Zachary F Lerner

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Adaptive ankle exoskeleton gait training demonstrates acute neuromuscular and spatiotemporal benefits for individuals with cerebral palsy: A pilot study. Gait and Posture, 2022, 95, 256-263.	1.4	17
2	Relationship between ankle function and walking ability for children and young adults with cerebral palsy: A systematic review of deficits and targeted interventions. Gait and Posture, 2022, 91, 165-178.	1.4	9
3	Improving the Energy Cost of Incline Walking and Stair Ascent With Ankle Exoskeleton Assistance in Cerebral Palsy. IEEE Transactions on Biomedical Engineering, 2022, 69, 2143-2152.	4.2	12
4	Bilateral vs. Paretic-Limb-Only Ankle Exoskeleton Assistance for Improving Hemiparetic Gait: A Case Series. IEEE Robotics and Automation Letters, 2022, 7, 1246-1253.	5.1	6
5	Is robotic gait training effective for individuals with cerebral palsy? A systematic review and meta-analysis of randomized controlled trials. Clinical Rehabilitation, 2022, 36, 873-882.	2.2	10
6	Design and Electromechanical Performance Evaluation of a Powered Parallel-Elastic Ankle Exoskeleton. IEEE Robotics and Automation Letters, 2022, 7, 8092-8099.	5.1	4
7	Feasibility evaluation of a dual-mode ankle exoskeleton to assist and restore community ambulation in older adults. Wearable Technologies, 2022, 3, .	3.1	5
8	A Low-Profile Hip Exoskeleton for Pathological Gait Assistance: Design and Pilot Testing. , 2022, , .		4
9	Does Ankle Exoskeleton Assistance Impair Stability During Walking in Individuals with Cerebral Palsy?. Annals of Biomedical Engineering, 2021, 49, 2522-2532.	2.5	8
10	Adaptive Ankle Exoskeleton Control: Validation Across Diverse Walking Conditions. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 801-812.	3.2	25
11	Pilot evaluation of changes in motor control after wearable robotic resistance training in children with cerebral palsy. Journal of Biomechanics, 2021, 126, 110601.	2.1	18
12	Feasibility of Augmenting Ankle Exoskeleton Walking Performance With Step Length Biofeedback in Individuals With Cerebral Palsy. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 442-449.	4.9	20
13	Usability and performance validation of an ultra-lightweight and versatile untethered robotic ankle exoskeleton. Journal of NeuroEngineering and Rehabilitation, 2021, 18, 163.	4.6	28
14	Ankle Exoskeleton Assistance Increases Six-Minute Walk Test Performance in Cerebral Palsy. IEEE Open Journal of Engineering in Medicine and Biology, 2021, 2, 320-323.	2.3	5
15	Effects of Lightweight Wearable Ankle Exoskeleton in an Individual With Parkinson Disease. Topics in Geriatric Rehabilitation, 2020, 36, 146-151.	0.4	3
16	Closing the Loop on Exoskeleton Motor Controllers: Benefits of Regression-Based Open-Loop Control. IEEE Robotics and Automation Letters, 2020, 5, 6025-6032.	5.1	3
17	Wearable Adaptive Resistance Training Improves Ankle Strength, Walking Efficiency and Mobility in Cerebral Palsy: A Pilot Clinical Trial. IEEE Open Journal of Engineering in Medicine and Biology, 2020, 1, 282-289.	2.3	18
18	Adaptive Ankle Resistance from a Wearable Robotic Device to Improve Muscle Recruitment in Cerebral Palsy. Annals of Biomedical Engineering, 2020, 48, 1309-1321.	2.5	31

ZACHARY F LERNER

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19	Ankle Exoskeleton Assistance Can Improve Over-Ground Walking Economy in Individuals With Cerebral Palsy. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2020, 28, 461-467.	4.9	61
20	The effects of pediatric obesity on patellofemoral joint contact force during walking. Gait and Posture, 2019, 73, 209-214.	1.4	21
21	Proportional Joint-Moment Control for Instantaneously Adaptive Ankle Exoskeleton Assistance. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 751-759.	4.9	58
22	Computational modeling of neuromuscular response to swing-phase robotic knee extension assistance in cerebral palsy. Journal of Biomechanics, 2019, 87, 142-149.	2.1	9
23	A Battery-Powered Ankle Exoskeleton Improves Gait Mechanics in a Feasibility Study of Individuals with Cerebral Palsy. Annals of Biomedical Engineering, 2019, 47, 1345-1356.	2.5	54
24	Repeatability of EMG activity during exoskeleton assisted walking in children with cerebral palsy: implications for real time adaptable control. , 2018, 2018, 2801-2804.		7
25	An Untethered Ankle Exoskeleton Improves Walking Economy in a Pilot Study of Individuals With Cerebral Palsy. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1985-1993.	4.9	69
26	Effectiveness of surgical and non-surgical management of crouch gait in cerebral palsy: A systematic review. Gait and Posture, 2017, 54, 93-105.	1.4	51
27	The Effects of Exoskeleton Assisted Knee Extension on Lower-Extremity Gait Kinematics, Kinetics, and Muscle Activity in Children with Cerebral Palsy. Scientific Reports, 2017, 7, 13512.	3.3	50
28	A lower-extremity exoskeleton improves knee extension in children with crouch gait from cerebral palsy. Science Translational Medicine, 2017, 9, .	12.4	110
29	A Robotic Exoskeleton for Treatment of Crouch Gait in Children With Cerebral Palsy: Design and Initial Application. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 650-659.	4.9	89
30	Relationship between assistive torque and knee biomechanics during exoskeleton walking in individuals with crouch gait. , 2017, 2017, 491-497.		12
31	Computational characterization of fracture healing under reduced gravity loading conditions. Journal of Orthopaedic Research, 2016, 34, 1206-1215.	2.3	7
32	Estimating the Mechanical Behavior of the Knee Joint During Crouch Gait: Implications for Real-Time Motor Control of Robotic Knee Orthoses. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2016, 24, 621-629.	4.9	13
33	Pediatric obesity and walking duration increase medial tibiofemoral compartment contact forces. Journal of Orthopaedic Research, 2016, 34, 97-105.	2.3	29
34	A robotic exoskeleton to treat crouch gait from cerebral palsy: Initial kinematic and neuromuscular evaluation. , 2016, 2016, 2214-2217.		17
35	Compressive and shear hip joint contact forces are affected by pediatric obesity during walking. Journal of Biomechanics, 2016, 49, 1547-1553.	2.1	26
36	Modulating tibiofemoral contact force in the sheep hind limb via treadmill walking: Predictions from an opensim musculoskeletal model. Journal of Orthopaedic Research, 2015, 33, 1128-1133.	2.3	18

ZACHARY F LERNER

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37	How tibiofemoral alignment and contact locations affect predictions of medial and lateral tibiofemoral contact forces. Journal of Biomechanics, 2015, 48, 644-650.	2.1	166
38	The Effect of Walking Duration on Gait Biomechanics in Children. Medicine and Science in Sports and Exercise, 2015, 47, 216.	0.4	0
39	Effects of obesity on lower extremity muscle function during walking at two speeds. Gait and Posture, 2014, 39, 978-984.	1.4	63
40	A comparison of slow, uphill and fast, level walking on lower extremity biomechanics and tibiofemoral joint loading in obese and nonobese adults. Journal of Orthopaedic Research, 2014, 32, 324-330.	2.3	51
41	Does adiposity affect muscle function during walking in children?. Journal of Biomechanics, 2014, 47, 2975-2982.	2.1	14
42	The Effects of Walking Speed on Tibiofemoral Loading Estimated Via Musculoskeletal Modeling. Journal of Applied Biomechanics, 2014, 30, 197-205.	0.8	45
43	Effects of an Obesity-Specific Marker Set on Estimated Muscle and Joint Forces in Walking. Medicine and Science in Sports and Exercise, 2014, 46, 1261-1267.	0.4	38
44	Soleus H-reflex modulation in cerebral palsy and its relationship with neural control complexity: a pilot study. Experimental Brain Research, 0, , .	1.5	0