

Tyson L Hedrick

List of Publications by Year in descending order

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Version: 2024-02-01

74
papers

4,823
citations

126708

33
h-index

102304

66
g-index

79
all docs

79
docs citations

79
times ranked

3094
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental evidence that physical activity inhibits osteoarthritis: Implications for inferring activity patterns from osteoarthritis in archeological human skeletons. <i>American Journal of Biological Anthropology</i> , 2022, 177, 223-231.	0.6	6
2	Combined effects of body posture and three-dimensional wing shape enable efficient gliding in flying lizards. <i>Scientific Reports</i> , 2022, 12, 1793.	1.6	12
3	Insect flight: Flies use a throttle to steer. <i>Current Biology</i> , 2022, 32, R218-R220.	1.8	1
4	Mosquitoes buzz and fruit flies don't—a comparative aeroacoustic analysis of wing-tone generation. <i>Bioinspiration and Biomimetics</i> , 2021, 16, 046019.	1.5	6
5	Comparison of experimental and numerical studies on the flow structures of hovering hawkmoths. <i>Journal of Fluids and Structures</i> , 2021, 107, 103405.	1.5	7
6	Mechanism and scaling of wing tone generation in mosquitoes. <i>Bioinspiration and Biomimetics</i> , 2020, 15, 016008.	1.5	20
7	Functional Morphology of Gliding Flight I: Modeling Reveals Distinct Performance Landscapes Based on Soaring Strategies. <i>Integrative and Comparative Biology</i> , 2020, 60, 1283-1296.	0.9	10
8	Functional Morphology of Gliding Flight II. Morphology Follows Predictions of Gliding Performance. <i>Integrative and Comparative Biology</i> , 2020, 60, 1297-1308.	0.9	11
9	How biomechanics, path planning and sensing enable gliding flight in a natural environment. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2020, 287, 20192888.	1.2	15
10	Vibrational control: A hidden stabilization mechanism in insect flight. <i>Science Robotics</i> , 2020, 5, .	9.9	52
11	Competition and cooperation among chimney swifts at roost entry. <i>Bioinspiration and Biomimetics</i> , 2019, 14, 055005.	1.5	3
12	Dragonflies use underdamped pursuit to chase conspecifics. <i>Journal of Experimental Biology</i> , 2019, 222, .	0.8	7
13	An Integrated Study of the Aeromechanics of Hovering Flight in Perturbed Flows. <i>AIAA Journal</i> , 2019, 57, 3753-3764.	1.5	11
14	Compound-V formations in shorebird flocks. <i>ELife</i> , 2019, 8, .	2.8	17
15	Gliding for a free lunch: biomechanics of foraging flight in common swifts (<i>Apus apus</i>). <i>Journal of Experimental Biology</i> , 2018, 221, .	0.8	19
16	Detecting intermittent switching leadership in coupled dynamical systems. <i>Scientific Reports</i> , 2018, 8, 10338.	1.6	15
17	Three-dimensional trajectories and network analyses of group behaviour within chimney swift flocks during approaches to the roost. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2017, 284, 20162602.	1.2	39
18	Aeromechanics of Hovering Flight in Perturbed Flows: Insights from Computational Models and Animal Experiments. , 2017, , .		0

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19	Asymmetry costs: Effects of wing damage on hovering flight performance in the hawkmoth <i>Manduca sexta</i> . Journal of Experimental Biology, 2017, 220, 3649-3656.	0.8	26
20	A nondestructive method to estimate the chlorophyll content of Arabidopsis seedlings. Plant Methods, 2017, 13, 26.	1.9	91
21	Flight motor modulation with speed in the hawkmoth <i>Manduca sexta</i> . Journal of Insect Physiology, 2017, 96, 115-121.	0.9	6
22	Data Management Rubric for Video Data in Organismal Biology. Integrative and Comparative Biology, 2017, 57, 33-47.	0.9	35
23	Multi-Camera Videography Methods for Aeroecology. , 2017, , 239-257.		0
24	Discovering useful parts for pose estimation in sparsely annotated datasets. , 2016, , .		1
25	Three-dimensional simulation for fast forward flight of a calliope hummingbird. Royal Society Open Science, 2016, 3, 160230.	1.1	26
26	Bristles reduce the force required to "fling" wings apart in the smallest insects. Journal of Experimental Biology, 2016, 219, 3759-3772.	0.8	61
27	Flight mechanics and control of escape manoeuvres in hummingbirds I. Flight kinematics. Journal of Experimental Biology, 2016, 219, 3518-3531.	0.8	65
28	Flight mechanics and control of escape manoeuvres in hummingbirds II. Aerodynamic force production, flight control and performance limitations. Journal of Experimental Biology, 2016, 219, 3532-3543.	0.8	25
29	3D for the people: multi-camera motion capture in the field with consumer-grade cameras and open source software. Biology Open, 2016, 5, 1334-1342.	0.6	72
30	Foraging at the edge of the world: low-altitude, high-speed manoeuvring in barn swallows. Philosophical Transactions of the Royal Society B: Biological Sciences, 2016, 371, 20150391.	1.8	19
31	Using collision cones to assess biological deconfliction methods. Journal of the Royal Society Interface, 2016, 13, 20160502.	1.5	16
32	Covering Ground: Movement Patterns and Random Walk Behavior in <i>Aquilonastra anomala</i> Sea Stars. Biological Bulletin, 2016, 231, 130-141.	0.7	6
33	Direct lateral maneuvers in hawkmoths. Biology Open, 2016, 5, 72-82.	0.6	20
34	Centripetal Acceleration Reaction: An Effective and Robust Mechanism for Flapping Flight in Insects. PLoS ONE, 2015, 10, e0132093.	1.1	17
35	Performance of a quasi-steady model for hovering hummingbirds. Theoretical and Applied Mechanics Letters, 2015, 5, 50-53.	1.3	11
36	Wing-pitching mechanism of hovering Ruby-throated hummingbirds. Bioinspiration and Biomimetics, 2015, 10, 016007.	1.5	17

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37	Western and Clark's grebes use novel strategies for running on water. <i>Journal of Experimental Biology</i> , 2015, 218, 1235-1243.	0.8	31
38	Recent developments in the study of insect flight. <i>Canadian Journal of Zoology</i> , 2015, 93, 925-943.	0.4	37
39	Field Flight Dynamics of Hummingbirds during Territory Encroachment and Defense. <i>PLoS ONE</i> , 2015, 10, e0125659.	1.1	32
40	Biobotic insect swarm based sensor networks for search and rescue. , 2014, , .		7
41	Hawkmoth flight performance in tornado-like whirlwind vortices. <i>Bioinspiration and Biomimetics</i> , 2014, 9, 025003.	1.5	27
42	The mechanics and behavior of Cliff Swallows during tandem flights. <i>Journal of Experimental Biology</i> , 2014, 217, 2717-25.	0.8	28
43	A protocol and calibration method for accurate multi-camera field videography. <i>Journal of Experimental Biology</i> , 2014, 217, 1843-8.	0.8	143
44	Clap and fling mechanism with interacting porous wings in tiny insect flight. <i>Journal of Experimental Biology</i> , 2014, 217, 3898-909.	0.8	71
45	Three-dimensional flow and lift characteristics of a hovering ruby-throated hummingbird. <i>Journal of the Royal Society Interface</i> , 2014, 11, 20140541.	1.5	71
46	A multi-fidelity modelling approach for evaluation and optimization of wing stroke aerodynamics in flapping flight. <i>Journal of Fluid Mechanics</i> , 2013, 721, 118-154.	1.4	93
47	Lift characteristics of a hovering rufous hummingbird. , 2013, , .		2
48	Hawkmoth flight stability in turbulent vortex streets. <i>Journal of Experimental Biology</i> , 2013, 216, 4567-79.	0.8	62
49	Collision avoidance in biological systems using collision cones. , 2013, , .		12
50	Time-Varying Wing-Twist Improves Aerodynamic Efficiency of Forward Flight in Butterflies. <i>PLoS ONE</i> , 2013, 8, e53060.	1.1	111
51	Morphological and kinematic basis of the hummingbird flight stroke: scaling of flight muscle transmission ratio. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2012, 279, 1986-1992.	1.2	60
52	Neuromuscular control of free-flight yaw turns in the hawkmoth <i>Manduca sexta</i> . <i>Journal of Experimental Biology</i> , 2012, 215, 1766-1774.	0.8	41
53	Using Computational and Mechanical Models to Study Animal Locomotion. <i>Integrative and Comparative Biology</i> , 2012, 52, 553-575.	0.9	42
54	Neuromuscular and biomechanical compensation for wing asymmetry in insect hovering flight. <i>Journal of Experimental Biology</i> , 2012, 215, 3631-8.	0.8	44

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55	Hummingbird flight. <i>Current Biology</i> , 2012, 22, R472-R477.	1.8	39
56	The mechanics and control of pitching manoeuvres in a freely flying hawkmoth (<i>Manduca sexta</i>). <i>Journal of Experimental Biology</i> , 2010, 213, 2515-2523.	0.8	153
57	Damping in flapping flight and its implications for manoeuvring, scaling and evolution. <i>Journal of Experimental Biology</i> , 2011, 214, 4073-4081.	0.8	22
58	X-ray reconstruction of moving morphology (XROMM): precision, accuracy and applications in comparative biomechanics research. <i>Journal of Experimental Zoology</i> , 2010, 313A, 262-279.	1.2	310
59	Within-wingbeat damping: dynamics of continuous free-flight yaw turns in <i>Manduca sexta</i> . <i>Biology Letters</i> , 2010, 6, 422-425.	1.0	24
60	Effects of flight speed upon muscle activity in hummingbirds. <i>Journal of Experimental Biology</i> , 2010, 213, 2515-2523.	0.8	39
61	Wingbeat Time and the Scaling of Passive Rotational Damping in Flapping Flight. <i>Science</i> , 2009, 324, 252-255.	6.0	251
62	Tracking a large number of objects from multiple views. , 2009, , .		26
63	Quantifying the complexity of bat wing kinematics. <i>Journal of Theoretical Biology</i> , 2008, 254, 604-615.	0.8	154
64	Software techniques for two- and three-dimensional kinematic measurements of biological and biomimetic systems. <i>Bioinspiration and Biomimetics</i> , 2008, 3, 034001.	1.5	1,062
65	Neuromechanics: an integrative approach for understanding motor control. <i>Integrative and Comparative Biology</i> , 2007, 47, 16-54.	0.9	226
66	Low speed maneuvering flight of the rose-breasted cockatoo (<i>Eolophus roseicapillus</i>). I. Kinematic and neuromuscular control of turning. <i>Journal of Experimental Biology</i> , 2007, 210, 1897-1911.	0.8	65
67	Three-dimensional kinematics of hummingbird flight. <i>Journal of Experimental Biology</i> , 2007, 210, 2368-2382.	0.8	207
68	Regional patterns of pectoralis fascicle strain in the pigeon <i>Columba livia</i> during level flight. <i>Journal of Experimental Biology</i> , 2005, 208, 771-786.	0.8	59
69	Dynamic pressure maps for wings and tails of pigeons in slow, flapping flight, and their energetic implications. <i>Journal of Experimental Biology</i> , 2005, 208, 355-369.	0.8	87
70	Wing inertia and whole-body acceleration: an analysis of instantaneous aerodynamic force production in cockatiels (<i>Nymphicus hollandicus</i>) flying across a range of speeds. <i>Journal of Experimental Biology</i> , 2004, 207, 1689-1702.	0.8	112
71	Wing kinematics of avian flight across speeds. <i>Journal of Avian Biology</i> , 2003, 34, 177-184.	0.6	66
72	How cockatiels (<i>Nymphicus hollandicus</i>) modulate pectoralis power output across flight speeds. <i>Journal of Experimental Biology</i> , 2003, 206, 1363-1378.	0.8	79

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73	Estimates of circulation and gait change based on a three-dimensional kinematic analysis of flight in cockatiels (<i>Nymphicus hollandicus</i>) and ringed turtle-doves (<i>Streptopelia risoria</i>). Journal of Experimental Biology, 2002, 205, 1389-1409.	0.8	102
74	Estimates of circulation and gait change based on a three-dimensional kinematic analysis of flight in cockatiels (<i>Nymphicus hollandicus</i>) and ringed turtle-doves (<i>Streptopelia risoria</i>). Journal of Experimental Biology, 2002, 205, 1389-409.	0.8	53