Kamran Mohseni

List of Publications by Year
in descending order

148 papers	2,910 citations	159585 30 h-index	214800 47 g-index
150 all docs	150 docs citations	150 times ranked	1798 citing authors

#	Article	IF	Citations
1	Autonomous Underwater Vehicle Depth and Pitch Trajectory Tracking Using Fiber-Reinforced Elastomer Bladders for Buoyancy Control. IEEE Journal of Oceanic Engineering, 2022, 47, 690-703.	3.8	4
2	Controlling the deformation space of soft membranes using fiber reinforcement. International Journal of Robotics Research, 2021, 40, 178-196.	8.5	9
3	Smoothed-Particle-Hydrodynamics for the Control of Robotic Swarms, and Parametric Associations. IEEE Transactions on Control of Network Systems, 2021, 8, 1942-1953.	3.7	3
4	A new kinematic criterion for vortex ring pinch-off. Physics of Fluids, 2021, 33, 037120.	4.0	12
5	Modeling and Characterizing a Fiber-Reinforced Dielectric Elastomer Tension Actuator. IEEE Robotics and Automation Letters, 2021, 6, 1264-1271.	5.1	12
6	Theoretical model for the separated flow around an accelerating flat plate using time-dependent self-similarity. Physical Review Fluids, 2021, 6, .	2.5	2
7	Correcting Current-Induced Magnetometer Errors on UAVs: An Online Model-Based Approach. IEEE Sensors Journal, 2020, 20, 1067-1076.	4.7	3
8	New insights from inviscid modelling of starting flow separation with roll-up. Journal of Fluid Mechanics, 2020, 903, .	3.4	1
9	Theoretical model of a finite force at the moving contact line. International Journal of Multiphase Flow, 2020, 132, 103398.	3.4	2
10	Scaling trends of birdâ€™s alular feathers in connection to leading-edge vortex flow over hand-wing. Scientific Reports, 2020, 10, 7905.	3.3	21
11	Active roll control at high angles of attack via bio-inspired sliding alula. , 2020, , .		1
12	On the maintenance of an attached leading-edge vortex via model bird alula. Journal of Fluid Mechanics, 2020, 897, .	3.4	19
13	Transient pressure modeling in jetting animals. Journal of Theoretical Biology, 2020, 494, 110237.	1.7	2
14	Hydrodynamic Force Decoupling Using a Distributed Sensory System. IEEE Robotics and Automation Letters, 2020, 5, 3235-3242.	5.1	5
15	Role of the rate of surface dilatation in determining microscopic dynamic contact angle. Physics of Fluids, 2020, 32, .	4.0	6
16	A Dual-Bladder Buoyancy Engine for a Cephalopod-Inspired AUV. , 2019, , .		2
17	Globally Stable Attitude Control of a Fixed-Wing Rudderless UAV Using Subspace Projection. IEEE Robotics and Automation Letters, 2019, 4, 1395-1401.	5.1	3
18	Roll Control of Low-Aspect-Ratio Wings Using Articulated Winglet Control Surfaces. Journal of Aircraft, 2019, 56, 419-430.	2.4	7

#	Article	IF	Citations
19	Visual-Inertial Guidance With a Plenoptic Camera for Autonomous Underwater Vehicles. IEEE Robotics and Automation Letters, 2019, 4, 2777-2784.	5.1	8
20	Distributed sensing for fluid disturbance compensation and motion control of intelligent robots. Nature Machine Intelligence, 2019, 1, 216-224.	16.0	23
21	The vortex-entrainment sheet in an inviscid fluid: theory and separation at a sharp edge. Journal of Fluid Mechanics, 2019, 866, 660-688.	3.4	6
22	A Soft End Effector Inspired by Cephalopod Suckers and Augmented by a Dielectric Elastomer Actuator. Soft Robotics, 2019, 6, 356-367.	8.0	28
23	Theoretical Prediction of Roll Moment Due to Sideslip for Thin Low-Aspect-Ratio Wings. AIAA Journal, 2019, 57, 1452-1467.	2.6	6
24	Investigation of a sliding alula for control augmentation of lifting surfaces at high angles of attack. Aerospace Science and Technology, 2019, 87, 73-88.	4.8	22
25	Concurrent Flow-Based Localization and Mapping in Time-Invariant Flow Fields. , 2019, , .		6
26	Field Deployment of a Plume Monitoring UAV Flock. IEEE Robotics and Automation Letters, 2019, 4, 769-775.	5.1	13
27	Dual-Radio Configuration for Flexible Communication in Flocking Micro/Miniature Aerial Vehicles. IEEE Systems Journal, 2019, 13, 2408-2419.	4.6	1
28	Viscous drag force model for dynamic Wilhelmy plate experiments. Physical Review Fluids, 2019, 4, .	2.5	8
29	Attitude Control of Micro/Mini Aerial Vehicles and Estimation of Aerodynamic Angles Formulated as Parametric Uncertainties. IEEE Robotics and Automation Letters, 2018, 3, 2063-2070.	5.1	10
30	Aerodynamic parameter estimation from wind tunnel testing of a small UAS. , 2018, , .		2
31	Anisotropic Flocking Control of Distributed Multi-Agent Systems using Fluid Abstraction. , 2018, , .		6
32	Modelling and Control of a miniature, low-aspect-ratio, fixed-delta-wing, rudderless aircraft. , 2018, , .		2
33	Dipole model of vorticity at the moving contact line. International Journal of Multiphase Flow, 2018, 103, 169-172.	3.4	2
34	Development of a Compact Autonomous Underwater Vehicle for Hierarchical Multi-Agent Cooperation. , 2018, , .		1
35	Simultaneous AUV Localization and Lagrangian Particle Tracking. , 2018, , .		0
36	Vortex sheet roll-up revisited. Journal of Fluid Mechanics, 2018, 855, 299-321.	3.4	14

#	Article	IF	Citations
37	Long-Term Inertial Navigation Aided by Dynamics of Flow Field Features. IEEE Journal of Oceanic Engineering, 2018, 43, 940-954.	3.8	30
38	Bioinspired Jet Propulsion for Disturbance Rejection of Marine Robots. IEEE Robotics and Automation Letters, 2018, 3, 2378-2385.	5.1	5
39	Transitional region of a round synthetic jet. Physical Review Fluids, 2018, 3, .	2.5	6
40	On the mechanism of high-incidence lift generation for steadily translating low-aspect-ratio wings. Journal of Fluid Mechanics, 2017, 813, 110-126.	3.4	40
41	A vortex model for forces and moments on low-aspect-ratio wings in side-slip with experimental validation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160760.	2.1	7
42	Relative planar strain control and minimizing deformation work in elastomeric sheets via reinforcing fiber arrays. Composites Science and Technology, 2017, 142, 50-64.	7.8	7
43	Dual Radio Autopilot System for Lightweight, Swarming Micro/Miniature Aerial Vehicles. Journal of Aerospace Information Systems, 2017, 14, 293-306.	1.4	18
44	Unsteady aerodynamics and vortex-sheet formation of a two-dimensional airfoil. Journal of Fluid Mechanics, 2017, 830, 439-478.	3.4	52
45	Multi-vehicle cooperation and nearly fuel-optimal flock guidance in strong background flows. Ocean Engineering, 2017, 141, 388-404.	4.3	26
46	An artificial fish lateral line sensory system composed of modular pressure sensor blocks. , 2017, , .		1
47	A Pressure Sensory System Inspired by the Fish Lateral Line: Hydrodynamic Force Estimation and Wall Detection. IEEE Journal of Oceanic Engineering, 2017, 42, 532-543.	3.8	37
48	Flow Characterization and Modeling of Strong Round Synthetic Jets in Crossflow. AIAA Journal, 2017, 55, 389-402.	2.6	4
49	A low-power optical communication modem for compact autonomous underwater vehicles. , 2017, , .		4
50	FACON: A flow-aided cooperative navigation scheme. , 2017, , .		8
51	Bioinspired visual guidance in turbid underwater environment. , 2017, , .		2
52	Leading-edge flow reattachment and the lateral static stability of low-aspect-ratio rectangular wings. Physical Review Fluids, 2017, 2, .	2.5	14
53	Design of a 3-D Printed, Modular Lateral Line Sensory System for Hydrodynamic Force Estimation. Marine Technology Society Journal, 2017, 51, 103-115.	0.4	6
54	A Compact Autonomous Underwater Vehicle With Cephalopod-Inspired Propulsion. Marine Technology Society Journal, 2016, 50, 88-101.	0.4	16

#	Article	IF	Citations
55	Nonlinear model reduction via a locally weighted POD method. International Journal for Numerical Methods in Engineering, 2016, 106, 372-396.	2.8	23
56	Velocity and thermal slip at the moving contact line. , 2016, , .		0
57	Geometric model reduction of forced and dissipative Hamiltonian systems. , 2016, , .		2
58	Unified slip boundary condition for fluid flows. Physical Review E, 2016, 94, 023113.	2.1	19
59	Micro/Miniature Aerial Vehicle Guidance for Hurricane Research. IEEE Systems Journal, 2016, 10, 1263-1270.	4.6	7
60	Aerodynamics and lateral stability of low-aspect-ratio wings with dihedral at Low Reynolds numbers. , 2016, , .		4
61	Vorticity Generation at Sharp Corners. , 2016, , .		0
62	Parameter governing the far-field features of round jets. Physical Review Fluids, 2016, 1, .	2.5	2
63	Pressure and work analysis of unsteady, deformable, axisymmetric, jet producing cavity bodies. Journal of Fluid Mechanics, 2015, 769, 337-368.	3.4	25
64	Anisotropic active Lagrangian particle swarm control in a meandering jet. , 2015, , .		7
65	Far-field momentum flux of high-frequency axisymmetric synthetic jets. Physics of Fluids, 2015, 27, .	4.0	9
66	A DDDAS Plume Monitoring System with Reduced Kalman Filter. Procedia Computer Science, 2015, 51, 2533-2542.	2.0	10
67	Coordinating Groups of Sensing Platforms in Dynamic, Uncertain Environments. , 2015, , .		1
68	Vortex structure of low-aspect-ratio wings in sideslip. , 2015, , .		2
69	Effect of Slip on Circulation Inside a Droplet. Journal of Fluids Engineering, Transactions of the ASME, 2015, 137, .	1.5	3
70	Droplets in an axisymmetric microtube: Effects of aspect ratio and fluid interfaces. Physics of Fluids, 2015, 27, .	4.0	9
71	A localized symplectic model reduction technique for parameterized Hamiltonian systems. , 2015, , .		1
72	Roll Stability Regimes at Low Reynolds Numbers. , 2015, , .		1

#	Article	IF	Citations
73	Inherent Stability Modes of Low-Aspect-Ratio Wings. Journal of Aircraft, 2015, 52, 141-155.	2.4	18
74	An Empirical Reduced Modeling Approach for Mobile, Distributed Sensor Platform Networks. Lecture Notes in Computer Science, 2015, , 195-204.	1.3	1
75	Towards background flow based AUV localization. , 2014, , .		8
76	A fish-like locomotion model in an ideal fluid with lateral-line-inspired background flow estimation. , 2014, , .		1
77	Wall Detection by Lateral Line Sensory System of Fish. , 2014, , .		6
78	An Online Manifold Learning Approach for Model Reduction of Dynamical Systems. SIAM Journal on Numerical Analysis, 2014, 52, 1928-1952.	2.3	11
79	Observations on the flow structures and transport in a simulated warm-core ring in the Gulf of Mexico. Ocean Dynamics, 2014, 64, 79-88.	2.2	1
80	Dynamic Data Driven Application System for Plume Estimation Using UAVs. Journal of Intelligent and Robotic Systems: Theory and Applications, 2014, 74, 421-436.	3.4	30
81	Autonomous vehicle localization in a vector field: Underwater vehicle implementation. , 2014, , .		6
82	Sensor driven feedback for puff estimation using unmanned aerial vehicles. , 2014, , .		7
83	A unified model for Digitized Heat Transfer in a microchannel. International Journal of Heat and Mass Transfer, 2014, 78, 393-407.	4.8	5
84	Bioinspired Hydrodynamic Force Feedforward for Autonomous Underwater Vehicle Control. IEEE/ASME Transactions on Mechatronics, 2014, 19, 1127-1137.	5.8	35
85	Digitized Heat Transfer. , 2014, , 1-10.		0
86	An inviscid regularization of hyperbolic conservation laws. Journal of Applied Mathematics and Computing, 2013, 43, 55-73.	2.5	2
87	Improving underwater thruster performance through jellyfish biomimicry and 2D jet velocity. , 2013, , .		2
88	Lift evaluation of a two-dimensional pitching flat plate. Physics of Fluids, 2013, 25, .	4.0	81
89	Propulsive efficiency of underwater vehicles using unsteady propulsors. , 2013, , .		1
90	Numerical and experimental investigation of heat transfer within the first circulation length of a digitized flow. , 2013, , .		2

#	Article	IF	Citations
91	Cooperative control using data-driven feedback for mobile sensors. , 2013, , .		4
92	Modelling circulation, impulse and kinetic energy of starting jets with non-zero radial velocity. Journal of Fluid Mechanics, 2013, 719, 488-526.	3.4	70
93	On Approximating the Translational Velocity of Vortex Rings. Journal of Fluids Engineering, Transactions of the ASME, 2013, 135, .	1.5	11
94	Analysis of boundary slip in a flow with an oscillating wall. Physical Review E, 2013, 87, .	2.1	11
95	Roll Stall for Low-Aspect-Ratio Wings. Journal of Aircraft, 2013, 50, 1060-1069.	2.4	26
96	Fluid-based cooperative underwater localization. , 2013, , .		1
97	Fish lateral line inspired hydrodynamic feedforward control for autonomous underwater vehicles. , 2013, , .		3
98	Nearly fuel-optimal trajectories for vehicle swarms in open domains with strong background flows. , 2013, , .		4
99	Passive mitigation of roll stall for low aspect ratio wings. Advanced Robotics, 2013, 27, 667-681.	1.8	11
100	Aerodynamic stability modes of low aspect ratio wings. , 2013, , .		2
101	Aerodynamic damping derivatives of low aspect ratio wings at low Reynolds numbers. , 2013, , .		2
102	A model of the lateral line of fish for vortex sensing. Bioinspiration and Biomimetics, 2012, 7, 036016.	2.9	37
103	Numerical Investigations of Digitized Heat Transfer. , 2012, , .		3
104	Effects of Sideslip on the Aerodynamics of Low-Aspect-Ratio Low-Reynolds-Number Wings. AIAA Journal, 2012, 50, 85-99.	2.6	62
105	New perspectives on collagen fibers in the squid mantle. Journal of Morphology, 2012, 273, 586-595.	1.2	16
106	A Fluid Dynamic Based Coordination of a Wireless Sensor Network of Unmanned Aerial Vehicles: 3-D Simulation and Wireless Communication Characterization. IEEE Sensors Journal, 2011, 11, 722-736.	4.7	36
107	A master-slave fluid cooperative control algorithm for optimal trajectory planning. , 2011, , .		21
108	An Experimental and Modeling Investigation of Synthetic Jets in a Coflow Wake. International Journal of Flow Control, 2011, 3, 19-36.	0.4	5

#	Article	IF	Citations
109	A Hybrid Class Underwater Vehicle: Bioinspired Propulsion, Embedded System, and Acoustic Communication and Localization System. Marine Technology Society Journal, 2011, 45, 153-164.	0.4	34
110	Cooperative Control of a Team of Unmanned Vehicles Using Smoothed Particle Hydrodynamics. , 2010, , .		15
111	Flow visualization and wall shear stress of a flapping model hummingbird wing. Experiments in Fluids, 2010, 49, 657-671.	2.4	12
112	An examination of the homentropic Euler equations with averaged characteristics. Journal of Differential Equations, 2010, 248, 574-593.	2.2	6
113	A New Potential Regularization of the One-Dimensional Euler and Homentropic Euler Equations. Multiscale Modeling and Simulation, 2010, 8, 1212-1243.	1.6	9
114	Dynamic Modeling and Control of Biologically Inspired Vortex Ring Thrusters for Underwater Robot Locomotion. IEEE Transactions on Robotics, 2010, 26, 542-554.	10.3	71
115	Cooperative Control of a Team of AUVs Using Smoothed Particle Hydrodynamics With Restricted Communication. , 2009, , .		8
116	Axisymmetric Synthetic Jets: An Experimental and Theoretical Examination. AIAA Journal, 2009, 47, 2273-2283.	2.6	46
117	The numerical comparison of flow patterns and propulsive performances for the hydromedusae<i>Sarsia tubulosa</i>and<i>Aequorea victoria</i>. Journal of Experimental Biology, 2009, 212, 2656-2667.	1.7	62
118	Flow structures and fluid transport for the hydromedusae<i>Sarsia tubulosa</i>and<i>Aequorea victoria</i>. Journal of Experimental Biology, 2009, 212, 2436-2447.	1.7	61
119	An arbitrary Lagrangianâ€"Eulerian formulation for the numerical simulation of flow patterns generated by the hydromedusa Aequorea victoria. Journal of Computational Physics, 2009, 228, 4588-4605.	3.8	63
120	Derivation of Regularized Euler Equations from Basic Principles. , 2009, , .		2
121	On the Convergence of the Convectively Filtered Burgers Equation to the Entropy Solution of the Inviscid Burgers Equation. Multiscale Modeling and Simulation, 2009, 7, 1811-1837.	1.6	16
122	An Experimental and Analytical Investigation of Rectangular Synthetic Jets. Journal of Fluids Engineering, Transactions of the ASME, 2009, 131, .	1.5	41
123	Vortex Shedding over a Two-Dimensional Airfoil: Where the Particles Come From. AIAA Journal, 2008, 46, 545-547.	2.6	37
124	Thrust Characterization of a Bioinspired Vortex Ring Thruster for Locomotion of Underwater Robots. IEEE Journal of Oceanic Engineering, 2008, 33, 123-132.	3.8	109
125	Developing a transient model for squid inspired thrusters, and incorporation into underwater robot control design. , 2008, , .		4
126	Digitized Heat Transfer: A New Paradigm for Thermal Management of Compact Micro Systems. IEEE Transactions on Components and Packaging Technologies, 2008, 31, 143-151.	1.3	61

#	Article	IF	Citations
127	The effect of droplet length on nusselt numbers in digitized heat transfer. Intersociety Conference on Thermal and Thermomechanical Phenomena in Electronic Systems, 2008, , .	0.0	6
128	Calculation of DEP and EWOD Forces for Application in Digital Microfluidics. Journal of Fluids Engineering, Transactions of the ASME, 2008, 130, .	1.5	30
129	A Lagrangian analysis of a two-dimensional airfoil with vortex shedding. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 344011.	2.1	56
130	A regularization of the Burgers equation using a filtered convective velocity. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 344016.	2.1	16
131	A Regularization of Burgers Equation using a Filtered Convective Velocity. , 2007, , .		2
132	A Unified Velocity Model for Digital Microfluidics. Nanoscale and Microscale Thermophysical Engineering, 2007, 11, 109-120.	2.6	33
133	Digitized Heat Transfer Using Electrowetting on Dielectric. Nanoscale and Microscale Thermophysical Engineering, 2007, 11, 99-108.	2.6	55
134	SensorFlock. , 2007, , .		126
135	Electrostatic force calculation for an EWOD-actuated droplet. Microfluidics and Nanofluidics, 2007, 3, 635-644.	2.2	60
136	Concentration Gradient and Information Energy for Decentralized UAV Control. , 2006, , .		8
137	An Electrowetting Microvalve: Numerical Simulation. Annals of the New York Academy of Sciences, 2006, 1077, 415-425.	3.8	18
138	Pulsatile vortex generators for low-speed maneuvering of small underwater vehicles. Ocean Engineering, 2006, 33, 2209-2223.	4.3	95
139	A formulation for calculating the translational velocity of a vortex ring or pair. Bioinspiration and Biomimetics, 2006, 1, S57-S64.	2.9	22
140	A dynamic model for the Lagrangian-averaged Navier-Stokes-Î± equations. Physics of Fluids, 2005, 17, 075106.	4.0	17
141	IMPULSE EXTREMIZATION IN VORTEX FORMATION FOR APPLICATION IN LOW SPEED MANEUVERING OF UNDERWATER VEHICLES. , 2005, , .		1
142	Numerical simulations of the Lagrangian averaged Navierâ€"Stokes equations for homogeneous isotropic turbulence. Physics of Fluids, 2003, 15, 524-544.	4.0	101
143	On the Effect of Pipe Boundary Layer Growth on the Formation of a Laminar Vortex Ring Generated by a Piston/Cylinder Arrangement. Theoretical and Computational Fluid Dynamics, 2002, 15, 303-316.	2.2	45
144	Statistical equilibrium theory for axisymmetric flows: Kelvinâ€™s variational principle and an explanation for the vortex ring pinch-off process. Physics of Fluids, 2001, 13, 1924-1931.	4.0	36

#	Article	IF	Citations
145	Numerical experiments on vortex ring formation. Journal of Fluid Mechanics, 2001, 430, 267-282.	3.4	131
146	A model for universal time scale of vortex ring formation. Physics of Fluids, 1998, 10, 2436-2438.	4.0	158
147	Behavior of a moving droplet under electrowetting actuation in microchannel. , 0, , .		2
148	Optimal Thrust Characteristics of a Synthetic Jet Actuator for Application in Low Speed Maneuvering of Underwater Vehicles. , 0, , .		10