

# Iman Borazjani

## List of Publications by Year in descending order

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81  
papers

3,467  
citations

185998

28  
h-index

138251

58  
g-index

86  
all docs

86  
docs citations

86  
times ranked

2205  
citing authors

#	ARTICLE	IF	CITATIONS
1	FLOW CONTROL with TRAVELING-WAVE SURFACE MORPHING at POST-STALL ANGLES of ATTACK. , 2022, , .		2
2	Large eddy Simulation of turbulent compressible wavy channels. , 2022, , .		0
3	A parallel dynamic overset grid framework for immersed boundary methods. Computers and Fluids, 2022, 239, 105378.	1.3	9
4	The Effects of Implantation Orientation of a Bileaflet Mechanical Heart Valve in an Anatomic Left Ventricle-Aorta Configuration. Journal of Biomechanical Engineering, 2022, 144, .	0.6	1
5	A compressible LES with immersed boundary method. , 2021, , .		1
6	The Role of Amplitude on Controlling Flow Separation Using Traveling Wave Morphing. , 2021, , .		4
7	A kinematics-based model for the settling of gravity-driven arbitrary-shaped particles on a surface. PLoS ONE, 2021, 16, e0243716.	1.1	3
8	Hydrodynamics of aquatic swimming: inspiration for flow control. , 2021, , .		0
9	Fluid-structure coupled biotransport processes in aortic valve disease. Journal of Biomechanics, 2021, 117, 110239.	0.9	16
10	Sharp-Interface Immersed-Boundary Method for Compressible Flows with Shock-Particle Interaction. AIAA Journal, 2021, 59, 1169-1183.	1.5	1
11	Automatic segmentation of the left ventricle in echocardiographic images using convolutional neural networks. Quantitative Imaging in Medicine and Surgery, 2021, 11, 1763-1781.	1.1	20
12	A Simple Flow Classification Parameter Can Discriminate Rupture Status in Intracranial Aneurysms. Neurosurgery, 2020, 87, E557-E564.	0.6	8
13	Numerical Simulations of Flow around Copepods: Challenges and Future Directions. Fluids, 2020, 5, 52.	0.8	3
14	The Ground Effect in Anguilliform Swimming. Biomimetics, 2020, 5, 9.	1.5	13
15	Controlling Flow Separation on a Thick Airfoil Using Backward Traveling Waves. AIAA Journal, 2020, 58, 3799-3807.	1.5	20
16	A hybrid <scp>echocardiography&#x2013;CFD</scp> framework for ventricular flow simulations. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, e03352.	1.0	9
17	Large Eddy Simulations of Flows with Moving Boundaries. Heat and Mass Transfer, 2020, , 201-225.	0.2	8
18	A numerical study on controlling flow separation via surface morphing in the form of backward traveling waves. , 2019, , .		8

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19	Reducing flow separation of an inclined plate via travelling waves. Journal of Fluid Mechanics, 2019, 880, 831-863.	1.4	28
20	A non-dimensional parameter for classification of the flow in intracranial aneurysms. I. Simplified geometries. Physics of Fluids, 2019, 31, 031904.	1.6	21
21	A non-dimensional parameter for classification of the flow in intracranial aneurysms. II. Patient-specific geometries. Physics of Fluids, 2019, 31, 031905.	1.6	27
22	Large eddy simulations of a turbulent channel flow with a deforming wall undergoing high steepness traveling waves. Physics of Fluids, 2019, 31, .	1.6	20
23	Comparison of platelet activation through hinge vs bulk flow in bileaflet mechanical heart valves. Journal of Biomechanics, 2019, 83, 280-290.	0.9	37
24	10.1063/1.5131268.1. , 2019, , .		0
25	The effects of irregular shape on the particle stress of dilute suspensions. Journal of Fluid Mechanics, 2018, 839, 663-692.	1.4	23
26	On the scaling of propagation of periodically generated vortex rings. Journal of Fluid Mechanics, 2018, 853, 150-170.	1.4	27
27	Platelet activation of mechanical versus bioprosthetic heart valves during systole. Journal of Biomechanics, 2017, 56, 111-116.	0.9	59
28	A Newtonâ€“Krylov method with an approximate analytical Jacobian for implicit solution of Navierâ€“Stokes equations on staggered overset-curvilinear grids with immersed boundaries. Journal of Computational Physics, 2017, 331, 227-256.	1.9	40
29	The effect of undulations on the particle stress in dilute suspensions of rod-like particles. European Journal of Computational Mechanics, 2017, 26, 61-77.	0.6	1
30	Effects of Reynolds and Womersley Numbers on the Hemodynamics of Intracranial Aneurysms. Computational and Mathematical Methods in Medicine, 2016, 2016, 1-16.	0.7	30
31	Hydrodynamics of swimming in stingrays: numerical simulations and the role of the leading-edge vortex. Journal of Fluid Mechanics, 2016, 788, 407-443.	1.4	99
32	Self-propelled swimming simulations of bio-inspired smart structures. Bioinspiration and Biomimetics, 2016, 11, 056001.	1.5	17
33	Automated Three-Dimensional Reconstruction of the Left Ventricle From Multiple-Axis Echocardiography. Journal of Biomechanical Engineering, 2016, 138, .	0.6	2
34	The influence of inertia on the rheology of a periodic suspension of neutrally buoyant rigid ellipsoids. Journal of Fluid Mechanics, 2015, 781, 506-549.	1.4	21
35	Generation and Optimization of Traveling Vibrating Waves in Self-Assembling Swimming Smart Boxes. , 2015, , .		0
36	A Review of Fluid-Structure Interaction Simulations of Prosthetic Heart Valves. Journal of Long-Term Effects of Medical Implants, 2015, 25, 75-93.	0.2	24

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37	The Role of Shape and Heart Rate on the Performance of the Left Ventricle. Journal of Biomechanical Engineering, 2015, 137, 114501.	0.6	10
38	The hydrodynamic advantages of synchronized swimming in a rectangular pattern. Bioinspiration and Biomimetics, 2015, 10, 056018.	1.5	102
39	Simulations of Unsteady Aquatic Locomotion: From Unsteadiness in Straight-Line Swimming to Fast-Starts. Integrative and Comparative Biology, 2015, 55, 740-752.	0.9	17
40	Vortex Generation in Two Intracranial Aneurysms. , 2014, , .		0
41	3D Flow Simulations in a Simplified Right Ventricle Model. , 2014, , .		0
42	Self-Assembling Swimming Smart Boxes. , 2014, , .		1
43	An Immersed Boundary Method for Calculating the Relative Viscosity of a Suspension of Rigid Particles. , 2014, , .		1
44	NREL Phase VI Wind Turbine Modeling Using an Unsteady Panel Method. , 2014, , .		0
45	Self-Propelled Swimming Simulations of Self-Assembling Smart Boxes. , 2014, , .		0
46	3D Reconstruction of the Left Ventricle From Four Echocardiographic Projections. , 2014, , .		2
47	Aerodynamic Design of Flat Delta Kite Based on Polhamus Concept of Leading Edge Suction Analogy. , 2014, , .		0
48	Parallel Implementation of Periodic Boundary Conditions for a Curvilinear Immersed Boundary Method. , 2014, , .		1
49	Fluid-structure interaction, immersed boundary-finite element method simulations of bio-prosthetic heart valves. Computer Methods in Applied Mechanics and Engineering, 2013, 257, 103-116.	3.4	137
50	The fish tail motion forms an attached leading edge vortex. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20122071.	1.2	111
51	A parallel overset-curvilinear-immersed boundary framework for simulating complex 3D incompressible flows. Computers and Fluids, 2013, 77, 76-96.	1.3	54
52	The functional role of caudal and anal/dorsal fins during the C-start of a bluegill sunfish. Journal of Experimental Biology, 2013, 216, 1658-69.	0.8	44
53	Left Ventricular Flow Analysis: Recent Advances in Numerical Methods and Applications in Cardiac Ultrasound. Computational and Mathematical Methods in Medicine, 2013, 2013, 1-11.	0.7	23
54	Hydrodynamics of the bluegill sunfish C-start escape response: three-dimensional simulations and comparison with experimental data. Journal of Experimental Biology, 2012, 215, 671-684.	0.8	97

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55	Numerical simulation of 3D flow past a real-life marine hydrokinetic turbine. <i>Advances in Water Resources</i> , 2012, 39, 33-43.	1.7	120
56	Interactive Slice WIM: Navigating and Interrogating Volume Data Sets Using a Multisurface, Multitouch VR Interface. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2012, 18, 1614-1626.	2.9	71
57	On the structure of vortex rings from inclined nozzles. <i>Journal of Fluid Mechanics</i> , 2011, 686, 451-483.	1.4	41
58	Vortex-induced vibrations of an elastically mounted sphere with three degrees of freedom at $\langle i \rangle Re \langle /i \rangle = 300$ : hysteresis and vortex shedding modes. <i>Journal of Fluid Mechanics</i> , 2011, 686, 426-450.	1.4	45
59	Curvilinear immersed boundary method for simulating coupled flow and bed morphodynamic interactions due to sediment transport phenomena. <i>Advances in Water Resources</i> , 2011, 34, 829-843.	1.7	106
60	Slice WIM. , 2011, , .		33
61	Visualizing the wake of aquatic swimmers. , 2011, , .		0
62	Supporting internal visualization of biomedical datasets via 3D rapid prototypes and sketch-based gestures. , 2011, , .		4
63	A Process for Design, Verification, Validation, and Manufacture of Medical Devices Using Immersive VR Environments. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2010, 4, .	0.4	7
64	High-Resolution Fluid-Structure Interaction Simulations of Flow Through a Bi-Leaflet Mechanical Heart Valve in an Anatomic Aorta. <i>Annals of Biomedical Engineering</i> , 2010, 38, 326-344.	1.3	92
65	Simulation of the Three-Dimensional Hinge Flow Fields of a Bileaflet Mechanical Heart Valve Under Aortic Conditions. <i>Annals of Biomedical Engineering</i> , 2010, 38, 841-853.	1.3	42
66	Disentangling the Functional Roles of Morphology and Motion in the Swimming of Fish. <i>Integrative and Comparative Biology</i> , 2010, 50, 1140-1154.	0.9	92
67	Pulsatile Flow Effects on the Hemodynamics of Intracranial Aneurysms. <i>Journal of Biomechanical Engineering</i> , 2010, 132, 111009.	0.6	45
68	The Effect of Implantation Orientation of a Bileaflet Mechanical Heart Valve on Kinematics and Hemodynamics in an Anatomic Aorta. <i>Journal of Biomechanical Engineering</i> , 2010, 132, 111005.	0.6	47
69	On the role of form and kinematics on the hydrodynamics of self-propelled body/caudal fin swimming. <i>Journal of Experimental Biology</i> , 2010, 213, 89-107.	0.8	209
70	On the role of copepod antennae in the production of hydrodynamic force during hopping. <i>Journal of Experimental Biology</i> , 2010, 213, 3019-3035.	0.8	29
71	Computational Techniques for Biological Fluids: From Blood Vessel Scale to Blood Cells. , 2010, , 105-155.		1
72	A Computational Fluid Dynamic (CFD) Tool for Optimization and Guided Implantation of Biomedical Devices. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2009, 3, .	0.4	3

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73	Numerical investigation of the hydrodynamics of anguilliform swimming in the transitional and inertial flow regimes. <i>Journal of Experimental Biology</i> , 2009, 212, 576-592.	0.8	201
74	Vortex-induced vibrations of two cylinders in tandem arrangement in the proximity wake interference region. <i>Journal of Fluid Mechanics</i> , 2009, 621, 321-364.	1.4	243
75	A review of state-of-the-art numerical methods for simulating flow through mechanical heart valves. <i>Medical and Biological Engineering and Computing</i> , 2009, 47, 245-256.	1.6	98
76	Curvilinear immersed boundary method for simulating fluid structure interaction with complex 3D rigid bodies. <i>Journal of Computational Physics</i> , 2008, 227, 7587-7620.	1.9	368
77	Numerical investigation of the hydrodynamics of carangiform swimming in the transitional and inertial flow regimes. <i>Journal of Experimental Biology</i> , 2008, 211, 1541-1558.	0.8	351
78	Simulations of the Hinge Flow Fields of a Bileaflet Mechanical Heart Valve Under Physiologic Pulsatile Aortic Conditions. , 2008, , .		0
79	Fluid-Structure Interaction in Bi-Leaflet Mechanical Heart Valves. , 2007, , 17.		2
80	Video: Leading edge vortex formation in aquatic swimming. , 0, , .		0
81	Video: Stall Delay of a NACA0018 Airfoil by Traveling Wave Actuations. , 0, , .		2