary Stenosis. Fluids, 2021, 6, 165.	1.7	5
17	Optimal Efficiency and Heaving Velocity in Flapping Foil Propulsion. AIAA Journal, 2021, 59, 2143-2154.	2.6	2
18	Effects of uniform vertical inflow perturbations on the performance of flapping wings. Royal Society Open Science, 2021, 8, 210471.	2.4	4

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19	Performance of passively pitching flapping wings in the presence of vertical inflows. Bioinspiration and Biomimetics, 2021, 16, 056003.	2.9	3
20	Transition to chaos in a two-sided collapsible channel flow. Journal of Fluid Mechanics, 2021, 926, .	3.4	21
21	Effects of surface roughness and derivation of scaling laws on gas transport in coal using a fractal-based lattice Boltzmann method. Fuel, 2020, 259, 116229.	6.4	24
22	Modeling the effects of gas slippage, cleat network topology and scale dependence of gas transport in coal seam gas reservoirs. Fuel, 2020, 264, 116715.	6.4	18
23	Hydrodynamic effects of mucus on swimming performance of an undulatory foil by using the DSD/SST method. Computational Mechanics, 2020, 65, 751-761.	4.0	14
24	Numerical study of sound generation by three-dimensional flexible flapping wings during hovering flight. Journal of Fluids and Structures, 2020, 99, 103165.	3.4	18
25	Analysis of unsteady flow effects on the Betz limit for flapping foil power generation. Journal of Fluid Mechanics, 2020, 902, .	3.4	16
26	Hydrodynamic study of sperm swimming near a wall based on the immersed boundary-lattice Boltzmann method. Engineering Applications of Computational Fluid Mechanics, 2020, 14, 853-870.	3.1	12
27	An immersed boundary-lattice Boltzmann method for fluid-structure interaction problems involving viscoelastic fluids and complex geometries. Journal of Computational Physics, 2020, 415, 109487.	3.8	65
28	Energy harvesting of two inverted piezoelectric flags in tandem, side-by-side and staggered arrangements. International Journal of Heat and Fluid Flow, 2020, 83, 108589.	2.4	20
29	An immersed boundary method for fluidâ€“structureâ€“acoustics interactions involving large deformations and complex geometries. Journal of Fluids and Structures, 2020, 95, 102993.	3.4	30
30	A Diffused Interface Immersed Boundaryâ€“Lattice Boltzmann Method for Simulation of Channel Flow. , 2020, , .		3
31	The Serrated Trailing Edge Influence on Flapping-wing Acoustics. , 2020, , .		0
32	IB-LBM study of non-Newtonian flexible capsule flows in contraction-expansion microchannels. , 2020, , .		0
33	Sound generation by three-dimensional flapping wings during hovering flight. , 2020, , .		0
34	Kinematic optimization of a flapping foil power generator using a multi-fidelity evolutionary algorithm. Renewable Energy, 2019, 132, 543-557.	8.9	16
35	Numerical study of flexible flapping wings with an immersed boundary method: Fluidâ€“structureâ€“acoustics interaction. Journal of Fluids and Structures, 2019, 90, 396-409.	3.4	26
36	Numerical simulation of flow over a parallel cantilevered flag in the vicinity of a rigid wall. Physical Review E, 2019, 99, 053111.	2.1	15

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37	Recent trends and progress in the immersed boundary method. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 7617-7636.	2.1	107
38	A hybrid immersed boundary-lattice Boltzmann/finite difference method for coupled dynamics of fluid flow, advection, diffusion and adsorption in fractured and porous media. Computers and Geosciences, 2019, 128, 70-78.	4.2	31
39	A Geometry-Adaptive Immersed Boundaryâ€“Lattice Boltzmann Method for Modelling Fluidâ€“Structure Interaction Problems. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2019, , 161-171.	0.2	6
40	Dynamic characteristics of a deformable capsule in a simple shear flow. Physical Review E, 2019, 99, 023101.	2.1	19
41	Investigation of effects of surface roughness on coal seam gas transport using a fractal-based lattice Boltzmann method. ASEG Extended Abstracts, 2019, 2019, 1-2.	0.1	1
42	Aerodynamic characteristics of hoverflies during hovering flight. Computers and Fluids, 2019, 183, 75-83.	2.5	14
43	The lattice Boltzmann method and its applications in complex flows and fluidâ€“structure interactions. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2018, 232, 403-404.	2.1	5
44	Numerical study on hydrodynamics for a non-sinusoidal forced oscillating hydrofoil based on an immersed boundary method. Ocean Engineering, 2018, 147, 606-620.	4.3	22
45	External force-induced focus pattern of a flexible filament in a viscous fluid. Applied Mathematical Modelling, 2018, 53, 369-383.	4.2	16
46	Benchmark numerical solutions for two-dimensional fluidâ€“structure interaction involving large displacements with the deforming-spatial-domain/stabilized spaceâ€“time and immersed boundaryâ€“lattice Boltzmann methods. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2018, 232, 2500-2514.	2.1	10
47	Effects of hawkmoth-like flexibility on the aerodynamic performance of flapping wings with different shapes and aspect ratios. Physics of Fluids, 2018, 30, .	4.0	52
48	Bio-inspired flapping foils and their applications. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2018, 232, 2493-2493.	2.1	2
49	Effects of flexibility on the hovering performance of flapping wings with different shapes and aspect ratios. Journal of Fluids and Structures, 2018, 81, 69-96.	3.4	48
50	Heat Transfer in Non-Newtonian Flows by a Hybrid Immersed Boundaryâ€“Lattice Boltzmann and Finite Difference Method. Applied Sciences (Switzerland), 2018, 8, 559.	2.5	24
51	A novel geometry-adaptive Cartesian grid based immersed boundaryâ€“lattice Boltzmann method for fluidâ€“structure interactions at moderate and high Reynolds numbers. Journal of Computational Physics, 2018, 375, 22-56.	3.8	69
52	Effects of pitching motion profile on energy harvesting performance of a semi-active flapping foil using immersed boundary method. Ocean Engineering, 2018, 163, 94-106.	4.3	45
53	Numerical study of rigid and flexible wing shapes in hover. Journal of Physics: Conference Series, 2017, 822, 012007.	0.4	5
54	An immersed boundary method for fluidâ€“structure interaction with compressible multiphase flows. Journal of Computational Physics, 2017, 346, 131-151.	3.8	76

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55	An improved lattice Boltzmann method for solid-liquid phase change in porous media under local thermal non-equilibrium conditions. International Journal of Heat and Mass Transfer, 2017, 110, 58-62.	4.8	32
56	Flapping foil power generator performance enhanced with a spring-connected tail. Physics of Fluids, 2017, 29, .	4.0	39
57	A simple and efficient implicit direct forcing immersed boundary model for simulations of complex flow. Applied Mathematical Modelling, 2017, 43, 287-305.	4.2	24
58	Discrete Vortex Method with Flow Separation Corrections for Flapping-Foil Power Generators. AIAA Journal, 2017, 55, 410-418.	2.6	23
59	Computational Methods and Models in Circulatory and Reproductive Systems. Computational and Mathematical Methods in Medicine, 2016, 2016, 1-2.	1.3	0
60	Deformation of a Capsule in a Power-Law Shear Flow. Computational and Mathematical Methods in Medicine, 2016, 2016, 1-9.	1.3	21
61	Macroscopic modeling of pedestrian flow based on a second-order predictive dynamic model. Applied Mathematical Modelling, 2016, 40, 9806-9820.	4.2	24
62	Effects of wing shape, aspect ratio and deviation angle on aerodynamic performance of flapping wings in hover. Physics of Fluids, 2016, 28, .	4.0	64
63	Refuging rainbow trout selectively exploit flows behind tandem cylinders. Journal of Experimental Biology, 2016, 219, 2182-2191.	1.7	28
64	An IB-LBM study of continuous cell sorting in deterministic lateral displacement arrays. Acta Mechanica Sinica/Lixue Xuebao, 2016, 32, 1023-1030.	3.4	12
65	Swimming performance and vorticity structures of a motherâ€“calf pair of fish. Computers and Fluids, 2016, 124, 1-11.	2.5	26
66	Macroscopic pedestrian flow model with degrading spatial information. Journal of Computational Science, 2015, 10, 36-44.	2.9	12
67	A numerical study of linear and nonlinear kinematic models in fish swimming with the DSD/SST method. Computational Mechanics, 2015, 55, 469-477.	4.0	17
68	A higher-order macroscopic model for bi-direction pedestrian flow. Physica A: Statistical Mechanics and Its Applications, 2015, 425, 69-78.	2.6	14
69	Numerical Investigation of Electrohydrodynamic Plumes for Locally Enhanced Cooling in Dielectric Liquids. IEEE Transactions on Industry Applications, 2015, 51, 669-678.	4.9	11
70	Numerical study on the power extraction performance of a flapping foil with a flexible tail. Physics of Fluids, 2015, 27, .	4.0	54
71	How a flexible tail improves the power extraction efficiency of a semi-activated flapping foil system: A numerical study. Journal of Fluids and Structures, 2015, 54, 886-899.	3.4	40
72	An FSI solution technique based on the DSD/SST method and its applications. Mathematical Models and Methods in Applied Sciences, 2015, 25, 2257-2285.	3.3	37

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73	IB-LBM simulation on blood cell sorting with a micro-fence structure. Bio-Medical Materials and Engineering, 2014, 24, 475-481.	0.6	10
74	IBâ€“LBM simulation of the haemocyte dynamics in a stenotic capillary. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 978-985.	1.6	28
75	Immersed Boundary-Lattice Boltzmann Method for Biological and Biomedical Flows. Communications in Computer and Information Science, 2014, , 383-392.	0.5	1
76	Deforming-Spatial-Domain/Stabilized Spaceâ€“Time (DSD/SST) method in computation of non-Newtonian fluid flow and heat transfer with moving boundaries. Computational Mechanics, 2014, 53, 257-271.	4.0	24
77	Fluidâ€“structure interaction involving large deformations: 3D simulations and applications to biological systems. Journal of Computational Physics, 2014, 258, 451-469.	3.8	299
78	Energy harvesting simulation of two piezoelectric flags in tandem arrangement in the uniform flow. , 2014, , .		1
79	Effect of the Mobility Parameter on the Oscillatory Electroconvection of Dielectric Liquids Subject to Strong Unipolar Charge Injection. IEEE Transactions on Industry Applications, 2014, 50, 2306-2313.	4.9	14
80	Improving power-extraction efficiency of a flapping plate: From passive deformation to active control. Journal of Fluids and Structures, 2014, 51, 384-392.	3.4	61
81	FSI modeling with the DSD/SST method for the fluid and finite difference method for the structure. Computational Mechanics, 2014, 54, 581-589.	4.0	39
82	IB-LBM study on cell sorting by pinched flow fractionation. Bio-Medical Materials and Engineering, 2014, 24, 2547-2554.	0.6	7
83	Role of mass on the stability of flag/flags in uniform flow. Applied Physics Letters, 2013, 103, .	3.3	34
84	Three-dimensional numerical simulation of electro-convection due to strong unipolar charge injection in a cubic cavity. , 2013, , .		1
85	Numerical observation of stationary and oscillatory electro-thermo-convection in a plane layer of dielectric liquid. , 2013, , .		0
86	Numerical investigation of electrohydrodynamic plumes for locally enhanced cooling in dielectric liquids. , 2013, , .		0
87	Simulation of a pulsatile non-Newtonian flow past a stenosed 2D artery with atherosclerosis. Computers in Biology and Medicine, 2013, 43, 1098-1113.	7.0	58
88	AN EFFICIENT RED BLOOD CELL MODEL IN THE FRAME OF IB-LBM AND ITS APPLICATION. International Journal of Biomathematics, 2013, 06, 1250061.	2.9	43
89	On numerical modeling of animal swimming and flight. Computational Mechanics, 2013, 52, 1221-1242.	4.0	72
90	Force production and asymmetric deformation of a flexible flapping wing in forward flight. Journal of Fluids and Structures, 2013, 36, 149-161.	3.4	107

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91	Effect of the mobility parameter on the oscillatory electro-convection of dielectric liquids subject to strong unipolar charge injection. , 2013, , .		0
92	Computational Fluidâ€“Structure Interaction for Biological and Biomedical Flows. , 2013, , .		4
93	STUDY ON A SELF-PROPELLED FISH SWIMMING IN VISCOUS FLUID BY A FINITE ELEMENT METHOD. Journal of Mechanics in Medicine and Biology, 2013, 13, 1340012.	0.7	13
94	The Role of Finite Displacements in Vocal Fold Modeling. Journal of Biomechanical Engineering, 2013, 135, 111008.	1.3	13
95	A MATHEMATICAL MODEL FOR MICRO- AND NANO-SWIMMERS. Journal of Mechanics in Medicine and Biology, 2013, 13, 1340013.	0.7	1
96	ANALYTICAL SOLUTIONS OF NON-FOURIER PENNES AND CHENâ€“HOLMES EQUATIONS. International Journal of Biomathematics, 2012, 05, 1250022.	2.9	3
97	Propulsive performance of a body with a traveling-wave surface. Physical Review E, 2012, 86, 016304.	2.1	31
98	Red blood cell partitioning and blood flux redistribution in microvascular bifurcation. Theoretical and Applied Mechanics Letters, 2012, 2, 024001.	2.8	25
99	Onset of instability of a flag in uniform flow. Theoretical and Applied Mechanics Letters, 2012, 2, 022005.	2.8	28
100	An efficient immersed boundary-lattice Boltzmann method for the hydrodynamic interaction of elastic filaments. Journal of Computational Physics, 2011, 230, 7266-7283.	3.8	226
101	Coupling modes of three filaments in side-by-side arrangement. Physics of Fluids, 2011, 23, .	4.0	74
102	Secondary vortex street in the wake of two tandem circular cylinders at low Reynolds number. Physical Review E, 2010, 81, 036305.	2.1	66
103	THE DEVELOPMENT AND STABILITY ANALYSIS OF A NONLINEAR GROWTH MODEL FOR MICROORGANISMS. International Journal of Biomathematics, 2010, 03, 417-438.	2.9	1
104	Interaction between a flexible filament and a downstream rigid body. Physical Review E, 2010, 82, 026301.	2.1	62
105	The Parameter's Effect on the Stability in Microbial Growth Model. Journal of Computers, 2010, 5, .	0.4	0
106	A Full-Newton Step Infeasible Interior-Point Algorithm for Linear Programming Based on a Kernel Function. Applied Mathematics and Optimization, 2009, 60, 237-251.	1.6	12
107	Microbial Growth Model and Stability Analysis. , 2009, , .		0