Henry C Astley

List of Publications by Year
in descending order

29 papers	1,039 citations	623734 14 h-index	552781 26 g-index
31 all docs	31 docs citations	31 times ranked	898 citing authors

#	Article	IF	Citations
1	Sidewinding with minimal slip: Snake and robot ascent of sandy slopes. Science, 2014, 346, 224-229.	12.6	209
2	Evidence for a vertebrate catapult: elastic energy storage in the plantaris tendon during frog jumping. Biology Letters, 2012, 8, 386-389.	2.3	131
3	The mechanics of elastic loading and recoil in anuran jumping. Journal of Experimental Biology, 2014, 217, 4372-4378.	1.7	82
4	Modulation of orthogonal body waves enables high maneuverability in sidewinding locomotion. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6200-6205.	7.1	78
5	Tail use improves performance on soft substrates in models of early vertebrate land locomotors. Science, 2016, 353, 154-158.	12.6	78
6	Effects of perch diameter and incline on the kinematics, performance and modes of arboreal locomotion of corn snakes (Elaphe guttata). Journal of Experimental Biology, 2007, 210, 3862-3872.	1.7	61
7	Getting around when youâ€™re round: quantitative analysis of the locomotion of the blunt-spined brittle star, Ophiocoma echinata. Journal of Experimental Biology, 2012, 215, 1923-1929.	1.7	51
8	Kinematic gait synthesis for snake robots. International Journal of Robotics Research, 2016, 35, 100-113.	8.5	45
9	Fluoromicrometry: A Method for Measuring Muscle Length Dynamics with Biplanar Videofluoroscopy. Journal of Experimental Zoology, 2016, 325, 399-408.	1.2	37
10	Robust jumping performance and elastic energy recovery from compliant perches in tree frogs. Journal of Experimental Biology, 2015, 218, 3360-3363.	1.7	32
11	The diversity and evolution of locomotor muscle properties in anurans. Journal of Experimental Biology, 2016, 219, 3163-3173.	1.7	32
12	Arboreal habitat structure affects the performance and modes of locomotion of corn snakes (Elaphe guttata). Journal of Experimental Zoology, 2009, 311A, 207-216.	1.2	30
13	Surprising simplicities and syntheses in limbless self-propulsion in sand. Journal of Experimental Biology, 2020, 223, .	1.7	29
14	Mitigating memory effects during undulatory locomotion on hysteretic materials. ELife, 2020, 9, .	6.0	23
15	Morphological and kinematic specializations of walking frogs. Journal of Experimental Zoology Part A: Ecological and Integrative Physiology, 2018, 329, 87-98.	1.9	16
16	Comparative and functional analysis of the digital mucus glands and secretions of tree frogs. Frontiers in Zoology, 2019, 16, 19.	2.0	15
17	Experimental modification of morphology reveals the effects of the zygosphene-zygantrum joint on the range of motion of snake vertebrae. Journal of Experimental Biology, 2020, 223, .	1.7	15
18	The Biomechanics of Multi-articular Muscleâ€“Tendon Systems in Snakes. Integrative and Comparative Biology, 2020, 60, 140-155.	2.0	12

#	Article	IF	Citations
19	Side-impact collision: mechanics of obstacle negotiation in sidewinding snakes. Bioinspiration and Biomimetics, 2020, 15, 065005.	2.9	12
20	Generation of propulsive force via vertical undulations in snakes. Journal of Experimental Biology, 2021, 224, .	1.7	9
21	Long Limbless Locomotors Over Land: The Mechanics and Biology of Elongate, Limbless Vertebrate Locomotion. Integrative and Comparative Biology, 2020, 60, 134-139.	2.0	8
22	Robot-inspired biology: The compound-wave control template. , 2015, , .		7
23	Defibrillate You Later, Alligator: Q10 Scaling and Refractoriness Keeps Alligators from Fibrillation. Integrative Organismal Biology, 2021, 3, obaa047.	1.8	5
24	Snakes combine vertical and lateral bending to traverse uneven terrain. Bioinspiration and Biomimetics, 2022, 17, 036009.	2.9	5
25	Traversing Tight Tunnelsâ€”Implementing an Adaptive Concertina Gait in a Biomimetic Snake Robot. , 2018, , .		4
26	The control of routine fish maneuvers: Connecting midline kinematics to turn outcomes. Journal of Experimental Zoology Part A: Ecological and Integrative Physiology, 2020, 333, 579-594.	1.9	4
27	Comparing the turn performance of different motor control schemes in multilink fish-inspired robots. Bioinspiration and Biomimetics, 2021, 16, 036010.	2.9	3
28	Testing the effects of body depth on fish maneuverability via robophysical models. Bioinspiration and Biomimetics, 2021, 17, .	2.9	3
29	Slithering across worldsâ€”snake-inspired robots for extraterrestrial exploration. , 2022, , 261-289.		1