J Maxwell Donelan

List of Publications by Year
in descending order

44	5,122	23	41
papers	citations	h-index	g-index
		279798	276875

52	52	52	3362
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Biomechanical Energy Harvesting: Generating Electricity During Walking with Minimal User Effort. Science, 2008, 319, 807-810.	12.6	633
2	Energetic Consequences of Walking Like an Inverted Pendulum: Step-to-Step Transitions. Exercise and Sport Sciences Reviews, 2005, 33, 88-97.	3.0	568
3	Mechanical work for step-to-step transitions is a major determinant of the metabolic cost of human walking. Journal of Experimental Biology, 2002, 205, 3717-3727.	1.7	547
4	Mechanical and metabolic determinants of the preferred step width in human walking. Proceedings of the Royal Society B: Biological Sciences, 2001, 268, 1985-1992.	2.6	489
5	Simultaneous positive and negative external mechanical work in human walking. Journal of Biomechanics, 2002, 35, 117-124.	2.1	427
6	Mechanical work for step-to-step transitions is a major determinant of the metabolic cost of human walking. Journal of Experimental Biology, 2002, 205, 3717-27.	1.7	360
7	Dynamic Principles of Gait and Their Clinical Implications. Physical Therapy, 2010, 90, 157-174.	2.4	336
8	Humans Can Continuously Optimize Energetic Cost during Walking. Current Biology, 2015, 25, 2452-2456.	3.9	272
9	Mechanics and energetics of swinging the human leg. Journal of Experimental Biology, 2005, 208, 439-445.	1.7	223
10	Force treadmill for measuring vertical and horizontal ground reaction forces. Journal of Applied Physiology, 1998, 85, 764-769.	2.5	185
11	Distinct fast and slow processes contribute to the selection of preferred step frequency during human walking. Journal of Applied Physiology, 2011, 110, 1682-1690.	2.5	97
12	"Body-In-The-Loop": Optimizing Device Parameters Using Measures of Instantaneous Energetic Cost. PLoS ONE, 2015, 10, e0135342.	2.5	97
13	Estimating instantaneous energetic cost during non-steady-state gait. Journal of Applied Physiology, 2014, 117, 1406-1415.	2.5	88
14	Scaling of sensorimotor control in terrestrial mammals. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 3563-3568.	2.6	87
15	Fast visual prediction and slow optimization of preferred walking speed. Journal of Neurophysiology, 2012, 107, 2549-2559.	1.8	61
16	The kangaroo's tail propels and powers pentapedal locomotion. Biology Letters, 2014, 10, 20140381.	2.3	61
17	Mechanics and energetics of step-to-step transitions isolated from human walking. Journal of Experimental Biology, 2010, 213, 4265-4271.	1.7	59
18	Scaling of sensorimotor delays in terrestrial mammals. Proceedings of the Royal Society B: Biological Sciences, 2018, 285, 20180613.	2.6	59

#	Article	IF	Citations
19	Taking advantage of external mechanical work to reduce metabolic cost: the mechanics and energetics of splitâ€belt treadmill walking. Journal of Physiology, 2019, 597, 4053-4068.	2.9	51
20	Force Regulation of Ankle Extensor Muscle Activity in Freely Walking Cats. Journal of Neurophysiology, 2009, 101, 360-371.	1.8	47
21	Coordination of push-off and collision determine the mechanical work of step-to-step transitions when isolated from human walking. Gait and Posture, 2012, 35, 292-297.	1.4	39
22	Using asymmetry to your advantage: learning to acquire and accept external assistance during prolonged split-belt walking. Journal of Neurophysiology, 2021, 125, 344-357.	1.8	35
23	Foot placement relies on state estimation during visually guided walking. Journal of Neurophysiology, 2017, 117, 480-491.	1.8	31
24	Energy optimization is a major objective in the real-time control of step width in human walking. Journal of Biomechanics, 2019, 91, 85-91.	2.1	30
25	Is natural variability in gait sufficient to initiate spontaneous energy optimization in human walking?. Journal of Neurophysiology, 2019, 121, 1848-1855.	1.8	28
26	How people initiate energy optimization and converge on their optimal gaits. Journal of Experimental Biology, 2019, 222, .	1.7	28
27	Fast and slow processes underlie the selection of both step frequency and walking speed. Journal of Experimental Biology, 2014, 217, 2939-46.	1.7	23
28	General variability leads to specific adaptation toward optimal movement policies. Current Biology, 2022, 32, 2222-2232.e5.	3.9	22
29	Criteria for dynamic similarity in bouncing gaits. Journal of Theoretical Biology, 2008, 250, 339-348.	1.7	21
30	Running perturbations reveal general strategies for step frequency selection. Journal of Applied Physiology, 2012, 112, 1239-1247.	2.5	16
31	Contribution of blood oxygen and carbon dioxide sensing to the energetic optimization of human walking. Journal of Neurophysiology, 2017, 118, 1425-1433.	1.8	16
32	A Mechatronic System for Studying Energy Optimization During Walking. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 1416-1425.	4.9	14
33	Challenging balance during sensorimotor adaptation increases generalization. Journal of Neurophysiology, 2020, 123, 1342-1354.	1.8	13
34	Energy consumption does not change after selective dorsal rhizotomy in children with spastic cerebral palsy. Developmental Medicine and Child Neurology, 2020, 62, 1047-1053.	2.1	13
35	Scaling of inertial delays in terrestrial mammals. PLoS ONE, 2020, 15, e0217188.	2.5	12
36	Savings in sensorimotor learning during balance-challenged walking but not reaching. Journal of Neurophysiology, 2021, 125, 2384-2396.	1.8	5

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37	A generalized method for controlling end-tidal respiratory gases during nonsteady physiological conditions. Journal of Applied Physiology, 2016, 121, 1247-1262.	2.5	4
38	Motor Control: No Constant but Change. Current Biology, 2016, 26, R915-R918.	3.9	3
39	Increasing the gradient of energetic cost does not initiate adaptation in human walking. Journal of Neurophysiology, 2021, 126, 440-450.	1.8	3
40	Energy optimization during walking involves implicit processing. Journal of Experimental Biology, 2021, 224, .	1.7	3
41	Principles of Energetics and Stability in Legged Locomotion. , 2017, , 1-28.		2
42	A remote laboratory course on experimental human physiology using wearable technology. American Journal of Physiology - Advances in Physiology Education, 2022, 46, 117-124.	1.6	2
43	Characterizing the performance of human leg external force control. Scientific Reports, 2022, 12, 4935.	3.3	2
44	Principles of Energetics and Stability in Legged Locomotion. , 2019, , 1231-1259.		0