# Claudio Pizzolato

List of Publications by Year
in descending order



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|---|---|---|---|
| 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 | 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 |
| 2 | 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 |
| 3 | 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 |
| 4 | 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 |
| 5 | 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 |
| 6 | 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 |
| 7 | 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 |
| 8 | Machine learning methods to support personalized neuromusculoskeletal modelling. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1169-1185. | 2.8 | 53 |
| 9 | 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 |
| 10 | Bioinspired Technologies to Connect Musculoskeletal Mechanobiology to the Person for Training and Rehabilitation. Frontiers in Computational Neuroscience, 2017, 11, 96. | 2.1 | 44 |
| 11 | Static optimization underestimates antagonist muscle activity at the glenohumeral joint: A musculoskeletal modeling study. Journal of Biomechanics, 2019, 97, 109348. | 2.1 | 43 |
| 12 | 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 |
| 13 | Neuromusculoskeletal Modeling-Based Prostheses for Recovery After Spinal Cord Injury. Frontiers in Neurorobotics, 2019, 13, 97. | 2.8 | 31 |
| 14 | 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 |
| 15 | 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 |
| 16 | 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 |
| 17 | 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 |
| 18 | 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 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | 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 |
| 20 | Development and validation of statistical shape models of the primary functional bone segments of the foot. PeerJ, 2020, 8, e8397. | 2.0 | 24 |
| 21 | 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 |
| 22 | 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 |
| 23 | Immediate effects of valgus knee bracing on tibiofemoral contact forces and knee muscle forces. Gait and Posture, 2019, 68, 55-62. | 1.4 | 22 |
| 24 | Non-invasive approaches to functional recovery after spinal cord injury: Therapeutic targets and multimodal device interventions. Experimental Neurology, 2021, 339, 113612. | 4.1 | 22 |
| 25 | EMG-Informed Neuromusculoskeletal Models Accurately Predict Knee Loading Measured Using Instrumented Implants. IEEE Transactions on Biomedical Engineering, 2022, 69, 2268-2275. | 4.2 | 21 |
| 26 | 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 |
| 27 | 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 |
| 28 | 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 |
| 29 | The effectiveness of EMG-driven neuromusculoskeletal model calibration is task dependent. Journal of Biomechanics, 2021, 129, 110698. | 2.1 | 15 |
| 30 | 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 |
| 31 | 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 |
| 32 | EMG-Assisted Algorithm to Account for Shoulder Muscles Co-Contraction in Overhead Manual Handling. Applied Sciences (Switzerland), 2020, 10, 3522. | 2.5 | 12 |
| 33 | Fusing Accelerometry with Videography to Monitor the Effect of Fatigue on Punching Performance in Elite Boxers. Sensors, 2020, 20, 5749. | 3.8 | 11 |
| 34 | Muscle function during single leg landing. Scientific Reports, 2022, 12, . | 3.3 | 10 |
| 35 | Free Achilles tendon strain during selected rehabilitation, locomotor, jumping, and landing tasks. Journal of Applied Physiology, 2022, 132, 956-965. | 2.5 | 9 |
| 36 | A flexible architecture to enhance wearable robots: Integration of EMG-informed models. , 2015, , . | | 8 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | 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 |
| 38 | 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 |
| 39 | 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 |
| 40 | Activation of the deep hip muscles can change the direction of loading at the hip. Journal of Biomechanics, 2022, 135, 111019. | 2.1 | 3 |
| 41 | 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 |
| 42 | 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 |
| 43 | Electromyography measurements of the deep hip muscles do not improve estimates of hip contact force. Journal of Biomechanics, 2022, 141, 111220. | 2.1 | 2 |
| 44 | 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 |
| 45 | Personalized digital humans for rehabilitation and assistive devices. Journal of Science and Medicine in Sport, 2022, 25, S5-S6. | 1.3 | 1 |
| 46 | Valgus knee bracing for medial knee osteoarthritis and varus malalignment: a pilot study. Osteoarthritis and Cartilage, 2021, 29, S173-S174. | 1.3 | 0 |