Jennifer L Hicks

List of Publications by Year
in descending order

34 papers	4,726 citations	257450 24 h-index	414414 32 g-index
39 all docs	39 docs citations	39 times ranked	4599 citing authors

#	Article	IF	Citations
1	OpenSim: Simulating musculoskeletal dynamics and neuromuscular control to study human and animal movement. PLoS Computational Biology, 2018, 14, e1006223.	3.2	735
2	Large-scale physical activity data reveal worldwide activity inequality. Nature, 2017, 547, 336-339.	27.8	675
3	Full-Body Musculoskeletal Model for Muscle-Driven Simulation of Human Gait. IEEE Transactions on Biomedical Engineering, 2016, 63, 2068-2079.	4.2	580
4	Is My Model Good Enough? Best Practices for Verification and Validation of Musculoskeletal Models and Simulations of Movement. Journal of Biomechanical Engineering, 2015, 137, 020905.	1.3	509
5	Machine learning in human movement biomechanics: Best practices, common pitfalls, and new opportunities. Journal of Biomechanics, 2018, 81, 1-11.	2.1	266
6	Muscle contributions to support and progression during single-limb stance in crouch gait. Journal of Biomechanics, 2010, 43, 2099-2105.	2.1	170
7	Deep neural networks enable quantitative movement analysis using single-camera videos. Nature Communications, 2020, 11, 4054.	12.8	133
8	Simulating Ideal Assistive Devices to Reduce the Metabolic Cost of Running. PLoS ONE, 2016, 11, e0163417.	2.5	127
9	Simulating ideal assistive devices to reduce the metabolic cost of walking with heavy loads. PLoS ONE, 2017, 12, e0180320.	2.5	121
10	Wearable sensors enable personalized predictions of clinical laboratory measurements. Nature Medicine, 2021, 27, 1105-1112.	30.7	121
11	Predicting gait adaptations due to ankle plantarflexor muscle weakness and contracture using physics-based musculoskeletal simulations. PLoS Computational Biology, 2019, 15, e1006993.	3.2	120
12	An ecosystem service perspective on urban nature, physical activity, and health. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	115
13	Best practices for analyzing large-scale health data from wearables and smartphone apps. Npj Digital Medicine, 2019, 2, 45.	10.9	108
14	OpenSim Moco: Musculoskeletal optimal control. PLoS Computational Biology, 2020, 16, e1008493.	3.2	96
15	Stretching Your Energetic Budget: How Tendon Compliance Affects the Metabolic Cost of Running. PLoS ONE, 2016, 11, e0150378.	2.5	95
16	Predictive Simulation Generates Human Adaptations during Loaded and Inclined Walking. PLoS ONE, 2015, 10, e0121407.	2.5	91
17	Clinical applicability of using spherical fitting to find hip joint centers. Gait and Posture, 2005, 22, 138-145.	1.4	80
18	Gait biomechanics in the era of data science. Journal of Biomechanics, 2016, 49, 3759-3761.	2.1	75

#	Article	IF	Citations
19	Preparatory co-activation of the ankle muscles may prevent ankle inversion injuries. Journal of Biomechanics, 2017, 52, 17-23.	2.1	58
20	An Open-Source and Wearable System for Measuring 3D Human Motion in Real-Time. IEEE Transactions on Biomedical Engineering, 2022, 69, 678-688.	4.2	57
21	OpenSense: An open-source toolbox for inertial-measurement-unit-based measurement of lower extremity kinematics over long durations. Journal of NeuroEngineering and Rehabilitation, 2022, 19, 22.	4.6	56
22	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
23	Deep reinforcement learning for modeling human locomotion control in neuromechanical simulation. Journal of NeuroEngineering and Rehabilitation, 2021, 18, 126.	4.6	45
24	Simulation-Based Design for Wearable Robotic Systems: An Optimization Framework for Enhancing a Standing Long Jump. IEEE Transactions on Biomedical Engineering, 2016, 63, 894-903.	4.2	40
25	Estimating the effect size of surgery to improve walking in children with cerebral palsy from retrospective observational clinical data. Scientific Reports, 2018, 8, 16344.	3.3	29
26	The mobilize center: an NIH big data to knowledge center to advance human movement research and improve mobility. Journal of the American Medical Informatics Association: JAMIA, 2015, 22, 1120-1125.	4.4	24
27	Testing Simulated Assistance Strategies on a Hip-Knee-Ankle Exoskeleton: a Case Study. , 2020, , .		20
28	Pre-operative gastrocnemius lengths in gait predict outcomes following gastrocnemius lengthening surgery in children with cerebral palsy. PLoS ONE, 2020, 15, e0233706.	2.5	19
29	Perspectives on Sharing Models and Related Resources in Computational Biomechanics Research. Journal of Biomechanical Engineering, 2018, 140, .	1.3	16
30	Artificial Intelligence for Prosthetics: Challenge Solutions. The Springer Series on Challenges in Machine Learning, 2020, , 69-128.	10.4	14
31	Coupled exoskeleton assistance simplifies control and maintains metabolic benefits: A simulation study. PLoS ONE, 2022, 17, e0261318.	2.5	14
32	Running in the wild: Energetics explain ecological running speeds. Current Biology, 2022, 32, 2309-2315.e3.	3.9	10
33	ShortFuse: Biomedical Time Series Representations in the Presence of Structured Information. Proceedings of Machine Learning Research, 2017, 68, 59-74.	0.3	1
34	Simulated Exoskeletons with Coupled Degrees-of-Freedom Reduce theÂMetabolic Cost of Walking. Biosystems and Biorobotics, 2022, , 389-393.	0.3	0