

James R Usherwood

List of Publications by Year in descending order

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Version: 2024-02-01

55
papers

2,918
citations

218677

26
h-index

168389

53
g-index

60
all docs

60
docs citations

60
times ranked

1798
citing authors

#	ARTICLE	IF	CITATIONS
1	The aerodynamics of revolving wings I. Model hawkmoth wings. <i>Journal of Experimental Biology</i> , 2002, 205, 1547-1564.	1.7	321
2	Upwash exploitation and downwash avoidance by flap phasing in ibis formation flight. <i>Nature</i> , 2014, 505, 399-402.	27.8	272
3	The aerodynamics of revolving wings I. Model hawkmoth wings. <i>Journal of Experimental Biology</i> , 2002, 205, 1547-64.	1.7	228
4	The aerodynamics of revolving wings II. Propeller force coefficients from mayfly to quail. <i>Journal of Experimental Biology</i> , 2002, 205, 1565-1576.	1.7	193
5	Running over rough terrain: guinea fowl maintain dynamic stability despite a large unexpected change in substrate height. <i>Journal of Experimental Biology</i> , 2006, 209, 171-187.	1.7	134
6	The aerodynamics of revolving wings II. Propeller force coefficients from mayfly to quail. <i>Journal of Experimental Biology</i> , 2002, 205, 1565-76.	1.7	130
7	Phasing of dragonfly wings can improve aerodynamic efficiency by removing swirl. <i>Journal of the Royal Society Interface</i> , 2008, 5, 1303-1307.	3.4	121
8	Flying in a flock comes at a cost in pigeons. <i>Nature</i> , 2011, 474, 494-497.	27.8	118
9	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.	1.7	112
10	Matching times of leading and following suggest cooperation through direct reciprocity during V-formation flight in ibis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 2115-2120.	7.1	104
11	No force limit on greyhound sprint speed. <i>Nature</i> , 2005, 438, 753-754.	27.8	103
12	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.	1.7	87
13	Two explanations for the compliant running paradox: reduced work of bouncing viscera and increased stability in uneven terrain. <i>Biology Letters</i> , 2010, 6, 418-421.	2.3	75
14	Understanding brachiation: insight from a collisional perspective. <i>Journal of Experimental Biology</i> , 2003, 206, 1631-1642.	1.7	74
15	The aerodynamic forces and pressure distribution of a revolving pigeon wing. <i>Experiments in Fluids</i> , 2009, 46, 991-1003.	2.4	58
16	The human foot and heel "sole" toe walking strategy: a mechanism enabling an inverted pendular gait with low isometric muscle force?. <i>Journal of the Royal Society Interface</i> , 2012, 9, 2396-2402.	3.4	55
17	Pitch then power: limitations to acceleration in quadrupeds. <i>Biology Letters</i> , 2009, 5, 610-613.	2.3	54
18	Accounting for elite indoor 200m sprint results. <i>Biology Letters</i> , 2006, 2, 47-50.	2.3	53

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19	Compass gait mechanics account for top walking speeds in ducks and humans. <i>Journal of Experimental Biology</i> , 2008, 211, 3744-3749.	1.7	51
20	Why not walk faster?. <i>Biology Letters</i> , 2005, 1, 338-341.	2.3	46
21	The aerodynamics of avian take-off from direct pressure measurements in Canada geese (<i>Branta</i>) Tj ETQq1 1 0.784314 rgBT /Overlock	1.7	39
22	Mechanics of dog walking compared with a passive, stiff-limbed, 4-bar linkage model, and their collisional implications. <i>Journal of Experimental Biology</i> , 2007, 210, 533-540.	1.7	38
23	High aerodynamic lift from the tail reduces drag in gliding raptors. <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	34
24	Constraints on muscle performance provide a novel explanation for the scaling of posture in terrestrial animals. <i>Biology Letters</i> , 2013, 9, 20130414.	2.3	32
25	Bird wings act as a suspension system that rejects gusts. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2020, 287, 20201748.	2.6	30
26	Mechanisms of force and power production in unsteady ricochet brachiation. <i>American Journal of Physical Anthropology</i> , 2003, 120, 364-372.	2.1	29
27	Children and adults minimise activated muscle volume by selecting gait parameters that balance gross mechanical power and work demands. <i>Journal of Experimental Biology</i> , 2015, 218, 2830-2839.	1.7	27
28	Physiological, aerodynamic and geometric constraints of flapping account for bird gaits, and bounding and flap-gliding flight strategies. <i>Journal of Theoretical Biology</i> , 2016, 408, 42-52.	1.7	27
29	Work minimization accounts for footfall phasing in slow quadrupedal gaits. <i>ELife</i> , 2017, 6, .	6.0	23
30	Raptor wing morphing with flight speed. <i>Journal of the Royal Society Interface</i> , 2021, 18, 20210349.	3.4	23
31	Identification of mouse gaits using a novel force-sensing exercise wheel. <i>Journal of Applied Physiology</i> , 2015, 119, 704-718.	2.5	17
32	Gait transition cost in humans. <i>European Journal of Applied Physiology</i> , 2003, 90, 647-650.	2.5	16
33	The extraordinary athletic performance of leaping gibbons. <i>Biology Letters</i> , 2012, 8, 46-49.	2.3	16
34	An extension to the collisional model of the energetic cost of support qualitatively explains trotting and the trot-to-canter transition. <i>Journal of Experimental Zoology Part A: Ecological and Integrative Physiology</i> , 2020, 333, 9-19.	1.9	16
35	Energetically optimal running requires torques about the centre of mass. <i>Journal of the Royal Society Interface</i> , 2012, 9, 2011-2015.	3.4	14
36	Inverted pendular running: a novel gait predicted by computer optimization is found between walk and run in birds. <i>Biology Letters</i> , 2010, 6, 765-768.	2.3	13

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37	Microparticle formation after co-culture of human whole blood and umbilical artery in a novel in vitro model of flow. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2012, 81A, 390-399.	1.5	13
38	Artificial mass loading disrupts stable social order in pigeon dominance hierarchies. <i>Biology Letters</i> , 2020, 16, 20200468.	2.3	12
39	Inertia may limit efficiency of slow flapping flight, but mayflies show a strategy for reducing the power requirements of loiter. <i>Bioinspiration and Biomimetics</i> , 2009, 4, 015003.	2.9	11
40	Locomotor preferences in terrestrial vertebrates: An online crowdsourcing approach to data collection. <i>Scientific Reports</i> , 2016, 6, 28825.	3.3	11
41	Why are the fastest runners of intermediate size? Contrasting scaling of mechanical demands and muscle supply of work and power. <i>Biology Letters</i> , 2020, 16, 20200579.	2.3	11
42	Vaulting mechanics successfully predict decrease in walk-run transition speed with incline. <i>Biology Letters</i> , 2013, 9, 20121121.	2.3	9
43	The scaling or ontogeny of human gait kinetics and walk-run transition: The implications of work vs. peak power minimization. <i>Journal of Biomechanics</i> , 2018, 81, 12-21.	2.1	9
44	Leap and Strike kinetics of an acoustically 'hunting' barn owl <i>Tyto alba</i> . <i>Journal of Experimental Biology</i> , 2014, 217, 3002-5.	1.7	8
45	The grazing gait, and implications of toppling table geometry for primate footfall sequences. <i>Biology Letters</i> , 2018, 14, 20180137.	2.3	8
46	Limb work and joint work minimization reveal an energetic benefit to the elbows-back, knees-forward limb design in parasagittal quadrupeds. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2020, 287, 20201517.	2.6	8
47	Collared doves <i>Streptopelia decaocto</i> display with high, near-maximal muscle powers, but at low energetic cost. <i>Journal of Avian Biology</i> , 2008, 39, 19-23.	1.2	7
48	Virtual manipulation of tail postures of a gliding barn owl (<i>Tyto alba</i>) demonstrates drag minimization when gliding. <i>Journal of the Royal Society Interface</i> , 2022, 19, 20210710.	3.4	7
49	Minimalist analogue robot discovers animal-like walking gaits. <i>Bioinspiration and Biomimetics</i> , 2020, 15, 026004.	2.9	5
50	The Possibility of Zero Limb-Work Gaits in Sprawled and Parasagittal Quadrupeds: Insights from Linkages of the Industrial Revolution. <i>Integrative Organismal Biology</i> , 2020, 2, obaa017.	1.8	4
51	Legs as linkages: an alternative paradigm for the role of tendons and isometric muscles in facilitating economical gait. <i>Journal of Experimental Biology</i> , 2022, 225, .	1.7	4
52	An instrumented centrifuge for studying mouse locomotion and behaviour under hypergravity. <i>Biology Open</i> , 2019, 8, .	1.2	2
53	MORE THAN A FLITTING TOUR OF FLAPPING FLIGHT. <i>Journal of Experimental Biology</i> , 2003, 206, 2095-2096.	1.7	1
54	Collared doves <i>Streptolelia decaocto</i> display with high, near-maximal muscle powers, but at low energetic cost. <i>Journal of Avian Biology</i> , 2007, .	1.2	1

#	ARTICLE	IF	CITATIONS
55	POLARIZED SQUID. <i>Journal of Experimental Biology</i> , 2007, 210, iv-iv.	1.7	0