James R Usherwood

List of Publications by Year
in descending order

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	Virtual manipulation of tail postures of a gliding barn owl (<i>Tyto alba</i>) demonstrates drag minimization when gliding. Journal of the Royal Society Interface, 2022, 19, 20210710.	3.4	7
2	Legs as linkages: an alternative paradigm for the role of tendons and isometric muscles in facilitating economical gait. Journal of Experimental Biology, 2022, 225, .	1.7	4
3	Raptor wing morphing with flight speed. Journal of the Royal Society Interface, 2021, 18, 20210349.	3.4	23
4	An extension to the collisional model of the energetic cost of support qualitatively explains trotting and the trotâ€“canter transition. Journal of Experimental Zoology Part A: Ecological and Integrative Physiology, 2020, 333, 9-19.	1.9	16
5	Minimalist analogue robot discovers animal-like walking gaits. Bioinspiration and Biomimetics, 2020, 15, 026004.	2.9	5
6	Why are the fastest runners of intermediate size? Contrasting scaling of mechanical demands and muscle supply of work and power. Biology Letters, 2020, 16, 20200579.	2.3	11
7	The Possibility of Zero Limb-Work Gaits in Sprawled and Parasagittal Quadrupeds: Insights from Linkages of the Industrial Revolution. Integrative Organismal Biology, 2020, 2, obaa017.	1.8	4
8	Bird wings act as a suspension system that rejects gusts. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20201748.	2.6	30
9	Artificial mass loading disrupts stable social order in pigeon dominance hierarchies. Biology Letters, 2020, 16, 20200468.	2.3	12
10	High aerodynamic lift from the tail reduces drag in gliding raptors. Journal of Experimental Biology, 2020, 223, .	1.7	34
11	Limb work and joint work minimization reveal an energetic benefit to the elbows-back, knees-forward limb design in parasagittal quadrupeds. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20201517.	2.6	8
12	An instrumented centrifuge for studying mouse locomotion and behaviour under hypergravity. Biology Open, 2019, 8, .	1.2	2
13	The scaling or ontogeny of human gait kinetics and walk-run transition: The implications of work vs. peak power minimization. Journal of Biomechanics, 2018, 81, 12-21.	2.1	9
14	The grazing gait, and implications of toppling table geometry for primate footfall sequences. Biology Letters, 2018, 14, 20180137.	2.3	8
15	Work minimization accounts for footfall phasing in slow quadrupedal gaits. ELife, 2017, 6, .	6.0	23
16	Physiological, aerodynamic and geometric constraints of flapping account for bird gaits, and bounding and flap-gliding flight strategies. Journal of Theoretical Biology, 2016, 408, 42-52.	1.7	27
17	Locomotor preferences in terrestrial vertebrates: An online crowdsourcing approach to data collection. Scientific Reports, 2016, 6, 28825.	3.3	11
18	Children and adults minimise activated muscle volume by selecting gait parameters that balance gross mechanical power and work demands. Journal of Experimental Biology, 2015, 218, 2830-2839.	1.7	27

#	ARTICLE	IF	CITATIONS
19	Identification of mouse gaits using a novel force-sensing exercise wheel. Journal of Applied Physiology, 2015, 119, 704-718.	2.5	17
20	Matching times of leading and following suggest cooperation through direct reciprocity during V-formation flight in ibis. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 2115-2120.	7.1	104
21	Leap and Strike kinetics of an acoustically 'hunting' barn owl Tyto alba. Journal of Experimental Biology, 2014, 217, 3002-5.	1.7	8
22	Upwash exploitation and downwash avoidance by flap phasing in ibis formation flight. Nature, 2014, 505, 399-402.	27.8	272
23	Constraints on muscle performance provide a novel explanation for the scaling of posture in terrestrial animals. Biology Letters, 2013, 9, 20130414.	2.3	32
24	Vaulting mechanics successfully predict decrease in walkâ€"run transition speed with incline. Biology Letters, 2013, 9, 20121121.	2.3	9
25	The human foot and heelâ€"soleâ€"toe walking strategy: a mechanism enabling an inverted pendular gait with low isometric muscle force?. Journal of the Royal Society Interface, 2012, 9, 2396-2402.	3.4	55
26	Energetically optimal running requires torques about the centre of mass. Journal of the Royal Society Interface, 2012, 9, 2011-2015.	3.4	14
27	The extraordinary athletic performance of leaping gibbons. Biology Letters, 2012, 8, 46-49.	2.3	16
28	Microparticle formation after coâ€culture of human whole blood and umbilical artery in a novel in vitro model of flow. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2012, 81A, 390-399.	1.5	13
29	Flying in a flock comes at a cost in pigeons. Nature, 2011, 474, 494-497.	27.8	118
30	Two explanations for the compliant running paradox: reduced work of bouncing viscera and increased stability in uneven terrain. Biology Letters, 2010, 6, 418-421.	2.3	75
31	Inverted pendular running: a novel gait predicted by computer optimization is found between walk and run in birds. Biology Letters, 2010, 6, 765-768.	2.3	13
32	Inertia may limit efficiency of slow flapping flight, but mayflies show a strategy for reducing the power requirements of loiter. Bioinspiration and Biomimetics, 2009, 4, 015003.	2.9	11
33	Pitch then power: limitations to acceleration in quadrupeds. Biology Letters, 2009, 5, 610-613.	2.3	54
34	The aerodynamic forces and pressure distribution of a revolving pigeon wing. Experiments in Fluids, 2009, 46, 991-1003.	2.4	58
35	Collared doves <i>Streptopelia decaocto</i> display with high, nearâ€maximal muscle powers, but at low energetic cost. Journal of Avian Biology, 2008, 39, 19-23.	1.2	7
36	Phasing of dragonfly wings can improve aerodynamic efficiency by removing swirl. Journal of the Royal Society Interface, 2008, 5, 1303-1307.	3.4	121

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37	Compass gait mechanics account for top walking speeds in ducks and humans. Journal of Experimental Biology, 2008, 211, 3744-3749.	1.7	51
38	Mechanics of dog walking compared with a passive, stiff-limbed, 4-bar linkage model, and their collisional implications. Journal of Experimental Biology, 2007, 210, 533-540.	1.7	38
39	Collared doves Streptolelia decaocto display with high, near-maximal muscle powers, but at low energetic cost. Journal of Avian Biology, 2007, .	1.2	1
40	POLARIZED SQUID. Journal of Experimental Biology, 2007, 210, iv-iv.	1.7	0
41	Accounting for elite indoor 200â€Šm sprint results. Biology Letters, 2006, 2, 47-50.	2.3	53
42	Running over rough terrain: guinea fowl maintain dynamic stability despite a large unexpected change in substrate height. Journal of Experimental Biology, 2006, 209, 171-187.	1.7	134
43	No force limit on greyhound sprint speed. Nature, 2005, 438, 753-754.	27.8	103
44	Dynamic pressure maps for wings and tails of pigeons in slow, flapping flight, and their energetic implications. Journal of Experimental Biology, 2005, 208, 355-369.	1.7	87
45	Why not walk faster?. Biology Letters, 2005, 1, 338-341.	2.3	46
46	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. Journal of Experimental Biology, 2004, 207, 1689-1702.	1.7	112
47	Gait transition cost in humans. European Journal of Applied Physiology, 2003, 90, 647-650.	2.5	16
48	Mechanisms of force and power production in unsteady ricochetal brachiation. American Journal of Physical Anthropology, 2003, 120, 364-372.	2.1	29
49	MORE THAN A FLITTING TOUR OF FLAPPING FLIGHT. Journal of Experimental Biology, 2003, 206, 2095-2096.	1.7	1
50	Understanding brachiation: insight from a collisional perspective. Journal of Experimental Biology, 2003, 206, 1631-1642.	1.7	74
51	The aerodynamics of avian take-off from direct pressure measurements in Canada geese (Branta) Tj ETQq1 1 0.784314 rgBT /Overlock	1.7	39
52	The aerodynamics of revolving wings I. Model hawkmoth wings. Journal of Experimental Biology, 2002, 205, 1547-1564.	1.7	321
53	The aerodynamics of revolving wings II. Propeller force coefficients from mayfly to quail. Journal of Experimental Biology, 2002, 205, 1565-1576.	1.7	193
54	The aerodynamics of revolving wings I. Model hawkmoth wings. Journal of Experimental Biology, 2002, 205, 1547-64.	1.7	228

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55	The aerodynamics of revolving wings II. Propeller force coefficients from mayfly to quail. Journal of Experimental Biology, 2002, 205, 1565-76.	1.7	130