Douglas L Altshuler

List of Publications by Year
in descending order

72	3,160	172386 29	168321 53
papers	citations	h-index	g-index

76	76	76	2640
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Response properties of optic flow neurons in the accessory optic system of hummingbirds versus zebra finches and pigeons. Journal of Neurophysiology, 2022, 127, 130-144.	0.9	9
2	Birds can transition between stable and unstable states via wing morphing. Nature, 2022, 603, 648-653.	13.7	32
3	Specializations in optic flow encoding in the pretectum of hummingbirds and zebra finches. Current Biology, 2022, 32, 2772-2779.e4.	1.8	7
4	Phase transformation-driven artificial muscle mimics the multifunctionality of avian wing muscle. Journal of the Royal Society Interface, 2021, 18, 20201042.	1.5	2
5	Flight muscle power increases with strain amplitude and decreases with cycle frequency in zebra finches (Taeniopygia guttata). Journal of Experimental Biology, 2020, 223, .	0.8	11
6	Individual variation and the biomechanics of maneuvering flight in hummingbirds. Journal of Experimental Biology, 2020, 223, .	0.8	5
7	An Algorithmic Approach to Natural Behavior. Current Biology, 2020, 30, R663-R675.	1.8	35
8	Hummingbird vision. Current Biology, 2020, 30, R103-R105.	1.8	2
9	Range of motion in the avian wing is strongly associated with flight behavior and body mass. Science Advances, 2019, 5, eaaw6670.	4.7	34
10	Spatial and Temporal Resolution of the Visual System of the Annaâ€™s Hummingbird (Calypte anna) Relative to Other Birds. Physiological and Biochemical Zoology, 2019, 92, 481-495.	0.6	9
11	Wing morphing allows gulls to modulate static pitch stability during gliding. Journal of the Royal Society Interface, 2019, 16, 20180641.	1.5	39
12	Work loop dynamics of the pigeon (Columba livia) humerotriceps demonstrate potentially diverse roles for active wing morphing. Journal of Experimental Biology, 2019, 222, .	0.8	4
13	Pretectal projections to the oculomotor cerebellum in hummingbirds (Calypte anna), zebra finches (Taeniopygia guttata), and pigeons (Columba livia). Journal of Comparative Neurology, 2019, 527, 2644-2658.	0.9	9
14	Pitch Control Effectiveness of the Avian Elbow and Wrist via a Numerical Lifting Line Analysis. , 2019, , .		2
15	The retinal projection to the nucleus lentiformis mesencephali in zebra finch (Taeniopygia guttata) and Annaâ€™s hummingbird (Calypte anna). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2018, 204, 369-376.	0.7	6
16	Morphology, muscle capacity, skill, and maneuvering ability in hummingbirds. Science, 2018, 359, 653-657.	6.0	56
17	The Orientation of Visual Space from the Perspective of Hummingbirds. Frontiers in Neuroscience, 2018, 12, 16.	1.4	8
18	Comparison of Visually Guided Flight in Insects and Birds. Frontiers in Neuroscience, 2018, 12, 157.	1.4	35

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19	Visual-Cerebellar Pathways and Their Roles in the Control of Avian Flight. Frontiers in Neuroscience, 2018, 12, 223.	1.4	32
20	Neurons Responsive to Global Visual Motion Have Unique Tuning Properties in Hummingbirds. Current Biology, 2017, 27, 279-285.	1.8	24
21	The biomechanical origin of extreme wing allometry in hummingbirds. Nature Communications, 2017, 8, 1047.	5.8	22
22	Visual Sensory Signals Dominate Tactile Cues during Docked Feeding in Hummingbirds. Frontiers in Neuroscience, 2017, 11, 622.	1.4	9
23	Mechanical Constraints on Flight at High Elevation Decrease Maneuvering Performance of Hummingbirds. Current Biology, 2016, 26, 3368-3374.	1.8	12
24	Visual guidance of forward flight in hummingbirds reveals control based on image features instead of pattern velocity. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8849-8854.	3.3	38
25	Hummingbirds control turning velocity using body orientation and turning radius using asymmetrical wingbeat kinematics. Journal of the Royal Society Interface, 2016, 13, 20160110.	1.5	18
26	Power reduction and the radial limit of stall delay in revolving wings of different aspect ratio. Journal of the Royal Society Interface, 2015, 12, 20150051.	1.5	91
27	The biophysics of bird flight: functional relationships integrate aerodynamics, morphology, kinematics, muscles, and sensors. Canadian Journal of Zoology, 2015, 93, 961-975.	0.4	78
28	Burst muscle performance predicts the speed, acceleration, and turning performance of Annaâ€™s hummingbirds. ELife, 2015, 4, e11159.	2.8	29
29	Hovering Flight in the HoneybeeApis mellifera: Kinematic Mechanisms for Varying Aerodynamic Forces. Physiological and Biochemical Zoology, 2014, 87, 870-881.	0.6	31
30	Hummingbirds control hovering flight by stabilizing visual motion. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 18375-18380.	3.3	42
31	Molecular Phylogenetics and the Diversification of Hummingbirds. Current Biology, 2014, 24, 910-916.	1.8	341
32	Hydration history and attachment morphology regulate seed release in Chorizanthe rigida (Polygonaceae), a serotinous desert annual. American Journal of Botany, 2014, 101, 1079-1084.	0.8	4
33	Hummingbird wing efficacy depends on aspect ratio and compares with helicopter rotors. Journal of the Royal Society Interface, 2014, 11, 20140585.	1.5	87
34	Molecular Phylogenetics and the Diversification of Hummingbirds. Current Biology, 2014, 24, 1038.	1.8	7
35	Muscle Activation Patterns and Motor Anatomy of Annaâ€™s HummingbirdsCalypte annaand Zebra FinchesTaeniopygia guttata. Physiological and Biochemical Zoology, 2013, 86, 27-46.	0.6	22
36	Hummingbirds generate bilateral vortex loops during hovering: evidence from flow visualization. Experiments in Fluids, 2013, 54, 1.	1.1	26

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37	Very low force-generating ability and unusually high temperature-dependency in hummingbird flight muscle fibers. Journal of Experimental Biology, 2013, 216, 2247-56.	0.8	20
38	Wingbeat kinematics and motor control of yaw turns in Anna's hummingbirds (Calypte anna). Journal of Experimental Biology, 2012, 215, 4070-84.	0.8	54
39	Projected changes in elevational distribution and flight performance of montane Neotropical hummingbirds in response to climate change. Global Change Biology, 2011, 17, 1671-1680.	4.2	28
40	Allometry of hummingbird lifting performance. Journal of Experimental Biology, 2010, 213, 725-734.	0.8	58
41	Trigeminal and Spinal Dorsal Horn (Dis)continuity and Avian Evolution. Brain, Behavior and Evolution, 2010, 76, 11-19.	0.9	7
42	Neuromuscular control of wingbeat kinematics in Anna's hummingbirds (Calypte anna). Journal of Experimental Biology, 2010, 213, 2507-2514.	0.8	28
43	A higher-level taxonomy for hummingbirds. Journal of Ornithology, 2009, 150, 155-165.	0.5	67
44	Wake patterns of the wings and tail of hovering hummingbirds. Experiments in Fluids, 2009, 46, 835-846.	1.1	58
45	Fiber type homogeneity of the flight musculature in small birds. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2009, 152, 324-331.	0.7	58
46	Generation of muscle power during hovering flight in hummingbirds: A comparison of aerodynamic models with measurements of metabolic input and mechanical power output. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2008, 150, S64.	0.8	0
47	Oxygen consumption rates in hovering hummingbirds reflect substrate-dependent differences in P/O ratios: carbohydrate as a `premium fuel'. Journal of Experimental Biology, 2007, 210, 2146-2153.	0.8	53
48	Phylogenetic Systematics and Biogeography of Hummingbirds: Bayesian and Maximum Likelihood Analyses of Partitioned Data and Selection of an Appropriate Partitioning Strategy. Systematic Biology, 2007, 56, 837-856.	2.7	241
49	The physiology and biomechanics of avian flight at high altitude. Integrative and Comparative Biology, 2006, 46, 62-71.	0.9	95
50	Flight Performance and Competitive Displacement of Hummingbirds across Elevational Gradients. American Naturalist, 2006, 167, 216-229.	1.0	65
51	Adaptations to life at high elevation: An introduction to the symposium. Integrative and Comparative Biology, 2006, 46, 3-4.	0.9	12
52	Wing Morphology and Flight Behavior of Some North American Hummingbird Species. Auk, 2005, 122, 872-886.	0.7	30
53	Short-amplitude high-frequency wing strokes determine the aerodynamics of honeybee flight. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18213-18218.	3.3	198
54	WING MORPHOLOGY AND FLIGHT BEHAVIOR OF SOME NORTH AMERICAN HUMMINGBIRD SPECIES. Auk, 2005, 122, 872.	0.7	30

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55	Take-off mechanics in hummingbirds (Trochilidae). Journal of Experimental Biology, 2004, 207, 1345-1352.	0.8	66
56	Of Hummingbirds and Helicopters: Hovering Costs, Competitive Ability, and Foraging Strategies. American Naturalist, 2004, 163, 16-25.	1.0	42
57	Resolution of a paradox: Hummingbird flight at high elevation does not come without a cost. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 17731-17736.	3.3	141
58	Aerodynamic forces of revolving hummingbird wings and wing models. Journal of Zoology, 2004, 264, 327-332.	0.8	96
59	CONFLICTING TERMINOLOGY FOR WING MEASUREMENTS IN ORNITHOLOGY AND AERODYNAMICS. Auk, 2004, 121, 973.	0.7	13
60	Conflicting Terminology for Wing Measurements in Ornithology and Aerodynamics. Auk, 2004, 121, 973-976.	0.7	0
61	Flower Color, Hummingbird Pollination, and Habitat Irradiance in Four Neotropical Forests1. Biotropica, 2003, 35, 344-355.	0.8	50
62	ECOLOGY AND EVOLUTION: Enhanced: Darwin's Hummingbirds. Science, 2003, 300, 588-589.	6.0	17
63	Kinematics of hovering hummingbird flight along simulated and natural elevational gradients. Journal of Experimental Biology, 2003, 206, 3139-3147.	0.8	97
64	The ecological and evolutionary interface of hummingbird flight physiology. Journal of Experimental Biology, 2002, 205, 2325-2336.	0.8	107
65	The ecological and evolutionary interface of hummingbird flight physiology. Journal of Experimental Biology, 2002, 205, 2325-36.	0.8	65
66	Observational Learning in Hummingbirds. Auk, 2001, 118, 795-799.	0.7	16
67	Hovering Performance of Hummingbirds in Hyperoxic Gas Mixtures. Journal of Experimental Biology, 2001, 204, 2021-2027.	0.8	6
68	Observational Learning in Hummingbirds. Auk, 2001, 118, 795.	0.7	12
69	Observational Learning in Hummingbirds. Auk, 2001, 118, 795-799.	0.7	1
70	Hovering performance of hummingbirds in hyperoxic gas mixtures. Journal of Experimental Biology, 2001, 204, 2021-7.	0.8	4
71	Maximal Horizontal Flight Performance of Hummingbirds: Effects of Body Mass and Molt. Physiological and Biochemical Zoology, 1999, 72, 145-155.	0.6	31
72	Novel interactions of non-pollinating ants with pollinators and fruit consumers in a tropical forest. Oecologia, 1999, 119, 600-606.	0.9	66