Thomas J Roberts

List of Publications by Year in descending order

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62 papers	4,550 citations	126907 33 h-index	128289 60 g-index
62 all docs	62 docs citations	62 times ranked	3049 citing authors

#	Article	IF	Citations
1	Passive skeletal muscle can function as an osmotic engine. Biology Letters, 2021, 17, 20200738.	2.3	2
2	Gastrocnemius Muscle Structural and Functional Changes Associated with Domestication in the Turkey. Animals, 2021, 11, 1850.	2.3	0
3	Magnetomicrometry. Science Robotics, 2021, 6, .	17.6	26
4	The need for speed: functional specializations of locomotor and feeding muscles in Anolis lizards. Journal of Experimental Biology, 2020, 223, .	1.7	7
5	Internal fluid pressure influences muscle contractile force. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 1772-1778.	7.1	32
6	Diversity of extracellular matrix morphology in vertebrate skeletal muscle. Journal of Morphology, 2020, 281, 160-169.	1.2	26
7	The time course of calf muscle fluid volume during prolonged running. Physiological Reports, 2020, 8, e14414.	1.7	6
8	Conference report on contractures in musculoskeletal and neurological conditions. Muscle and Nerve, 2020, 61, 740-744.	2.2	13
9	Loading Rate Has Little Influence on Tendon Fascicle Mechanics. Frontiers in Physiology, 2020, 11, 255.	2.8	9
10	Some Challenges of Playing with Power: Does Complex Energy Flow Constrain Neuromuscular Performance?. Integrative and Comparative Biology, 2019, 59, 1619-1628.	2.0	6
11	Passive muscle tension increases in proportion to intramuscular fluid volume. Journal of Experimental Biology, 2019, 222, .	1.7	15
12	The Multi-Scale, Three-Dimensional Nature of Skeletal Muscle Contraction. Physiology, 2019, 34, 402-408.	3.1	34
13	Evidence of a tunable biological spring: elastic energy storage in aponeuroses varies with transverse strain in vivo. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20182764.	2.6	17
14	Release of fascial compartment boundaries reduces muscle force output. Journal of Applied Physiology, 2019, 126, 593-598.	2.5	13
15	Patterns of musculoskeletal growth and dimensional changes associated with selection and developmental plasticity in domestic and wild strain turkeys. Ecology and Evolution, 2018, 8, 3229-3239.	1.9	9
16	Waddle and shuffle: Gait alterations associated with domestication in turkeys. Journal of Experimental Biology, 2018, 221, .	1.7	8
17	Aponeurosis influences the relationship between muscle gearing and force. Journal of Applied Physiology, 2018, 125, 513-519.	2.5	31
18	Bluegill sunfish use high power outputs from axial muscles to generate powerful suction-feeding strikes. Journal of Experimental Biology, 2018, 221, .	1.7	27

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19	Structural Determinants of Muscle Gearing During Dynamic Contractions. Integrative and Comparative Biology, 2018, 58, 207-218.	2.0	56
20	Incompressible fluid plays a mechanical role in the development of passive muscle tension. Biology Letters, 2017, 13, 20160630.	2.3	46
21	Speed-dependent modulation of wing muscle recruitment intensity and kinematics in two bat species. Journal of Experimental Biology, 2017, 220, 1820-1829.	1.7	15
22	3â€Ð range of motion envelopes reveal interacting degrees of freedom in avian hind limb joints. Journal of Anatomy, 2017, 231, 906-920.	1.5	37
23	Skeletal muscle mechanics, energetics and plasticity. Journal of NeuroEngineering and Rehabilitation, 2017, 14, 108.	4.6	99
24	Stuck in gear: age-related loss of variable gearing in skeletal muscle. Journal of Experimental Biology, 2016, 219, 998-1003.	1.7	62
25	Determinants of aponeurosis shape change during muscle contraction. Journal of Biomechanics, 2016, 49, 1812-1817.	2.1	32
26	Fluoromicrometry: A Method for Measuring Muscle Length Dynamics with Biplanar Videofluoroscopy. Journal of Experimental Zoology, 2016, 325, 399-408.	1.2	37
27	Contribution of elastic tissues to the mechanics and energetics of muscle function during movement. Journal of Experimental Biology, 2016, 219, 266-275.	1.7	143
28	Robust jumping performance and elastic energy recovery from compliant perches in tree frogs. Journal of Experimental Biology, 2015, 218, 3360-3363.	1.7	32
29	Swimming muscles power suction feeding in largemouth bass. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 8690-8695.	7.1	153
30	The series elastic shock absorber: tendon elasticity modulates energy dissipation by muscle during burst deceleration. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20142800.	2.6	100
31	Timing matters: tuning the mechanics of a muscle-tendon unit by adjusting stimulation phase during cyclic contractions. Journal of Experimental Biology, 2015, 218, 3150-9.	1.7	32
32	Power amplification in an isolated muscle-tendon is load dependent. Journal of Experimental Biology, 2015, 218, 3700-9.	1.7	31
33	Guineafowl with a twist: asymmetric limb control in steady bipedal locomotion. Journal of Experimental Biology, 2015, 218, 3836-3844.	1.7	31
34	The mechanics of elastic loading and recoil in anuran jumping. Journal of Experimental Biology, 2014, 217, 4372-4378.	1.7	82
35	The energetic benefits of tendon springs in running: is the reduction of muscle work important?. Journal of Experimental Biology, 2014, 217, 4365-71.	1.7	42
36	Geared up to stretch: pennate muscle behavior during active lengthening. Journal of Experimental Biology, 2014, 217, 376-381.	1.7	63

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37	Long-axis rotation: a missing degree of freedom in avian bipedal locomotion. Journal of Experimental Biology, 2014, 217, 2770-82.	1.7	89
38	Chasing maximal performance: a cautionary tale from the celebrated jumping frogs of Calaveras County. Journal of Experimental Biology, 2013, 216, 3947-3953.	1.7	42
39	How Tendons Buffer Energy Dissipation by Muscle. Exercise and Sport Sciences Reviews, 2013, 41, 186-193.	3.0	94
40	Variable gearing in a biologically inspired pneumatic actuator array. Bioinspiration and Biomimetics, 2013, 8, 026002.	2.9	25
41	Muscle power attenuation by tendon during energy dissipation. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 1108-1113.	2.6	98
42	Evidence for a vertebrate catapult: elastic energy storage in the plantaris tendon during frog jumping. Biology Letters, 2012, 8, 386-389.	2.3	131
43	Flexible mechanisms: the diverse roles of biological springs in vertebrate movement. Journal of Experimental Biology, 2011, 214, 353-361.	1.7	313
44	The weak link: do muscle properties determine locomotor performance in frogs?. Philosophical Transactions of the Royal Society B: Biological Sciences, 2011, 366, 1488-1495.	4.0	55
45	The series-elastic shock absorber: tendons attenuate muscle power during eccentric actions. Journal of Applied Physiology, 2010, 109, 396-404.	2.5	85
46	Muscle performance during frog jumping: influence of elasticity on muscle operating lengths. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 1523-1530.	2.6	103
47	Interpreting muscle function from EMG: lessons learned from direct measurements of muscle force. Integrative and Comparative Biology, 2008, 48, 312-320.	2.0	107
48	Variable gearing in pennate muscles. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 1745-1750.	7.1	295
49	Relative shortening velocity in locomotor muscles: turkey ankle extensors operate at low V/V_{max}. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2008, 294, R200-R210.	1.8	25
50	Muscle strain is modulated more with running slope than speed in wild turkey knee and hip extensors. Journal of Experimental Biology, 2007, 210, 2510-2517.	1.7	33
51	Mechanical function of two ankle extensors in wild turkeys: shifts from energy production to energy absorption during inclineversusdecline running. Journal of Experimental Biology, 2004, 207, 2277-2288.	1.7	112
52	Forceâ€“velocity properties of two avian hindlimb muscles. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2004, 137, 711-721.	1.8	63
53	Energetics of Bipedal Running: I. Metabolic Cost of Generating Force. Journal of Experimental Biology, 1998, 201, 2745-2751.	1.7	212
54	Energetics Of Bipedal Running II. Limb Design and Running Mechanics. Journal of Experimental Biology, 1998, 201, 2753-2762.	1.7	101

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55	Energetics of bipedal running. I. Metabolic cost of generating force. Journal of Experimental Biology, 1998, 201, 2745-51.	1.7	169
56	Energetics of bipedal running. II. Limb design and running mechanics. Journal of Experimental Biology, 1998, 201, 2753-62.	1.7	75
57	Muscular Force in Running Turkeys: The Economy of Minimizing Work. Science, 1997, 275, 1113-1115.	12.6	680
58	Design of the Oxygen and Substrate Pathways: I. Model and Strategy to Test Symmorphosis in a Network Structure. Journal of Experimental Biology, 1996, 199, 1643-1649.	1.7	44
59	Design of the Oxygen and Substrate Pathways: II. Defining the Upper Limits of Carbohydrate and Fat Oxidation. Journal of Experimental Biology, 1996, 199, 1651-1658.	1.7	103
60	Design of the Oxygen and Substrate Pathways: III. Partitioning Energy Provision from Carbohydrates. Journal of Experimental Biology, 1996, 199, 1659-1666.	1.7	45
61	Design of the oxygen and substrate pathways. II. Defining the upper limits of carbohydrate and fat oxidation. Journal of Experimental Biology, 1996, 199, 1651-8.	1.7	76
62	Relationship between gene expression networks and muscle contractile physiology differences in Anolis lizards. Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 0, , .	1.5	1