Gregory S Sawicki

List of Publications by Year
in descending order

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61 papers	5,086 citations	147801 31 h-index	138484 58 g-index
65 all docs	65 docs citations	65 times ranked	2998 citing authors

#	ARTICLE	IF	CITATIONS
1	Reducing the energy cost of human walking using an unpowered exoskeleton. Nature, 2015, 522, 212-215.	27.8	732
2	The mechanics and energetics of human walking and running: a joint level perspective. Journal of the Royal Society Interface, 2012, 9, 110-118.	3.4	369
3	An improved powered ankleâ€“foot orthosis using proportional myoelectric control. Gait and Posture, 2006, 23, 425-428.	1.4	329
4	The exoskeleton expansion: improving walking and running economy. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 25.	4.6	243
5	Mechanics and energetics of level walking with powered ankle exoskeletons. Journal of Experimental Biology, 2008, 211, 1402-1413.	1.7	232
6	A pneumatically powered knee-ankle-foot orthosis (KAFO) with myoelectric activation and inhibition. Journal of NeuroEngineering and Rehabilitation, 2009, 6, 23.	4.6	191
7	Human medial gastrocnemius forceâ€“velocity behavior shifts with locomotion speed and gait. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 977-982.	7.1	191
8	Mechanical performance of artificial pneumatic muscles to power an ankleâ€“foot orthosis. Journal of Biomechanics, 2006, 39, 1832-1841.	2.1	188
9	It Pays to Have a Spring in Your Step. Exercise and Sport Sciences Reviews, 2009, 37, 130-138.	3.0	184
10	Powered Lower Limb Orthoses for Gait Rehabilitation. Topics in Spinal Cord Injury Rehabilitation, 2005, 11, 34-49.	1.8	170
11	A PHYSIOLOGIST'S PERSPECTIVE ON ROBOTIC EXOSKELETONS FOR HUMAN LOCOMOTION. International Journal of Humanoid Robotics, 2007, 04, 507-528.	1.1	149
12	Powered ankle exoskeletons reveal the metabolic cost of plantar flexor mechanical work during walking with longer steps at constant step frequency. Journal of Experimental Biology, 2009, 212, 21-31.	1.7	145
13	Estimation of Quasi-Stiffness and Propulsive Work of the Human Ankle in the Stance Phase of Walking. PLoS ONE, 2013, 8, e59935.	2.5	120
14	Six degree-of-freedom analysis of hip, knee, ankle and foot provides updated understanding of biomechanical work during human walking. Journal of Experimental Biology, 2015, 218, 876-886.	1.7	114
15	A neuromechanics-based powered ankle exoskeleton to assist walking post-stroke: a feasibility study. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 23.	4.6	111
16	How to hit home runs: Optimum baseball bat swing parameters for maximum range trajectories. American Journal of Physics, 2003, 71, 1152-1162.	0.7	90
17	Elastic ankle exoskeletons reduce soleus muscle force but not work in human hopping. Journal of Applied Physiology, 2013, 115, 579-585.	2.5	84
18	Estimation of Quasi-Stiffness of the Human Knee in the Stance Phase of Walking. PLoS ONE, 2013, 8, e59993.	2.5	82

#	ARTICLE	IF	CITATIONS
19	An exoskeleton using controlled energy storage and release to aid ankle propulsion. , 2011, 2011, 5975342.		78
20	Linking the mechanics and energetics of hopping with elastic ankle exoskeletons. Journal of Applied Physiology, 2012, 113, 1862-1872.	2.5	77
21	A Cyber Expert System for Auto-Tuning Powered Prosthesis Impedance Control Parameters. Annals of Biomedical Engineering, 2016, 44, 1613-1624.	2.5	75
22	Revisiting the mechanics and energetics of walking in individuals with chronic hemiparesis following stroke: from individual limbs to lower limb joints. Journal of NeuroEngineering and Rehabilitation, 2015, 12, 24.	4.6	74
23	Adding Stiffness to the Foot Modulates Soleus Force-Velocity Behaviour during Human Walking. Scientific Reports, 2016, 6, 29870.	3.3	71
24	Mechanics and energetics of incline walking with robotic ankle exoskeletons. Journal of Experimental Biology, 2009, 212, 32-41.	1.7	70
25	Estimation of Quasi-Stiffness of the Human Hip in the Stance Phase of Walking. PLoS ONE, 2013, 8, e81841.	2.5	69
26	The effects of powered ankle-foot orthoses on joint kinematics and muscle activation during walking in individuals with incomplete spinal cord injury. Journal of NeuroEngineering and Rehabilitation, 2006, 3, 3.	4.6	62
27	A Simple Model to Estimate Plantarflexor Muscleâ€“Tendon Mechanics and Energetics During Walking With Elastic Ankle Exoskeletons. IEEE Transactions on Biomedical Engineering, 2016, 63, 914-923.	4.2	61
28	Mechanics and energetics of post-stroke walking aided by a powered ankle exoskeleton with speed-adaptive myoelectric control. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 57.	4.6	61
29	Musculoskeletal modelling deconstructs the paradoxical effects of elastic ankle exoskeletons on plantar-flexor mechanics & energetics during hopping. Journal of Experimental Biology, 2014, 217, 4018-28.	1.7	51
30	Individual limb mechanical analysis of gait following stroke. Journal of Biomechanics, 2015, 48, 984-989.	2.1	49
31	Exoskeletons Improve Locomotion Economy by Reducing Active Muscle Volume. Exercise and Sport Sciences Reviews, 2019, 47, 237-245.	3.0	44
32	Mechanics of walking and running up and downhill: A joint-level perspective to guide design of lower-limb exoskeletons. PLoS ONE, 2020, 15, e0231996.	2.5	44
33	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
34	Power amplification in an isolated muscle-tendon is load dependent. Journal of Experimental Biology, 2015, 218, 3700-9.	1.7	31
35	Unconstrained muscle-tendon workloops indicate resonance tuning as a mechanism for elastic limb behavior during terrestrial locomotion. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E5891-8.	7.1	30
36	Impact of elastic ankle exoskeleton stiffness on neuromechanics and energetics of human walking across multiple speeds. Journal of NeuroEngineering and Rehabilitation, 2020, 17, 75.	4.6	28

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37	The influence of a unilateral fixed ankle on metabolic and mechanical demands during walking in unimpaired young adults. Journal of Biomechanics, 2012, 45, 2405-2410.	2.1	27
38	More is not always better: modeling the effects of elastic exoskeleton compliance on underlying ankle muscleâ€“tendon dynamics. Bioinspiration and Biomimetics, 2014, 9, 046018.	2.9	26
39	Exploiting elasticity: Modeling the influence of neural control on mechanics and energetics of ankle muscleâ€“tendons during human hopping. Journal of Theoretical Biology, 2014, 353, 121-132.	1.7	24
40	Cyclically producing the same average muscle-tendon force with a smaller duty increases metabolic rate. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20200431.	2.6	24
41	Adding carbon fiber to shoe soles may not improve running economy: a muscle-level explanation. Scientific Reports, 2020, 10, 17154.	3.3	23
42	Trailing limb angle is a surrogate for propulsive limb forces during walking post-stroke. Clinical Biomechanics, 2019, 67, 115-118.	1.2	21
43	Onset timing of treadmill belt perturbations influences stability during walking. Journal of Biomechanics, 2022, 130, 110800.	2.1	21
44	Humans falling in holes: adaptations in lower-limb joint mechanics in response to a rapid change in substrate height during human hopping. Journal of the Royal Society Interface, 2019, 16, 20190292.	3.4	19
45	Development of a Novel Gait Analysis Tool Measuring Center of Pressure for Evaluation of Canine Chronic Thoracolumbar Spinal Cord Injury. Journal of Neurotrauma, 2019, 36, 3018-3025.	3.4	19
46	Machine learning to extract muscle fascicle length changes from dynamic ultrasound images in real-time. PLoS ONE, 2021, 16, e0246611.	2.5	18
47	Reduced Achilles Tendon Stiffness Disrupts Calf Muscle Neuromechanics in Elderly Gait. Gerontology, 2022, 68, 241-251.	2.8	18
48	Series elasticity facilitates safe plantar flexor muscleâ€“tendon shock absorption during perturbed human hopping. Proceedings of the Royal Society B: Biological Sciences, 2021, 288, 20210201.	2.6	17
49	Hurry Up and Get Out of the Way! Exploring the Limits of Muscle-Based Latch Systems for Power Amplification. Integrative and Comparative Biology, 2019, 59, 1546-1558.	2.0	16
50	Neuromechanics and Energetics of Walking With an Ankle Exoskeleton Using Neuromuscular-Model Based Control: A Parameter Study. Frontiers in Bioengineering and Biotechnology, 2021, 9, 615358.	4.1	14
51	Shorter muscle fascicle operating lengths increase the metabolic cost of cyclic force production. Journal of Applied Physiology, 2022, 133, 524-533.	2.5	14
52	Modeling age-related changes in muscle-tendon dynamics during cyclical contractions in the rat gastrocnemius. Journal of Applied Physiology, 2016, 121, 1004-1012.	2.5	13
53	Extracting electricity with exosuit braking. Science, 2021, 372, 909-911.	12.6	9
54	A benchtop biorobotic platform for in vitro observation of muscle-tendon dynamics with parallel mechanical assistance from an elastic exoskeleton. Journal of Biomechanics, 2017, 57, 8-17.	2.1	7

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55	A Soft-Exosuit Enables Multi-Scale Analysis of Wearable Robotics in a Bipedal Animal Model. , 2018, , .		4
56	Isolating the energetic and mechanical consequences of imposed reductions in ankle and knee flexion during gait. Journal of NeuroEngineering and Rehabilitation, 2021, 18, 21.	4.6	4
57	Running birds reveal secrets for legged robot design. Science Robotics, 2022, 7, eabo2147.	17.6	4
58	Older Adults Overcome Reduced Triceps Surae Structural Stiffness to Preserve Ankle Joint Quasi-Stiffness During Walking. Journal of Applied Biomechanics, 2020, 36, 209-216.	0.8	3
59	Which lower limb joints compensate for destabilizing energy during walking in humans?. Journal of the Royal Society Interface, 2022, 19, .	3.4	3
60	Factors Influencing Ball-Player Impact Probability in Youth Baseball. Sports Health, 2015, 7, 154-160.	2.7	1
61	Emulator-Based Optimization of a Semi-Active Hip Exoskeleton Concept: Sweeping Impedance Across Walking Speeds. IEEE Transactions on Biomedical Engineering, 2023, 70, 271-282.	4.2	1