

Kamran Mohseni

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3057145/publications.pdf>

Version: 2024-02-01

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	A model for universal time scale of vortex ring formation. <i>Physics of Fluids</i> , 1998, 10, 2436-2438.	4.0	158
2	Numerical experiments on vortex ring formation. <i>Journal of Fluid Mechanics</i> , 2001, 430, 267-282.	3.4	131
3	SensorFlock., 2007, , .		126
4	Thrust Characterization of a Bioinspired Vortex Ring Thruster for Locomotion of Underwater Robots. <i>IEEE Journal of Oceanic Engineering</i> , 2008, 33, 123-132.	3.8	109
5	Numerical simulations of the Lagrangian averaged Navier–Stokes equations for homogeneous isotropic turbulence. <i>Physics of Fluids</i> , 2003, 15, 524-544.	4.0	101
6	Pulsatile vortex generators for low-speed maneuvering of small underwater vehicles. <i>Ocean Engineering</i> , 2006, 33, 2209-2223.	4.3	95
7	Lift evaluation of a two-dimensional pitching flat plate. <i>Physics of Fluids</i> , 2013, 25, .	4.0	81
8	Dynamic Modeling and Control of Biologically Inspired Vortex Ring Thrusters for Underwater Robot Locomotion. <i>IEEE Transactions on Robotics</i> , 2010, 26, 542-554.	10.3	71
9	Modelling circulation, impulse and kinetic energy of starting jets with non-zero radial velocity. <i>Journal of Fluid Mechanics</i> , 2013, 719, 488-526.	3.4	70
10	An arbitrary Lagrangian–Eulerian formulation for the numerical simulation of flow patterns generated by the hydromedusa <i>Aequorea victoria</i> . <i>Journal of Computational Physics</i> , 2009, 228, 4588-4605.	3.8	63
11	The numerical comparison of flow patterns and propulsive performances for the hydromedusae <i>Sarsia tubulosa</i> and <i>Aequorea victoria</i> . <i>Journal of Experimental Biology</i> , 2009, 212, 2656-2667.	1.7	62
12	Effects of Sideslip on the Aerodynamics of Low-Aspect-Ratio Low-Reynolds-Number Wings. <i>AIAA Journal</i> , 2012, 50, 85-99.	2.6	62
13	Digitized Heat Transfer: A New Paradigm for Thermal Management of Compact Micro Systems. <i>IEEE Transactions on Components and Packaging Technologies</i> , 2008, 31, 143-151.	1.3	61
14	Flow structures and fluid transport for the hydromedusae <i>Sarsia tubulosa</i> and <i>Aequorea victoria</i> . <i>Journal of Experimental Biology</i> , 2009, 212, 2436-2447.	1.7	61
15	Electrostatic force calculation for an EWOD-actuated droplet. <i>Microfluidics and Nanofluidics</i> , 2007, 3, 635-644.	2.2	60
16	A Lagrangian analysis of a two-dimensional airfoil with vortex shedding. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 344011.	2.1	56
17	Digitized Heat Transfer Using Electrowetting on Dielectric. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2007, 11, 99-108.	2.6	55
18	Unsteady aerodynamics and vortex-sheet formation of a two-dimensional airfoil. <i>Journal of Fluid Mechanics</i> , 2017, 830, 439-478.	3.4	52

#	ARTICLE	IF	CITATIONS
19	Axisymmetric Synthetic Jets: An Experimental and Theoretical Examination. <i>AIAA Journal</i> , 2009, 47, 2273-2283.	2.6	46
20	On the Effect of Pipe Boundary Layer Growth on the Formation of a Laminar Vortex Ring Generated by a Piston/Cylinder Arrangement. <i>Theoretical and Computational Fluid Dynamics</i> , 2002, 15, 303-316.	2.2	45
21	An Experimental and Analytical Investigation of Rectangular Synthetic Jets. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2009, 131, .	1.5	41
22	On the mechanism of high-incidence lift generation for steadily translating low-aspect-ratio wings. <i>Journal of Fluid Mechanics</i> , 2017, 813, 110-126.	3.4	40
23	Vortex Shedding over a Two-Dimensional Airfoil: Where the Particles Come From. <i>AIAA Journal</i> , 2008, 46, 545-547.	2.6	37
24	A model of the lateral line of fish for vortex sensing. <i>Bioinspiration and Biomimetics</i> , 2012, 7, 036016.	2.9	37
25	A Pressure Sensory System Inspired by the Fish Lateral Line: Hydrodynamic Force Estimation and Wall Detection. <i>IEEE Journal of Oceanic Engineering</i> , 2017, 42, 532-543.	3.8	37
26	Statistical equilibrium theory for axisymmetric flows: Kelvin's variational principle and an explanation for the vortex ring pinch-off process. <i>Physics of Fluids</i> , 2001, 13, 1924-1931.	4.0	36
27	A Fluid Dynamic Based Coordination of a Wireless Sensor Network of Unmanned Aerial Vehicles: 3-D Simulation and Wireless Communication Characterization. <i>IEEE Sensors Journal</i> , 2011, 11, 722-736.	4.7	36
28	Bioinspired Hydrodynamic Force Feedforward for Autonomous Underwater Vehicle Control. <i>IEEE/ASME Transactions on Mechatronics</i> , 2014, 19, 1127-1137.	5.8	35
29	A Hybrid Class Underwater Vehicle: Bioinspired Propulsion, Embedded System, and Acoustic Communication and Localization System. <i>Marine Technology Society Journal</i> , 2011, 45, 153-164.	0.4	34
30	A Unified Velocity Model for Digital Microfluidics. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2007, 11, 109-120.	2.6	33
31	Calculation of DEP and EWOD Forces for Application in Digital Microfluidics. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2008, 130, .	1.5	30
32	Dynamic Data Driven Application System for Plume Estimation Using UAVs. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2014, 74, 421-436.	3.4	30
33	Long-Term Inertial Navigation Aided by Dynamics of Flow Field Features. <i>IEEE Journal of Oceanic Engineering</i> , 2018, 43, 940-954.	3.8	30
34	A Soft End Effector Inspired by Cephalopod Suckers and Augmented by a Dielectric Elastomer Actuator. <i>Soft Robotics</i> , 2019, 6, 356-367.	8.0	28
35	Roll Stall for Low-Aspect-Ratio Wings. <i>Journal of Aircraft</i> , 2013, 50, 1060-1069.	2.4	26
36	Multi-vehicle cooperation and nearly fuel-optimal flock guidance in strong background flows. <i>Ocean Engineering</i> , 2017, 141, 388-404.	4.3	26

#	ARTICLE	IF	CITATIONS
37	Pressure and work analysis of unsteady, deformable, axisymmetric, jet producing cavity bodies. <i>Journal of Fluid Mechanics</i> , 2015, 769, 337-368.	3.4	25
38	Nonlinear model reduction via a locally weighted POD method. <i>International Journal for Numerical Methods in Engineering</i> , 2016, 106, 372-396.	2.8	23
39	Distributed sensing for fluid disturbance compensation and motion control of intelligent robots. <i>Nature Machine Intelligence</i> , 2019, 1, 216-224.	16.0	23
40	A formulation for calculating the translational velocity of a vortex ring or pair. <i>Bioinspiration and Biomimetics</i> , 2006, 1, S57-S64.	2.9	22
41	Investigation of a sliding alula for control augmentation of lifting surfaces at high angles of attack. <i>Aerospace Science and Technology</i> , 2019, 87, 73-88.	4.8	22
42	A master-slave fluid cooperative control algorithm for optimal trajectory planning. , 2011, , .		21
43	Scaling trends of bird's alular feathers in connection to leading-edge vortex flow over hand-wing. <i>Scientific Reports</i> , 2020, 10, 7905.	3.3	21
44	Unified slip boundary condition for fluid flows. <i>Physical Review E</i> , 2016, 94, 023113.	2.1	19
45	On the maintenance of an attached leading-edge vortex via model bird alula. <i>Journal of Fluid Mechanics</i> , 2020, 897, .	3.4	19
46	An Electrowetting Microvalve: Numerical Simulation. <i>Annals of the New York Academy of Sciences</i> , 2006, 1077, 415-425.	3.8	18
47	Inherent Stability Modes of Low-Aspect-Ratio Wings. <i>Journal of Aircraft</i> , 2015, 52, 141-155.	2.4	18
48	Dual Radio Autopilot System for Lightweight, Swarming Micro/Miniature Aerial Vehicles. <i>Journal of Aerospace Information Systems</i> , 2017, 14, 293-306.	1.4	18
49	A dynamic model for the Lagrangian-averaged Navier-Stokes- $\hat{\pm}$ equations. <i>Physics of Fluids</i> , 2005, 17, 075106.	4.0	17
50	A regularization of the Burgers equation using a filtered convective velocity. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2008, 41, 344016.	2.1	16
51	On the Convergence of the Convectively Filtered Burgers Equation to the Entropy Solution of the Inviscid Burgers Equation. <i>Multiscale Modeling and Simulation</i> , 2009, 7, 1811-1837.	1.6	16
52	New perspectives on collagen fibers in the squid mantle. <i>Journal of Morphology</i> , 2012, 273, 586-595.	1.2	16
53	A Compact Autonomous Underwater Vehicle With Cephalopod-Inspired Propulsion. <i>Marine Technology Society Journal</i> , 2016, 50, 88-101.	0.4	16
54	Cooperative Control of a Team of Unmanned Vehicles Using Smoothed Particle Hydrodynamics. , 2010, , .		15

#	ARTICLE	IF	CITATIONS
55	Vortex sheet roll-up revisited. <i>Journal of Fluid Mechanics</i> , 2018, 855, 299-321.	3.4	14
56	Leading-edge flow reattachment and the lateral static stability of low-aspect-ratio rectangular wings. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	14
57	Field Deployment of a Plume Monitoring UAV Flock. <i>IEEE Robotics and Automation Letters</i> , 2019, 4, 769-775.	5.1	13
58	Flow visualization and wall shear stress of a flapping model hummingbird wing. <i>Experiments in Fluids</i> , 2010, 49, 657-671.	2.4	12
59	A new kinematic criterion for vortex ring pinch-off. <i>Physics of Fluids</i> , 2021, 33, 037120.	4.0	12
60	Modeling and Characterizing a Fiber-Reinforced Dielectric Elastomer Tension Actuator. <i>IEEE Robotics and Automation Letters</i> , 2021, 6, 1264-1271.	5.1	12
61	On Approximating the Translational Velocity of Vortex Rings. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2013, 135, .	1.5	11
62	Analysis of boundary slip in a flow with an oscillating wall. <i>Physical Review E</i> , 2013, 87, .	2.1	11
63	Passive mitigation of roll stall for low aspect ratio wings. <i>Advanced Robotics</i> , 2013, 27, 667-681.	1.8	11
64	An Online Manifold Learning Approach for Model Reduction of Dynamical Systems. <i>SIAM Journal on Numerical Analysis</i> , 2014, 52, 1928-1952.	2.3	11
65	Optimal Thrust Characteristics of a Synthetic Jet Actuator for Application in Low Speed Maneuvering of Underwater Vehicles. , 0, , .		10
66	A DDDAS Plume Monitoring System with Reduced Kalman Filter. <i>Procedia Computer Science</i> , 2015, 51, 2533-2542.	2.0	10
67	Attitude Control of Micro/Mini Aerial Vehicles and Estimation of Aerodynamic Angles Formulated as Parametric Uncertainties. <i>IEEE Robotics and Automation Letters</i> , 2018, 3, 2063-2070.	5.1	10
68	A New Potential Regularization of the One-Dimensional Euler and Homentropic Euler Equations. <i>Multiscale Modeling and Simulation</i> , 2010, 8, 1212-1243.	1.6	9
69	Far-field momentum flux of high-frequency axisymmetric synthetic jets. <i>Physics of Fluids</i> , 2015, 27, .	4.0	9
70	Droplets in an axisymmetric microtube: Effects of aspect ratio and fluid interfaces. <i>Physics of Fluids</i> , 2015, 27, .	4.0	9
71	Controlling the deformation space of soft membranes using fiber reinforcement. <i>International Journal of Robotics Research</i> , 2021, 40, 178-196.	8.5	9
72	Concentration Gradient and Information Energy for Decentralized UAV Control. , 2006, , .		8

#	ARTICLE	IF	CITATIONS
73	Cooperative Control of a Team of AUVs Using Smoothed Particle Hydrodynamics With Restricted Communication. , 2009, , .		8
74	Towards background flow based AUV localization. , 2014, , .		8
75	FACON: A flow-aided cooperative navigation scheme. , 2017, , .		8
76	Visual-Inertial Guidance With a Plenoptic Camera for Autonomous Underwater Vehicles. IEEE Robotics and Automation Letters, 2019, 4, 2777-2784.	5.1	8
77	Viscous drag force model for dynamic Wilhelmy plate experiments. Physical Review Fluids, 2019, 4, .	2.5	8
78	Sensor driven feedback for puff estimation using unmanned aerial vehicles. , 2014, , .		7
79	Anisotropic active Lagrangian particle swarm control in a meandering jet. , 2015, , .		7
80	Micro/Miniature Aerial Vehicle Guidance for Hurricane Research. IEEE Systems Journal, 2016, 10, 1263-1270.	4.6	7
81	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
82	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
83	Roll Control of Low-Aspect-Ratio Wings Using Articulated Winglet Control Surfaces. Journal of Aircraft, 2019, 56, 419-430.	2.4	7
84	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
85	An examination of the homentropic Euler equations with averaged characteristics. Journal of Differential Equations, 2010, 248, 574-593.	2.2	6
86	Wall Detection by Lateral Line Sensory System of Fish. , 2014, , .		6
87	Autonomous vehicle localization in a vector field: Underwater vehicle implementation. , 2014, , .		6
88	Anisotropic Flocking Control of Distributed Multi-Agent Systems using Fluid Abstraction. , 2018, , .		6
89	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
90	Theoretical Prediction of Roll Moment Due to Sideslip for Thin Low-Aspect-Ratio Wings. AIAA Journal, 2019, 57, 1452-1467.	2.6	6

#	ARTICLE	IF	CITATIONS
91	Concurrent Flow-Based Localization and Mapping in Time-Invariant Flow Fields. , 2019, , .		6
92	Role of the rate of surface dilatation in determining microscopic dynamic contact angle. Physics of Fluids, 2020, 32, .	4.0	6
93	Transitional region of a round synthetic jet. Physical Review Fluids, 2018, 3, .	2.5	6
94	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
95	A unified model for Digitized Heat Transfer in a microchannel. International Journal of Heat and Mass Transfer, 2014, 78, 393-407.	4.8	5
96	Bioinspired Jet Propulsion for Disturbance Rejection of Marine Robots. IEEE Robotics and Automation Letters, 2018, 3, 2378-2385.	5.1	5
97	Hydrodynamic Force Decoupling Using a Distributed Sensory System. IEEE Robotics and Automation Letters, 2020, 5, 3235-3242.	5.1	5
98	An Experimental and Modeling Investigation of Synthetic Jets in a Coflow Wake. International Journal of Flow Control, 2011, 3, 19-36.	0.4	5
99	Developing a transient model for squid inspired thrusters, and incorporation into underwater robot control design. , 2008, , .		4
100	Cooperative control using data-driven feedback for mobile sensors. , 2013, , .		4
101	Nearly fuel-optimal trajectories for vehicle swarms in open domains with strong background flows. , 2013, , .		4
102	Aerodynamics and lateral stability of low-aspect-ratio wings with dihedral at Low Reynolds numbers. , 2016, , .		4
103	Flow Characterization and Modeling of Strong Round Synthetic Jets in Crossflow. AIAA Journal, 2017, 55, 389-402.	2.6	4
104	A low-power optical communication modem for compact autonomous underwater vehicles. , 2017, , .		4
105	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
106	Numerical Investigations of Digitized Heat Transfer. , 2012, , .		3
107	Fish lateral line inspired hydrodynamic feedforward control for autonomous underwater vehicles. , 2013, , .		3
108	Effect of Slip on Circulation Inside a Droplet. Journal of Fluids Engineering, Transactions of the ASME, 2015, 137, .	1.5	3

#	ARTICLE	IF	CITATIONS
109	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
110	Correcting Current-Induced Magnetometer Errors on UAVs: An Online Model-Based Approach. IEEE Sensors Journal, 2020, 20, 1067-1076.	4.7	3
111	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
112	Behavior of a moving droplet under electrowetting actuation in microchannel. , 0, , .		2
113	A Regularization of Burgers Equation using a Filtered Convective Velocity. , 2007, , .		2
114	Derivation of Regularized Euler Equations from Basic Principles. , 2009, , .		2
115	An inviscid regularization of hyperbolic conservation laws. Journal of Applied Mathematics and Computing, 2013, 43, 55-73.	2.5	2
116	Improving underwater thruster performance through jellyfish biomimicry and 2D jet velocity. , 2013, , .		2
117	Numerical and experimental investigation of heat transfer within the first circulation length of a digitized flow. , 2013, , .		2
118	Aerodynamic stability modes of low aspect ratio wings. , 2013, , .		2
119	Aerodynamic damping derivatives of low aspect ratio wings at low Reynolds numbers. , 2013, , .		2
120	Vortex structure of low-aspect-ratio wings in sideslip. , 2015, , .		2
121	Geometric model reduction of forced and dissipative Hamiltonian systems. , 2016, , .		2
122	Bioinspired visual guidance in turbid underwater environment. , 2017, , .		2
123	Aerodynamic parameter estimation from wind tunnel testing of a small UAS. , 2018, , .		2
124	Modelling and Control of a miniature, low-aspect-ratio, fixed-delta-wing, rudderless aircraft. , 2018, , .		2
125	Dipole model of vorticity at the moving contact line. International Journal of Multiphase Flow, 2018, 103, 169-172.	3.4	2
126	A Dual-Bladder Buoyancy Engine for a Cephalopod-Inspired AUV. , 2019, , .		2

#	ARTICLE	IF	CITATIONS
127	Theoretical model of a finite force at the moving contact line. International Journal of Multiphase Flow, 2020, 132, 103398.	3.4	2
128	Transient pressure modeling in jetting animals. Journal of Theoretical Biology, 2020, 494, 110237.	1.7	2
129	Theoretical model for the separated flow around an accelerating flat plate using time-dependent self-similarity. Physical Review Fluids, 2021, 6, .	2.5	2
130	Parameter governing the far-field features of round jets. Physical Review Fluids, 2016, 1, .	2.5	2
131	Propulsive efficiency of underwater vehicles using unsteady propulsors. , 2013, , .		1
132	Fluid-based cooperative underwater localization. , 2013, , .		1
133	A fish-like locomotion model in an ideal fluid with lateral-line-inspired background flow estimation. , 2014, , .		1
134	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
135	Coordinating Groups of Sensing Platforms in Dynamic, Uncertain Environments. , 2015, , .		1
136	A localized symplectic model reduction technique for parameterized Hamiltonian systems. , 2015, , .		1
137	Roll Stability Regimes at Low Reynolds Numbers. , 2015, , .		1
138	An artificial fish lateral line sensory system composed of modular pressure sensor blocks. , 2017, , .		1
139	Development of a Compact Autonomous Underwater Vehicle for Hierarchical Multi-Agent Cooperation. , 2018, , .		1
140	Dual-Radio Configuration for Flexible Communication in Flocking Micro/Miniature Aerial Vehicles. IEEE Systems Journal, 2019, 13, 2408-2419.	4.6	1
141	New insights from inviscid modelling of starting flow separation with roll-up. Journal of Fluid Mechanics, 2020, 903, .	3.4	1
142	Active roll control at high angles of attack via bio-inspired sliding alula. , 2020, , .		1
143	An Empirical Reduced Modeling Approach for Mobile, Distributed Sensor Platform Networks. Lecture Notes in Computer Science, 2015, , 195-204.	1.3	1
144	IMPULSE EXTREMIZATION IN VORTEX FORMATION FOR APPLICATION IN LOW SPEED MANEUVERING OF UNDERWATER VEHICLES. , 2005, , .		1

#	ARTICLE	IF	CITATIONS
145	Velocity and thermal slip at the moving contact line. , 2016, , .		0
146	Vorticity Generation at Sharp Corners. , 2016, , .		0
147	Simultaneous AUV Localization and Lagrangian Particle Tracking. , 2018, , .		0
148	Digitized Heat Transfer. , 2014, , 1-10.		0