Joseph Ayers

List of Publications by Year
in descending order

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Version: 2024-02-01

43 papers	1,182 citations	471477 17 h-index	414395 32 g-index
43 all docs	43 docs citations	43 times ranked	660 citing authors

#	Article	IF	Citations
1	Neuronal control of locomotion in the lobster,Homarus americanus. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1977, 115, 1-27.	1.6	154
2	Monosynaptic entrainment of an endogenous pacemaker network: A cellular mechanism for von Holst's magnet effect. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1979, 129, 5-17.	1.6	112
3	Underwater walking. Arthropod Structure and Development, 2004, 33, 347-360.	1.4	100
4	Biomimetic approaches to the control of underwater walking machines. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2007, 365, 273-295.	3.4	91
5	Cytoarchitecture of spinalâ€projecting neurons in the brain of the larval sea lamprey. Journal of Comparative Neurology, 1993, 336, 194-210.	1.6	85
6	Neuromuscular strategies underlying different behavioral acts in a multifunctional crustacean leg joint. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1978, 128, 81-94.	1.6	83
7	Time course of salamander spinal cord regeneration and recovery of swimming: HRP retrograde pathway tracing and kinematic analysis. Experimental Neurology, 1990, 108, 198-213.	4.1	71
8	Locomotion: Control by Positive-Feedback Optokinetic Responses. Science, 1972, 177, 183-185.	12.6	55
9	Neuronal control of locomotion in the lobsterHomarus americanus. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1977, 115, 29-46.	1.6	49
10	Observations on the electric organ discharge of two skate species (Chondrichthyes: Rajidae) and its relationship to behaviour. Environmental Biology of Fishes, 1987, 20, 241-254.	1.0	48
11	Low power CMOS electronic central pattern generator design for a biomimetic underwater robot. Neurocomputing, 2007, 71, 284-296.	5.9	39
12	Oscillations and oscillatory behavior in small neural circuits. Biological Cybernetics, 2006, 95, 537-554.	1.3	36
13	De novo transcriptome assembly for the lobster Homarus americanus and characterization of differential gene expression across nervous system tissues. BMC Genomics, 2016, 17, 63.	2.8	27
14	Metamorphosis of spinal-projecting neurons in the brain of the sea lamprey during transformation of the larva to adult: Normal anatomy and response to axotomy. Journal of Comparative Neurology, 1995, 362, 453-467.	1.6	25
15	Neuronal control of locomotion in the lobsterHomarus americanus. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1978, 123, 289-298.	1.6	20
16	Controlling underwater robots with electronic nervous systems. Applied Bionics and Biomechanics, 2010, 7, 57-67.	1.1	19
17	Regeneration of locomotor command systems in the sea lamprey. Brain Research, 1983, 279, 238-240.	2.2	18
18	Temperature preference and acclimation in the Jonah Crab, Cancer borealis. Journal of Experimental Marine Biology and Ecology, 2014, 455, 7-13.	1.5	18

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19	Role of I_h in differentiating the dynamics of the gastric and pyloric neurons in the stomatogastric ganglion of the lobster, Homarus americanus. Journal of Neurophysiology, 2016, 115, 2434-2445.	1.8	15
20	A low power 100MΩ CMOS front-end transimpedance amplifier for biosensing applications. , 2010, , .		14
21	Visualization and quantification of biological flow fields through videoâ€based digital motionâ€analysis techniques*. Marine and Freshwater Behaviour and Physiology, 1998, 31, 55-61.	0.9	13
22	Controlling Biomimetic Underwater Robots With Electronic Nervous Systems. , 2008, , 295-306.		12
23	Plasticity of fin command system function following spinal transection in larval sea lamprey. Brain Research, 1987, 415, 337-341.	2.2	9
24	Synaptic perturbation and entrainment of gastric mill rhythm of the spiny lobster. Journal of Neurophysiology, 1984, 51, 113-125.	1.8	7
25	Low power, high PVT variation tolerant central pattern generator design for a bio-hybrid micro robot. , 2012, , .		7
26	Architectures for Adaptive Behavior in Biomimetic Underwater Robots. , 2004, , 171-187.		6
27	<title>Development of a biomimetic underwater ambulatory robot: advantages of matching biomimetic control architecture with biomimetic actuators</title>. , 2000, 4196, 54.		5
28	A Conserved Neural Circuit-Based Architecture for Ambulatory and Undulatory Biomimetic Robots. Marine Technology Society Journal, 2011, 45, 147-152.	0.4	5
29	A Conserved Biomimetic Control Architecture for Walking, Swimming and Flying Robots. Lecture Notes in Computer Science, 2012, , 1-12.	1.3	5
30	Biomimetic Central Pattern Generators for Robotics and Prosthetics. , 0, , .		4
31	A Conserved Network for Control of Arthropod Exteroceptive Optical Flow Reflexes during Locomotion. Lecture Notes in Computer Science, 2010, , 72-81.	1.3	4
32	A 65nm CMOS ultra low power and low noise 131M front-end transimpedance amplifier. , 2010, , .		4
33	A low power 65nm CMOS electronic neuron and synapse design for a biomimetic micro-robot. , 2011, , .		4
34	A nitric oxide sensor fabricated through e-jet printing towards use in bioelectronics interfaces. Journal of Applied Electrochemistry, 2019, 49, 229-239.	2.9	4
35	Designing and Implementing Nervous System Simulations on LEGO Robots. Journal of Visualized Experiments, 2013, , e50519.	0.3	3
36	Implementation of Excitatory CMOS Neuron Oscillator for Robot Motion Control Unit. Journal of Semiconductor Technology and Science, 2014, 14, 383-390.	0.4	3

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37	A Biomimetic Neuronal Network-Based Controller for Guided Helicopter Flight. Lecture Notes in Computer Science, 2013, , 299-310.	1.3	2
38	Underwater Vehicles Based on Biological Intelligence. Mechanical Engineering, 2016, 138, S6-S10.	0.1	2
39	The transient potassium outward current has different roles in modulating the pyloric and gastric mill rhythms in the stomatogastric ganglion. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2017, 203, 275-290.	1.6	2
40	Low power CMOS adaptive electronic central pattern generator design. , 2005, , .		1
41	Two-Stage Silver Sintering Process Improves Sheet Resistance, Film Uniformity, and Layering Properties via Electrohydrodynamic Jet Printing. 3D Printing and Additive Manufacturing, 2017, 4, 165-171.	2.9	1
42	Do different behaviors require different central pattern generators. Behavioral and Brain Sciences, 1980, 3, 541-541.	0.7	0
43	A Behavior-Based Controller Architecture for Reactive Underwater Robots. Studies in Cognitive Systems, 2000, , 357-370.	0.1	0