James C Liao

List of Publications by Year
in descending order

40 papers	3,226 citations	257450 24 h-index	302126 39 g-index
46 all docs	46 docs citations	46 times ranked	2097 citing authors

#	Article	IF	Citations
1	The Philosophy of Outliers: Reintegrating Rare Events Into Biological Science. Integrative and Comparative Biology, 2022, 61, 2191-2198.	2.0	6
2	Fish-inspired segment models for undulatory steady swimming. Bioinspiration and Biomimetics, 2022, 17, 046007.	2.9	5
3	Fish swimming efficiency. Current Biology, 2022, 32, R666-R671.	3.9	5
4	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
5	Activity of Posterior Lateral Line Afferent Neurons during Swimming in Zebrafish. Journal of Visualized Experiments, 2021, , .	0.3	3
6	Body Caudal Undulation Measured by Soft Sensors and Emulated by Soft Artificial Muscles. Integrative and Comparative Biology, 2021, 61, 1955-1965.	2.0	4
7	Corollary discharge enables proprioception from lateral line sensory feedback. PLoS Biology, 2021, 19, e3001420.	5.6	9
8	Convergence of undulatory swimming kinematics across a diversity of fishes. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	38
9	An Algorithmic Approach to Natural Behavior. Current Biology, 2020, 30, R663-R675.	3.9	35
10	Oxygen consumption of drift-feeding rainbow trout: the energetic tradeoff between locomotion and feeding in flow. Journal of Experimental Biology, 2020, 223, .	1.7	10
11	Efferent modulation of spontaneous lateral line activity during and after zebrafish motor commands. Journal of Neurophysiology, 2019, 122, 2438-2448.	1.8	35
12	Head width influences flow sensing by the lateral line canal system in fishes. Journal of Experimental Biology, 2018, 221, .	1.7	10
13	Behavior, Electrophysiology, and Robotics Experiments to Study Lateral Line Sensing in Fishes. Integrative and Comparative Biology, 2018, 58, 874-883.	2.0	12
14	A non-toxic dose of cobalt chloride blocks hair cells of the zebrafish lateral line. Hearing Research, 2017, 350, 17-21.	2.0	10
15	Computational analysis of vortex dynamics and performance enhancement due to bodyâ€“fin andÂ finâ€“fin interactions in fish-like locomotion. Journal of Fluid Mechanics, 2017, 829, 65-88.	3.4	130
16	Accelerating fishes increase propulsive efficiency by modulating vortex ring geometry. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13828-13833.	7.1	55
17	Fish Swimming in a KÃ¡rmÃ¡n Vortex Street: Kinematics, Sensory Biology and Energetics. Marine Technology Society Journal, 2017, 51, 48-55.	0.4	14
18	Refuging rainbow trout selectively exploit flows behind tandem cylinders. Journal of Experimental Biology, 2016, 219, 2182-2191.	1.7	28

#	Article	IF	Citations
19	Synaptic Ribbons Require Ribeye for Electron Density, Proper Synaptic Localization, and Recruitment of Calcium Channels. Cell Reports, 2016, 15, 2784-2795.	6.4	60
20	Lateral Line Layout Correlates with the Differential Hydrodynamic Pressure on Swimming Fish. Physical Review Letters, 2015, 114, 018102.	7.8	52
21	Frequency response properties of primary afferent neurons in the posterior lateral line system of larval zebrafish. Journal of Neurophysiology, 2015, 113, 657-668.	1.8	18
22	Afferent and motoneuron activity in response to single neuromast stimulation in the posterior lateral line of larval zebrafish. Journal of Neurophysiology, 2014, 112, 1329-1339.	1.8	36
23	The effect of flow speed and body size on KÃ¡rmÃ¡n gait kinematics in rainbow trout. Journal of Experimental Biology, 2013, 216, 3442-9.	1.7	21
24	A kinematic model of KÃ¡rmÃ¡n gaiting in rainbow trout. Journal of Experimental Biology, 2013, 216, 4666-77.	1.7	25
25	The Hydrodynamics of Flow Stimuli. Springer Handbook of Auditory Research, 2013, , 73-98.	0.7	12
26	Physiology of afferent neurons in larval zebrafish provides a functional framework for lateral line somatotopy. Journal of Neurophysiology, 2012, 107, 2615-2623.	1.8	52
27	Zebrafish Larvae Exhibit Rheotaxis and Can Escape a Continuous Suction Source Using Their Lateral Line. PLoS ONE, 2012, 7, e36661.	2.5	90
28	THE IPOS FRAMEWORK: LINKING FISH SWIMMING PERFORMANCE IN ALTERED FLOWS FROM LABORATORY EXPERIMENTS TO RIVERS. River Research and Applications, 2012, 28, 429-443.	1.7	139
29	Heterogeneity and dynamics of lateral line afferent innervation during development in zebrafish (<i>Danio rerio</i>). Journal of Comparative Neurology, 2012, 520, 1376-1386.	1.6	33
30	Rainbow trout consume less oxygen in turbulence: the energetics of swimming behaviors at different speeds. Journal of Experimental Biology, 2011, 214, 1428-1436.	1.7	86
31	Organization and physiology of posterior lateral line afferent neurons in larval zebrafish. Biology Letters, 2010, 6, 402-405.	2.3	43
32	Shared versus Specialized Glycinergic Spinal Interneurons in Axial Motor Circuits of Larval Zebrafish. Journal of Neuroscience, 2008, 28, 12982-12992.	3.6	128
33	A review of fish swimming mechanics and behaviour in altered flows. Philosophical Transactions of the Royal Society B: Biological Sciences, 2007, 362, 1973-1993.	4.0	566
34	The role of the lateral line and vision on body kinematics and hydrodynamic preference of rainbow trout in turbulent flow. Journal of Experimental Biology, 2006, 209, 4077-4090.	1.7	118
35	Neuromuscular control of trout swimming in a vortex street: implications for energy economy during the Kàrmàn gait. Journal of Experimental Biology, 2004, 207, 3495-3506.	1.7	134
36	Fish Exploiting Vortices Decrease Muscle Activity. Science, 2003, 302, 1566-1569.	12.6	698

#	Article	IF	Citations
37	The Kal̀rmal̀n gait: novel body kinematics of rainbow trout swimming in a vortex street. Journal of Experimental Biology, 2003, 206, 1059-1073.	1.7	396
38	Swimming in needlefish (Belonidae): anguilliform locomotion with fins. Journal of Experimental Biology, 2002, 205, 2875-2884.	1.7	45
39	Swimming in needlefish (Belonidae): anguilliform locomotion with fins. Journal of Experimental Biology, 2002, 205, 2875-84.	1.7	32
40	Evolutionary convergence of a neural mechanism in the cavefish lateral line system. ELife, 0, 11, .	6.0	5