Claudio Pizzolato

List of Publications by Year
in descending order

46 papers	1,441 citations	331670 21 h-index	345221 36 g-index
47 all docs	47 docs citations	47 times ranked	947 citing authors

#	Article	IF	Citations
1	The Deep Hip Muscles are Unlikely to Stabilize the Hip in the Sagittal Plane During Walking: A Joint Stiffness Approach. IEEE Transactions on Biomedical Engineering, 2022, 69, 1133-1140.	4.2	3
2	Electromyography-Assisted Neuromusculoskeletal Models Can Estimate Physiological Muscle Activations and Joint Moments Across the Neck Before Impacts. Journal of Biomechanical Engineering, 2022, 144, .	1.3	7
3	Feasibility of personalised hip load modification using real-time biofeedback in hip osteoarthritis: A pilot study. Osteoarthritis and Cartilage Open, 2022, 4, 100230.	2.0	6
4	EMG-Informed Neuromusculoskeletal Models Accurately Predict Knee Loading Measured Using Instrumented Implants. IEEE Transactions on Biomedical Engineering, 2022, 69, 2268-2275.	4.2	21
5	Free Achilles tendon strain during selected rehabilitation, locomotor, jumping, and landing tasks. Journal of Applied Physiology, 2022, 132, 956-965.	2.5	9
6	A muscle synergy-based method to estimate muscle activation patterns of children with cerebral palsy using data collected from typically developing children. Scientific Reports, 2022, 12, 3599.	3.3	13
7	Activation of the deep hip muscles can change the direction of loading at the hip. Journal of Biomechanics, 2022, 135, 111019.	2.1	3
8	Effect of a valgus brace on medial tibiofemoral joint contact force in knee osteoarthritis with varus malalignment: A within-participant cross-over randomised study with an uncontrolled observational longitudinal follow-up. PLoS ONE, 2022, 17, e0257171.	2.5	3
9	Personalized digital humans for rehabilitation and assistive devices. Journal of Science and Medicine in Sport, 2022, 25, S5-S6.	1.3	1
10	Muscle function during single leg landing. Scientific Reports, 2022, 12, .	3.3	10
11	Electromyography measurements of the deep hip muscles do not improve estimates of hip contact force. Journal of Biomechanics, 2022, 141, 111220.	2.1	2
12	Trunk, pelvis and lower limb walking biomechanics are similarly altered in those with femoroacetabular impingement syndrome regardless of cam morphology size. Gait and Posture, 2021, 83, 26-34.	1.4	23
13	Valgus knee bracing for medial knee osteoarthritis and varus malalignment: a pilot study. Osteoarthritis and Cartilage, 2021, 29, S173-S174.	1.3	0
14	Non-invasive approaches to functional recovery after spinal cord injury: Therapeutic targets and multimodal device interventions. Experimental Neurology, 2021, 339, 113612.	4.1	22
15	The effectiveness of EMG-driven neuromusculoskeletal model calibration is task dependent. Journal of Biomechanics, 2021, 129, 110698.	2.1	15
16	Best methods and data to reconstruct paediatric lower limb bones for musculoskeletal modelling. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1225-1238.	2.8	20
17	Increasing level of neuromusculoskeletal model personalisation to investigate joint contact forces in cerebral palsy: A twin case study. Clinical Biomechanics, 2020, 72, 141-149.	1.2	30
18	Machine learning methods to support personalized neuromusculoskeletal modelling. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1169-1185.	2.8	53

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19	The Free Achilles Tendon Is Shorter, Stiffer, Has Larger Cross-Sectional Area and Longer T2* Relaxation Time in Trained Middle-Distance Runners Compared to Healthy Controls. Frontiers in Physiology, 2020, 11, 965.	2.8	13
20	Targeted Achilles Tendon Training and Rehabilitation Using Personalized and Real-Time Multiscale Models of the Neuromusculoskeletal System. Frontiers in Bioengineering and Biotechnology, 2020, 8, 878.	4.1	26
21	Fusing Accelerometry with Videography to Monitor the Effect of Fatigue on Punching Performance in Elite Boxers. Sensors, 2020, 20, 5749.	3.8	11
22	Muscle contributions to tibiofemoral shear forces and valgus and rotational joint moments during single leg drop landing. Scandinavian Journal of Medicine and Science in Sports, 2020, 30, 1664-1674.	2.9	27
23	Non-negative matrix factorisation is the most appropriate method for extraction of muscle synergies in walking and running. Scientific Reports, 2020, 10, 8266.	3.3	67
24	Individuals with mild-to-moderate hip osteoarthritis walk with lower hip joint contact forces despite higher levels of muscle co-contraction compared to healthy individuals. Osteoarthritis and Cartilage, 2020, 28, 924-931.	1.3	23
25	EMG-Assisted Algorithm to Account for Shoulder Muscles Co-Contraction in Overhead Manual Handling. Applied Sciences (Switzerland), 2020, 10, 3522.	2.5	12
26	Development and validation of statistical shape models of the primary functional bone segments of the foot. PeerJ, 2020, 8, e8397.	2.0	24
27	Finding the sweet spot via personalised Achilles tendon training: the future is within reach. British Journal of Sports Medicine, 2019, 53, 11-12.	6.7	28
28	Static optimization underestimates antagonist muscle activity at the glenohumeral joint: A musculoskeletal modeling study. Journal of Biomechanics, 2019, 97, 109348.	2.1	43
29	Magnetic Resonance Imaging and Freehand 3-D Ultrasound Provide Similar Estimates of Free Achilles Tendon Shape and 3-D Geometry. Ultrasound in Medicine and Biology, 2019, 45, 2898-2905.	1.5	18
30	The effects of electromyography-assisted modelling in estimating musculotendon forces during gait in children with cerebral palsy. Journal of Biomechanics, 2019, 92, 45-53.	2.1	39
31	Individuals with mild-to-moderate hip osteoarthritis walk with lower hip joint contact forces despite higher levels of muscle co-contraction compared to healthy controls. Osteoarthritis and Cartilage, 2019, 27, S62-S63.	1.3	2
32	Neuromusculoskeletal Modeling-Based Prostheses for Recovery After Spinal Cord Injury. Frontiers in Neurorobotics, 2019, 13, 97.	2.8	31
33	Immediate effects of valgus knee bracing on tibiofemoral contact forces and knee muscle forces. Gait and Posture, 2019, 68, 55-62.	1.4	22
34	Influence of altered geometry and material properties on tissue stress distribution under load in tendinopathic Achilles tendons â€“ A subject-specific finite element analysis. Journal of Biomechanics, 2019, 82, 142-148.	2.1	16
35	A calibrated EMG-informed neuromusculoskeletal model can appropriately account for muscle co-contraction in the estimation of hip joint contact forces in people with hip osteoarthritis. Journal of Biomechanics, 2019, 83, 134-142.	2.1	50
36	Tibiofemoral joint contact forces increase with load magnitude and walking speed but remain almost unchanged with different types of carried load. PLoS ONE, 2018, 13, e0206859.	2.5	27

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37	Subject-specific calibration of neuromuscular parameters enables neuromusculoskeletal models to estimate physiologically plausible hip joint contact forces in healthy adults. Journal of Biomechanics, 2018, 80, 111-120.	2.1	53
38	Biofeedback for Gait Retraining Based on Real-Time Estimation of Tibiofemoral Joint Contact Forces. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1612-1621.	4.9	88
39	Real-time inverse kinematics and inverse dynamics for lower limb applications using OpenSim. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 436-445.	1.6	60
40	Bioinspired Technologies to Connect Musculoskeletal Mechanobiology to the Person for Training and Rehabilitation. Frontiers in Computational Neuroscience, 2017, 11, 96.	2.1	44
41	Muscle contributions to medial tibiofemoral compartment contact loading following ACL reconstruction using semitendinosus and gracilis tendon grafts. PLoS ONE, 2017, 12, e0176016.	2.5	30
42	CEINMS: A toolbox to investigate the influence of different neural control solutions on the prediction of muscle excitation and joint moments during dynamic motor tasks. Journal of Biomechanics, 2015, 48, 3929-3936.	2.1	223
43	MOtoNMS: A MATLAB toolbox to process motion data for neuromusculoskeletal modeling and simulation. Source Code for Biology and Medicine, 2015, 10, 12.	1.7	109
44	A flexible architecture to enhance wearable robots: Integration of EMG-informed models. , 2015, , .		8
45	Modeling and simulating the neuromuscular mechanisms regulating ankle and knee joint stiffness during human locomotion. Journal of Neurophysiology, 2015, 114, 2509-2527.	1.8	104
46	Real-time estimation of lower limb joint angles through inverse kinematics during walking using a scaled OpenSim model. Journal of Science and Medicine in Sport, 2014, 18, e142.	1.3	1