J Maxwell Donelan

List of Publications by Year
in descending order

44 papers	5,122 citations	279701 23 h-index	276775 41 g-index
52 all docs	52 docs citations	52 times ranked	3362 citing authors

#	Article	IF	Citations
1	A remote laboratory course on experimental human physiology using wearable technology. American Journal of Physiology - Advances in Physiology Education, 2022, 46, 117-124.	0.8	2
2	Characterizing the performance of human leg external force control. Scientific Reports, 2022, 12, 4935.	1.6	2
3	General variability leads to specific adaptation toward optimal movement policies. Current Biology, 2022, 32, 2222-2232.e5.	1.8	22
4	Using asymmetry to your advantage: learning to acquire and accept external assistance during prolonged split-belt walking. Journal of Neurophysiology, 2021, 125, 344-357.	0.9	35
5	Savings in sensorimotor learning during balance-challenged walking but not reaching. Journal of Neurophysiology, 2021, 125, 2384-2396.	0.9	5
6	Increasing the gradient of energetic cost does not initiate adaptation in human walking. Journal of Neurophysiology, 2021, 126, 440-450.	0.9	3
7	Energy optimization during walking involves implicit processing. Journal of Experimental Biology, 2021, 224, .	0.8	3
8	Challenging balance during sensorimotor adaptation increases generalization. Journal of Neurophysiology, 2020, 123, 1342-1354.	0.9	13
9	Scaling of inertial delays in terrestrial mammals. PLoS ONE, 2020, 15, e0217188.	1.1	12
10	Energy consumption does not change after selective dorsal rhizotomy in children with spastic cerebral palsy. Developmental Medicine and Child Neurology, 2020, 62, 1047-1053.	1.1	13
11	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.	1.3	51
12	A Mechatronic System for Studying Energy Optimization During Walking. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 1416-1425.	2.7	14
13	Energy optimization is a major objective in the real-time control of step width in human walking. Journal of Biomechanics, 2019, 91, 85-91.	0.9	30
14	Is natural variability in gait sufficient to initiate spontaneous energy optimization in human walking?. Journal of Neurophysiology, 2019, 121, 1848-1855.	0.9	28
15	How people initiate energy optimization and converge on their optimal gaits. Journal of Experimental Biology, 2019, 222, .	0.8	28
16	Principles of Energetics and Stability in Legged Locomotion. , 2019, , 1231-1259.		0
17	Scaling of sensorimotor delays in terrestrial mammals. Proceedings of the Royal Society B: Biological Sciences, 2018, 285, 20180613.	1.2	59
18	Foot placement relies on state estimation during visually guided walking. Journal of Neurophysiology, 2017, 117, 480-491.	0.9	31

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19	Contribution of blood oxygen and carbon dioxide sensing to the energetic optimization of human walking. Journal of Neurophysiology, 2017, 118, 1425-1433.	0.9	16
20	Principles of Energetics and Stability in Legged Locomotion. , 2017, , 1-28.		2
21	A generalized method for controlling end-tidal respiratory gases during nonsteady physiological conditions. Journal of Applied Physiology, 2016, 121, 1247-1262.	1.2	4
22	Motor Control: No Constant but Change. Current Biology, 2016, 26, R915-R918.	1.8	3
23	Humans Can Continuously Optimize Energetic Cost during Walking. Current Biology, 2015, 25, 2452-2456.	1.8	272
24	"Body-In-The-Loop": Optimizing Device Parameters Using Measures of Instantaneous Energetic Cost. PLoS ONE, 2015, 10, e0135342.	1.1	97
25	Fast and slow processes underlie the selection of both step frequency and walking speed. Journal of Experimental Biology, 2014, 217, 2939-46.	0.8	23
26	Estimating instantaneous energetic cost during non-steady-state gait. Journal of Applied Physiology, 2014, 117, 1406-1415.	1.2	88
27	The kangaroo's tail propels and powers pentapedal locomotion. Biology Letters, 2014, 10, 20140381.	1.0	61
28	Running perturbations reveal general strategies for step frequency selection. Journal of Applied Physiology, 2012, 112, 1239-1247.	1.2	16
29	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.	0.6	39
30	Fast visual prediction and slow optimization of preferred walking speed. Journal of Neurophysiology, 2012, 107, 2549-2559.	0.9	61
31	Distinct fast and slow processes contribute to the selection of preferred step frequency during human walking. Journal of Applied Physiology, 2011, 110, 1682-1690.	1.2	97
32	Dynamic Principles of Gait and Their Clinical Implications. Physical Therapy, 2010, 90, 157-174.	1.1	336
33	Scaling of sensorimotor control in terrestrial mammals. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 3563-3568.	1.2	87
34	Mechanics and energetics of step-to-step transitions isolated from human walking. Journal of Experimental Biology, 2010, 213, 4265-4271.	0.8	59
35	Force Regulation of Ankle Extensor Muscle Activity in Freely Walking Cats. Journal of Neurophysiology, 2009, 101, 360-371.	0.9	47
36	Criteria for dynamic similarity in bouncing gaits. Journal of Theoretical Biology, 2008, 250, 339-348.	0.8	21

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37	Biomechanical Energy Harvesting: Generating Electricity During Walking with Minimal User Effort. Science, 2008, 319, 807-810.	6.0	633
38	Mechanics and energetics of swinging the human leg. Journal of Experimental Biology, 2005, 208, 439-445.	0.8	223
39	Energetic Consequences of Walking Like an Inverted Pendulum: Step-to-Step Transitions. Exercise and Sport Sciences Reviews, 2005, 33, 88-97.	1.6	568
40	Simultaneous positive and negative external mechanical work in human walking. Journal of Biomechanics, 2002, 35, 117-124.	0.9	427
41	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.	0.8	547
42	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.	0.8	360
43	Mechanical and metabolic determinants of the preferred step width in human walking. Proceedings of the Royal Society B: Biological Sciences, 2001, 268, 1985-1992.	1.2	489
44	Force treadmill for measuring vertical and horizontal ground reaction forces. Journal of Applied Physiology, 1998, 85, 764-769.	1.2	185