John H Long Jr

List of Publications by Year
in descending order

53 papers	1,465 citations	304701 22 h-index	330122 37 g-index
53 all docs	53 docs citations	53 times ranked	949 citing authors

#	Article	IF	Citations
1	The Importance of Body Stiffness in Undulatory Propulsion. American Zoologist, 1996, 36, 678-694.	0.7	183
2	Muscles, Elastic Energy, and the Dynamics of Body Stiffness in Swimming Eels. American Zoologist, 1998, 38, 771-792.	0.7	119
3	Four flippers or two? Tetrapodal swimming with an aquatic robot. Bioinspiration and Biomimetics, 2006, 1, 20-29.	2.9	96
4	Stiffness and Damping Forces in the Intervertebral Joints of Blue Marlin (<i>Makaira Nigricans</i>). Journal of Experimental Biology, 1992, 162, 131-155.	1.7	80
5	Morphology, mechanics, and locomotion: the relation between the notochord and swimming motions in sturgeon. Environmental Biology of Fishes, 1995, 44, 199-211.	1.0	78
6	EVOLUTION OF BEHAVIOR AND NEURAL CONTROL OF THE FAST-START ESCAPE RESPONSE. Evolution; International Journal of Organic Evolution, 2002, 56, 993-1007.	2.3	78
7	Biomimetic evolutionary analysis: testing the adaptive value of vertebrate tail stiffness in autonomous swimming robots. Journal of Experimental Biology, 2006, 209, 4732-4746.	1.7	76
8	Force transmission via axial tendons in undulating fish: a dynamic analysis. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2002, 133, 911-929.	1.8	68
9	The notochord of hagfish<i>Myxine glutinosa</i>: visco-elastic properties and mechanical functions during steady swimming. Journal of Experimental Biology, 2002, 205, 3819-3831.	1.7	60
10	Fish out of water: terrestrial jumping by fully aquatic fishes. Journal of Experimental Zoology, 2011, 315A, 649-653.	1.2	46
11	Scaling of swimming performance in baleen whales. Journal of Experimental Biology, 2019, 222, .	1.7	45
12	Turning maneuvers in sharks: Predicting body curvature from axial morphology. Journal of Morphology, 2009, 270, 954-965.	1.2	44
13	Backbone Mechanics of the Blue Marlin <i>Makaira Nigricans</i> (Pisces, Istiophoridae). Journal of Experimental Biology, 1990, 148, 449-459.	1.7	44
14	Testing Biomimetic Structures in Bioinspired Robots: How Vertebrae Control the Stiffness of the Body and the Behavior of Fish-Like Swimmers. Integrative and Comparative Biology, 2011, 51, 158-175.	2.0	40
15	The notochord of hagfish Myxine glutinosa: visco-elastic properties and mechanical functions during steady swimming. Journal of Experimental Biology, 2002, 205, 3819-31.	1.7	39
16	Go Reconfigure: How Fish Change Shape as They Swim and Evolve. Integrative and Comparative Biology, 2010, 50, 1120-1139.	2.0	29
17	Skin and Bones, Sinew and Gristle: the Mechanical Behavior of Fish Skeletal Tissues. Fish Physiology, 2005, , 141-177.	0.8	27
18	Jumping sans legs: does elastic energy storage by the vertebral column power terrestrial jumps in bony fishes?. Zoology, 2014, 117, 7-18.	1.2	25

#	Article	IF	Citations
19	A Navigational Primitive: Biorobotic Implementation of Cycloptic Helical Klinotaxis in Planar Motion. IEEE Journal of Oceanic Engineering, 2004, 29, 795-806.	3.8	24
20	Built for speed: strain in the cartilaginous vertebral columns of sharks. Zoology, 2014, 117, 19-27.	1.2	24
21	Vertebrae in compression: Mechanical behavior of arches and centra in the gray smoothâ€hound shark (<i>Mustelus californicus</i>). Journal of Morphology, 2010, 271, 366-375.	1.2	22
22	Automatic control: the vertebral column of dogfish sharks behaves as a continuously variable transmission with smoothly shifting functions. Journal of Experimental Biology, 2016, 219, 2908-2919.	1.7	22
23	Swimming fundamentals: turning performance of leopard sharks (Triakis semifasciata) is predicted by body shape and postural reconfiguration. Zoology, 2011, 114, 348-359.	1.2	21
24	Inspired by Sharks: A Biomimetic Skeleton for the Flapping, Propulsive Tail of an Aquatic Robot. Marine Technology Society Journal, 2011, 45, 119-129.	0.4	20
25	Sink and swim: kinematic evidence for lifting-body mechanisms in negatively buoyant electric rays <i>Narcine brasiliensis</i>. Journal of Experimental Biology, 2011, 214, 2935-2948.	1.7	15
26	How Movements of a Non-Humanoid Robot Affect Emotional Perceptions and Trust. International Journal of Social Robotics, 2021, 13, 1967-1978.	4.6	12
27	Flapping flexible fish. Experiments in Fluids, 2007, 43, 779-797.	2.4	11
28	Are You Positive? Electric Dipole Polarity Discrimination in the Yellow Stingray, <i>Urobatis jamaicensis</i>. Biological Bulletin, 2013, 225, 85-91.	1.8	10
29	Testing Biological Hypotheses with Embodied Robots: Adaptations, Accidents, and By-Products in the Evolution of Vertebrates. Frontiers in Robotics and AI, 2014, 1, .	3.2	10
30	How Does Soft Robotics Drive Research in Animal Locomotion?. Soft Robotics, 2014, 1, 161-168.	8.0	10
31	Animal Metaphors and Metaphorizing Animals: An Integrated Literary, Cognitive, and Evolutionary Analysis of Making and Partaking of Stories. Evolution: Education and Outreach, 2011, 4, 52-63.	0.8	9
32	Modeling a swimming fish with an initial boundary value problem: Unsteady maneuvers of an elastic plate with internal force generation. Mathematical and Computer Modelling, 1999, 30, 77-93.	2.0	8
33	The notochord in Atlantic salmon (Salmo salar L.) undergoes profound morphological and mechanical changes during development. Journal of Anatomy, 2017, 231, 639-654.	1.5	8
34	A multi-body approach for 6DOF modeling of Biomimetic Autonomous Underwater Vehicles with simulation and experimental results. , 2009, , .		7
35	Biomimetic evolutionary analysis: Robotically-simulated vertebrates in a predator-prey ecology. , 2009, , .		6
36	Morphology, mechanics, and locomotion: the relation between the notochord and swimming motions in sturgeon. Developments in Environmental Biology of Fishes, 1995, , 199-211.	0.2	6

#	ARTICLE	IF	CITATIONS
37	Aquatic locomotion: New approaches to invertebrate and vertebrate biomechanics. American Zoologist, 1996, 36, 535-536.	0.7	5
38	EVOLUTION OF BEHAVIOR AND NEURAL CONTROL OF THE FAST-START ESCAPE RESPONSE. Evolution; International Journal of Organic Evolution, 2002, 56, 993.	2.3	5
39	Connecting materials, performance and evolution: a case study of the glue of moth-catching spiders (Cyrtarachninae). Journal of Experimental Biology, 2022, 225, .	1.7	5
40	Modularity and Sparsity: Evolution of Neural Net Controllers in Physically Embodied Robots. Frontiers in Robotics and AI, 2016, 3, .	3.2	4
41	Epigenetic Operators and the Evolution of Physically Embodied Robots. Frontiers in Robotics and AI, 2017, 4, .	3.2	4
42	Biorobotic insights into neuromechanical coordination of undulatory swimming. Science Robotics, 2021, 6, .	17.6	4
43	Senses & Sensibility: Predator-Prey Experiments Reveal How Fish Perceive & Respond to Threats. American Biology Teacher, 2008, 70, 462-467.	0.2	3
44	Axial systems and their actuation: new twists on the ancient body of craniates. Zoology, 2014, 117, 1-6.	1.2	3
45	Using Artificial Organisms To Study The Evolution of Backbones in Fish. , 2007, , .		2
46	Rumors of Our Deathâ€¦. Topics in Cognitive Science, 2019, 11, 864-868.	1.9	2
47	Heads and tails: The notochord develops differently in the cranium and caudal fin of Atlantic Salmon (<scp><i>Salmo salar</i></scp>, L.). Anatomical Record, 2021, 304, 1629-1649.	1.4	2
48	Morphological Evolution: Bioinspired Methods for Analyzing Bioinspired Robots. Frontiers in Robotics and AI, 2021, 8, 717214.	3.2	2
49	Embodied Computational Evolution: Feedback Between Development and Evolution in Simulated Biorobots. Frontiers in Robotics and AI, 2021, 8, 674823.	3.2	1
50	Toward Population-Level Biohybrid Systems: Bioinspiration and Behavior. , 2021, , .		1
51	Editorial: Evolvability, Environments, Embodiment & Emergence in Robotics. Frontiers in Robotics and AI, 2018, 5, 103.	3.2	0
52	Flapping flexible fish. , 2010, , 141-159.		0
53	Evolution Ainâ€™t Engineering: Animals, Robots, and the Messy Struggle for Existence. Social and Cultural Studies of Robots and AI, 2019, , 17-34.	0.2	0