

# Zachary F Lerner

## List of Publications by Year in descending order

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Version: 2024-02-01

44  
papers

1,304  
citations

393982

19  
h-index

377514

34  
g-index

45  
all docs

45  
docs citations

45  
times ranked

1090  
citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptive ankle exoskeleton gait training demonstrates acute neuromuscular and spatiotemporal benefits for individuals with cerebral palsy: A pilot study. <i>Gait and Posture</i> , 2022, 95, 256-263.	0.6	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. <i>Gait and Posture</i> , 2022, 91, 165-178.	0.6	9
3	Improving the Energy Cost of Incline Walking and Stair Ascent With Ankle Exoskeleton Assistance in Cerebral Palsy. <i>IEEE Transactions on Biomedical Engineering</i> , 2022, 69, 2143-2152.	2.5	12
4	Bilateral vs. Paretic-Limb-Only Ankle Exoskeleton Assistance for Improving Hemiparetic Gait: A Case Series. <i>IEEE Robotics and Automation Letters</i> , 2022, 7, 1246-1253.	3.3	6
5	Is robotic gait training effective for individuals with cerebral palsy? A systematic review and meta-analysis of randomized controlled trials. <i>Clinical Rehabilitation</i> , 2022, 36, 873-882.	1.0	10
6	Design and Electromechanical Performance Evaluation of a Powered Parallel-Elastic Ankle Exoskeleton. <i>IEEE Robotics and Automation Letters</i> , 2022, 7, 8092-8099.	3.3	4
7	Feasibility evaluation of a dual-mode ankle exoskeleton to assist and restore community ambulation in older adults. <i>Wearable Technologies</i> , 2022, 3, .	1.6	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?. <i>Annals of Biomedical Engineering</i> , 2021, 49, 2522-2532.	1.3	8
10	Adaptive Ankle Exoskeleton Control: Validation Across Diverse Walking Conditions. <i>IEEE Transactions on Medical Robotics and Bionics</i> , 2021, 3, 801-812.	2.1	25
11	Pilot evaluation of changes in motor control after wearable robotic resistance training in children with cerebral palsy. <i>Journal of Biomechanics</i> , 2021, 126, 110601.	0.9	18
12	Feasibility of Augmenting Ankle Exoskeleton Walking Performance With Step Length Biofeedback in Individuals With Cerebral Palsy. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2021, 29, 442-449.	2.7	20
13	Usability and performance validation of an ultra-lightweight and versatile untethered robotic ankle exoskeleton. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2021, 18, 163.	2.4	28
14	Ankle Exoskeleton Assistance Increases Six-Minute Walk Test Performance in Cerebral Palsy. <i>IEEE Open Journal of Engineering in Medicine and Biology</i> , 2021, 2, 320-323.	1.7	5
15	Effects of Lightweight Wearable Ankle Exoskeleton in an Individual With Parkinson Disease. <i>Topics in Geriatric Rehabilitation</i> , 2020, 36, 146-151.	0.2	3
16	Closing the Loop on Exoskeleton Motor Controllers: Benefits of Regression-Based Open-Loop Control. <i>IEEE Robotics and Automation Letters</i> , 2020, 5, 6025-6032.	3.3	3
17	Wearable Adaptive Resistance Training Improves Ankle Strength, Walking Efficiency and Mobility in Cerebral Palsy: A Pilot Clinical Trial. <i>IEEE Open Journal of Engineering in Medicine and Biology</i> , 2020, 1, 282-289.	1.7	18
18	Adaptive Ankle Resistance from a Wearable Robotic Device to Improve Muscle Recruitment in Cerebral Palsy. <i>Annals of Biomedical Engineering</i> , 2020, 48, 1309-1321.	1.3	31

#	ARTICLE	IF	CITATIONS
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.	2.7	61
20	The effects of pediatric obesity on patellofemoral joint contact force during walking. Gait and Posture, 2019, 73, 209-214.	0.6	21
21	Proportional Joint-Moment Control for Instantaneously Adaptive Ankle Exoskeleton Assistance. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 751-759.	2.7	58
22	Computational modeling of neuromuscular response to swing-phase robotic knee extension assistance in cerebral palsy. Journal of Biomechanics, 2019, 87, 142-149.	0.9	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.	1.3	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.	2.7	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.	0.6	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.	1.6	50
28	A lower-extremity exoskeleton improves knee extension in children with crouch gait from cerebral palsy. Science Translational Medicine, 2017, 9, .	5.8	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.	2.7	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.	1.2	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.	2.7	13
33	Pediatric obesity and walking duration increase medial tibiofemoral compartment contact forces. Journal of Orthopaedic Research, 2016, 34, 97-105.	1.2	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.	0.9	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.	1.2	18

#	ARTICLE	IF	CITATIONS
37	How tibiofemoral alignment and contact locations affect predictions of medial and lateral tibiofemoral contact forces. <i>Journal of Biomechanics</i> , 2015, 48, 644-650.	0.9	166
38	The Effect of Walking Duration on Gait Biomechanics in Children. <i>Medicine and Science in Sports and Exercise</i> , 2015, 47, 216.	0.2	0
39	Effects of obesity on lower extremity muscle function during walking at two speeds. <i>Gait and Posture</i> , 2014, 39, 978-984.	0.6	63
40	A comparison of slow, uphill and fast, level walking on lower extremity biomechanics and tibiofemoral joint loading in obese and nonobese adults. <i>Journal of Orthopaedic Research</i> , 2014, 32, 324-330.	1.2	51
41	Does adiposity affect muscle function during walking in children?. <i>Journal of Biomechanics</i> , 2014, 47, 2975-2982.	0.9	14
42	The Effects of Walking Speed on Tibiofemoral Loading Estimated Via Musculoskeletal Modeling. <i>Journal of Applied Biomechanics</i> , 2014, 30, 197-205.	0.3	45
43	Effects of an Obesity-Specific Marker Set on Estimated Muscle and Joint Forces in Walking. <i>Medicine and Science in Sports and Exercise</i> , 2014, 46, 1261-1267.	0.2	38
44	Soleus H-reflex modulation in cerebral palsy and its relationship with neural control complexity: a pilot study. <i>Experimental Brain Research</i> , 0, , .	0.7	0