Ilse Jonkers

List of Publications by Year in descending order

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205 papers	6,383 citations	66343 42 h-index	110387 64 g-index
229 all docs	229 docs citations	229 times ranked	5134 citing authors

#	Article	IF	Citations
1	Quantitative Gait Analysis in Parkinsonâ€™s Disease: Comparison With a Healthy Control Group. Archives of Physical Medicine and Rehabilitation, 2005, 86, 1007-1013.	0.9	270
2	Capacity to increase walking speed is limited by impaired hip and ankle power generation in lower functioning persons post-stroke. Gait and Posture, 2009, 29, 129-137.	1.4	180
3	Rapid predictive simulations with complex musculoskeletal models suggest that diverse healthy and pathological human gaits can emerge from similar control strategies. Journal of the Royal Society Interface, 2019, 16, 20190402.	3.4	158
4	A randomized study of combined botulinum toxin type A and casting in the ambulant child with cerebral palsy using objective outcome measures. European Journal of Neurology, 2001, 8, 75-87.	3.3	130
5	Evaluation of the effect of backpack load and position during standing and walking using biomechanical, physiological and subjective measures. Ergonomics, 2007, 50, 728-742.	2.1	130
6	Kalman smoothing improves the estimation of joint kinematics and kinetics in marker-based human gait analysis. Journal of Biomechanics, 2008, 41, 3390-3398.	2.1	115
7	Personalized MR-based musculoskeletal models compared to rescaled generic models in the presence of increased femoral anteversion: Effect on hip moment arm lengths. Gait and Posture, 2008, 28, 358-365.	1.4	113
8	Subject-specific hip geometry affects predicted hip joint contact forces during gait. Journal of Biomechanics, 2008, 41, 1243-1252.	2.1	101
9	Calculated moment-arm and muscle-tendon lengths during gait differ substantially using MR based versus rescaled generic lower-limb musculoskeletal models. Gait and Posture, 2008, 28, 640-648.	1.4	93
10	Sensitivity of dynamic simulations of gait and dynamometer experiments to hill muscle model parameters of knee flexors and extensors. Journal of Biomechanics, 2010, 43, 1876-1883.	2.1	93
11	Subject-specific hip geometry and hip joint centre location affects calculated contact forces at the hip during gait. Journal of Biomechanics, 2009, 42, 1246-1251.	2.1	91
12	Measuring only hop distance during single leg hop testing is insufficient to detect deficits in knee function after ACL reconstruction: a systematic review and meta-analysis. British Journal of Sports Medicine, 2020, 54, 139-153.	6.7	88
13	Relation between subject-specific hip joint loading, stress distribution in the proximal femur and bone mineral density changes after total hip replacement. Journal of Biomechanics, 2008, 41, 3405-3413.	2.1	81
14	In vivo evaluation of a vibration analysis technique for the per-operative monitoring of the fixation of hip prostheses. Journal of Orthopaedic Surgery and Research, 2009, 4, 10.	2.3	78
15	The Contribution of Step Characteristics to Sprint Running Performance in High-Level Male and Female Athletes. Journal of Strength and Conditioning Research, 2013, 27, 116-124.	2.1	78
16	The complementary role of the plantarflexors, hamstrings and gluteus maximus in the control of stance limb stability during gait. Gait and Posture, 2003, 17, 264-272.	1.4	76
17	Loading of Hip Measured by Hip Contact Forces at Different Speeds of Walking and Running. Journal of Bone and Mineral Research, 2015, 30, 1431-1440.	2.8	76
18	The flexion synergy, mother of all synergies and father of new models of gait. Frontiers in Computational Neuroscience, 2013, 7, 14.	2.1	73

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19	Knee Joint Loading in Healthy Adults During Functional Exercises: Implications for Rehabilitation Guidelines. Journal of Orthopaedic and Sports Physical Therapy, 2018, 48, 162-173.	3.5	71
20	Influence of weak hip abductor muscles on joint contact forces during normal walking: probabilistic modeling analysis. Journal of Biomechanics, 2013, 46, 2186-2193.	2.1	68
21	From block clearance to sprint running: Characteristics underlying an effective transition. Journal of Sports Sciences, 2013, 31, 137-149.	2.0	68
22	A musculoskeletal model customized for squatting task. Computer Methods in Biomechanics and Biomedical Engineering, 2019, 22, 21-24.	1.6	68
23	Characterisation of walking loads by 3D inertial motion tracking. Journal of Sound and Vibration, 2014, 333, 5212-5226.	3.9	65
24	Task constraints and minimization of muscle effort result in a small number of muscle synergies during gait. Frontiers in Computational Neuroscience, 2014, 8, 115.	2.1	64
25	Gait alterations to effectively reduce hip contact forces. Journal of Orthopaedic Research, 2015, 33, 1094-1102.	2.3	63
26	Level of subject-specific detail in musculoskeletal models affects hip moment arm length calculation during gait in pediatric subjects with increased femoral anteversion. Journal of Biomechanics, 2011, 44, 1346-1353.	2.1	62
27	A physiology based inverse dynamic analysis of human gait: potential and perspectives. Computer Methods in Biomechanics and Biomedical Engineering, 2009, 12, 563-574.	1.6	61
28	Knee contact forces are not altered in early knee osteoarthritis. Gait and Posture, 2016, 45, 115-120.	1.4	61
29	Calculating gait kinematics using MR-based kinematic models. Gait and Posture, 2011, 33, 158-164.	1.4	60
30	Atlas-based non-rigid image registration to automatically define line-of-action muscle models: A validation study. Journal of Biomechanics, 2009, 42, 565-572.	2.1	58
31	Gait characteristics and lower limb muscle strength in women with early and established knee osteoarthritis. Clinical Biomechanics, 2013, 28, 40-47.	1.2	58
32	Botulinum toxin type A treatment of cerebral palsy: an integrated approach. European Journal of Neurology, 1999, 6, s51.	3.3	57
33	Single event multilevel botulinum toxin type A treatment and surgery: similarities and differences. European Journal of Neurology, 2001, 8, 88-97.	3.3	56
34	A spasticity model based on feedback from muscle force explains muscle activity during passive stretches and gait in children with cerebral palsy. PLoS ONE, 2018, 13, e0208811.	2.5	56
35	EMG-Driven Optimal Estimation of Subject-SPECIFIC Hill Model Muscleâ€“Tendon Parameters of the Knee Joint Actuators. IEEE Transactions on Biomedical Engineering, 2017, 64, 2253-2262.	4.2	55
36	Subject-Exoskeleton Contact Model Calibration Leads to Accurate Interaction Force Predictions. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2019, 27, 1597-1605.	4.9	55

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37	Single leg vertical jump performance identifies knee function deficits at return to sport after ACL reconstruction in male athletes. British Journal of Sports Medicine, 2022, 56, 490-498.	6.7	55
38	Aberrant pelvis and hip kinematics impair hip loading before and after total hip replacement. Gait and Posture, 2009, 30, 296-302.	1.4	52
39	Single leg hop for distance symmetry masks lower limb biomechanics: time to discuss hop distance as decision criterion for return to sport after ACL reconstruction?. British Journal of Sports Medicine, 2022, 56, 249-256.	6.7	51
40	Arm swing in human walking: What is their drive?. Gait and Posture, 2014, 40, 321-326.	1.4	50
41	Test-Retest Reliability of Innovated Strength Tests for Hip Muscles. PLoS ONE, 2013, 8, e81149.	2.5	48
42	Control of angular momentum during walking in children with cerebral palsy. Research in Developmental Disabilities, 2011, 32, 2860-2866.	2.2	47
43	Hip movement pathomechanics of patients with hip osteoarthritis aim at reducing hip joint loading on the osteoarthritic side. Gait and Posture, 2018, 59, 11-17.	1.4	47
44	Model-based control for exoskeletons with series elastic actuators evaluated on sit-to-stand movements. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 65.	4.6	47
45	Physics-Based Simulations to Predict the Differential Effects of Motor Control and Musculoskeletal Deficits on Gait Dysfunction in Cerebral Palsy: A Retrospective Case Study. Frontiers in Human Neuroscience, 2020, 14, 40.	2.0	46
46	Knee Cartilage Thickness, T1Ï•and T2 Relaxation Time Are Related to Articular Cartilage Loading in Healthy Adults. PLoS ONE, 2017, 12, e0170002.	2.5	46
47	Proprioceptive accuracy in women with early and established knee osteoarthritis and its relation to functional ability, postural control, and muscle strength. Clinical Rheumatology, 2013, 32, 1365-1374.	2.2	45
48	The study of muscle action during single support and swing phase of gait: clinical relevance of forward simulation techniques. Gait and Posture, 2003, 17, 97-105.	1.4	44
49	Hip contact force in presence of aberrant bone geometry during normal and pathological gait. Journal of Orthopaedic Research, 2014, 32, 1406-1415.	2.3	44
50	Muscle optimization techniques impact the magnitude of calculated hip joint contact forces. Journal of Orthopaedic Research, 2015, 33, 430-438.	2.3	44
51	Mobile assessment of the lower limb kinematics in healthy persons and in persons with degenerative knee disorders: A systematic review. Gait and Posture, 2018, 59, 229-241.	1.4	44
52	Three-dimensional reaching tasks: Effect of reaching height and width on upper limb kinematics and muscle activity. Gait and Posture, 2010, 32, 500-507.	1.4	43
53	Gait stability in children with Cerebral Palsy. Research in Developmental Disabilities, 2013, 34, 1689-1699.	2.2	43
54	Similar muscles contribute to horizontal and vertical acceleration of center of mass in forward and backward walking: implications for neural control. Journal of Neurophysiology, 2012, 107, 3385-3396.	1.8	42

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55	Virtual reconstruction of glenoid bone defects using a statistical shape model. Journal of Shoulder and Elbow Surgery, 2018, 27, 160-166.	2.6	42
56	Virtual reality balance training for elderly: Similar skiing games elicit different challenges in balance training. Gait and Posture, 2018, 59, 111-116.	1.4	42
57	A multi-scale modelling framework combining musculoskeletal rigid-body simulations with adaptive finite element analyses, to evaluate the impact of femoral geometry on hip joint contact forces and femoral bone growth. PLoS ONE, 2020, 15, e0235966.	2.5	42
58	Transmission of Whole-Body Vibration and Its Effect on Muscle Activation. Journal of Strength and Conditioning Research, 2013, 27, 2533-2541.	2.1	40
59	SimCP: A Simulation Platform to Predict Gait Performance Following Orthopedic Intervention in Children With Cerebral Palsy. Frontiers in Neurorobotics, 2019, 13, 54.	2.8	40
60	A multilevel approach to botulinum toxin type A treatment of the (ilio)psoas in spasticity in cerebral palsy. European Journal of Neurology, 1999, 6, s59-s62.	3.3	39
61	Mechanobiological prediction of proximal femoral deformities in children with cerebral palsy. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 253-262.	1.6	39
62	Medial knee loading is altered in subjects with early osteoarthritis during gait but not during step-up-and-over task. PLoS ONE, 2017, 12, e0187583.	2.5	39
63	Alterated talar and navicular bone morphology is associated with pes planus deformity: A CTâ€scan study. Journal of Orthopaedic Research, 2013, 31, 282-287.	2.3	38
64	Role of subject-specific musculoskeletal loading on the prediction of bone density distribution in the proximal femur. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 30, 244-252.	3.1	37
65	Subject-specific geometrical detail rather than cost function formulation affects hip loading calculation. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 1475-1488.	1.6	37
66	A patient-specific guide for optimizing custom-made glenoid implantation in cases of severe glenoid defects: an inÂvitro study. Journal of Shoulder and Elbow Surgery, 2016, 25, 837-845.	2.6	36
67	The influence of maximum isometric muscle force scaling on estimated muscle forces from musculoskeletal models of children with cerebral palsy. Gait and Posture, 2018, 65, 213-220.	1.4	36
68	Longitudinal joint loading in patients before and up to one year after unilateral total hip arthroplasty. Gait and Posture, 2018, 61, 117-124.	1.4	35
69	Increased use of stepping strategy in response to medio-lateral perturbations in the elderly relates to altered reactive tibialis anterior activity. Gait and Posture, 2019, 68, 575-582.	1.4	35
70	Musculo-tendon length and lengthening velocity of rectus femoris in stiff knee gait. Gait and Posture, 2006, 23, 222-229.	1.4	34
71	How gravity and muscle action control mediolateral center of mass excursion during slow walking: A simulation study. Gait and Posture, 2014, 39, 91-97.	1.4	34
72	Control of propulsion and body lift during the first two stances of sprint running: a simulation study. Journal of Sports Sciences, 2015, 33, 2016-2024.	2.0	34

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73	A methodological framework for detecting ulcersâ€™ risk in diabetic foot subjects by combining gait analysis, a new musculoskeletal foot model and a foot finite element model. Gait and Posture, 2018, 60, 279-285.	1.4	34
74	OpenSim Versus Human Body Model: A Comparison Study for the Lower Limbs During Gait. Journal of Applied Biomechanics, 2018, 34, 496-502.	0.8	33
75	Generic scaled versus subject-specific models for the calculation of musculoskeletal loading in cerebral palsy gait: Effect of personalized musculoskeletal geometry outweighs the effect of personalized neural control. Clinical Biomechanics, 2021, 87, 105402.	1.2	33
76	The effect of muscle weakness on the capability gap during gross motor function: a simulation study supporting design criteria for exoskeletons of the lower limb. BioMedical Engineering OnLine, 2014, 13, 111.	2.7	32
77	Altering length and velocity feedback during a neuro-musculoskeletal simulation of normal gait contributes to hemiparetic gait characteristics. Journal of NeuroEngineering and Rehabilitation, 2014, 11, 78.	4.6	32
78	Subject-specific musculoskeletal modelling in patients before and after total hip arthroplasty. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 1683-1691.	1.6	32
79	Sensitivity of predicted muscle forces during gait to anatomical variability in musculotendon geometry. Journal of Biomechanics, 2015, 48, 2116-2123.	2.1	31
80	An EMG-based, muscle driven forward simulation of single support phase of gait. Journal of Biomechanics, 2002, 35, 609-619.	2.1	30
81	Use of Computational Modeling to Study Joint Degeneration: A Review. Frontiers in Bioengineering and Biotechnology, 2020, 8, 93.	4.1	30
82	A Machine Learning Approach to Estimate Hip and Knee Joint Loading Using a Mobile Phone-Embedded IMU. Frontiers in Bioengineering and Biotechnology, 2020, 8, 320.	4.1	29
83	Modulation of gluteus medius activity reflects the potential of the muscle to meet the mechanical demands during perturbed walking. Scientific Reports, 2018, 8, 11675.	3.3	28
84	Extended foot-ankle musculoskeletal models for application in movement analysis. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 153-159.	1.6	27
85	Real-Time Gait Event Detection Based on Kinematic Data Coupled to a Biomechanical Model â€. Sensors, 2017, 17, 671.	3.8	27
86	ANP32A regulates ATM expression and prevents oxidative stress in cartilage, brain, and bone. Science Translational Medicine, 2018, 10, .	12.4	27
87	Ranking of osteogenic potential of physical exercises in postmenopausal women based on femoral neck strains. PLoS ONE, 2018, 13, e0195463.	2.5	27
88	The influence of knee joint geometry and alignment on the tibiofemoral load distribution: A computational study. Knee, 2019, 26, 813-823.	1.6	27
89	The effect of perturbing body segment parameters on calculated joint moments and muscle forces during gait. Journal of Biomechanics, 2014, 47, 596-601.	2.1	26
90	Performance specification for lower limb orthotic devices. Clinical Biomechanics, 2004, 19, 711-718.	1.2	25

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91	An in vitro approach to the evaluation of foot-ankle kinematics: Performance evaluation of a custom-built gait simulator. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2013, 227, 955-967.	1.8	25
92	Quantifying thumb opposition kinematics using dynamic computed tomography. Journal of Biomechanics, 2016, 49, 1994-1999.	2.1	25
93	Successful Preliminary Walking Experiments on a Transtibial Amputee Fitted with a Powered Prosthesis. Prosthetics and Orthotics International, 2009, 33, 368-377.	1.0	24
94	Early periprosthetic bone remodelling around cemented and uncemented custom-made femoral components and their uncemented acetabular cups. Archives of Orthopaedic and Trauma Surgery, 2011, 131, 941-948.	2.4	24
95	Inverse dynamic estimates of muscle recruitment and joint contact forces are more realistic when minimizing muscle activity rather than metabolic energy or contact forces. Gait and Posture, 2019, 74, 223-230.	1.4	24
96	Combined enzymatic degradation of proteoglycans and collagen significantly alters intratissue strains in articular cartilage during cyclic compression. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 98, 383-394.	3.1	24
97	A new method for estimating subjectâ€specific muscleâ€“tendon parameters of the knee joint actuators: a simulation study. International Journal for Numerical Methods in Biomedical Engineering, 2014, 30, 969-987.	2.1	22
98	Musculoskeletal modelling in dogs: challenges and future perspectives. Veterinary and Comparative Orthopaedics and Traumatology, 2016, 29, 181-187.	0.5	22
99	Mechanical effort predicts the selection of ankle over hip strategies in nonstepping postural responses. Journal of Neurophysiology, 2016, 116, 1937-1945.	1.8	22
100	Musculotendon excursion potential, tendon slack and muscle fibre length: the interaction of the canine gastrocnemius muscle and tendon. Journal of Anatomy, 2018, 233, 460-467.	1.5	22
101	Selective dorsal rhizotomy improves muscle forces during walking in children with spastic cerebral palsy. Clinical Biomechanics, 2019, 65, 26-33.	1.2	22
102	Comparison of lower limb muscle strength between diabetic neuropathic and healthy subjects using OpenSim. Gait and Posture, 2017, 58, 194-200.	1.4	21
103	Cartilage-on-cartilage contact: effect of compressive loading on tissue deformations and structural integrity of bovine articular cartilage. Osteoarthritis and Cartilage, 2018, 26, 1699-1709.	1.3	21
104	Implementation of physiological functional spinal units in a rigid-body model of the thoracolumbar spine. Journal of Biomechanics, 2020, 98, 109437.	2.1	21
105	Image Based Musculoskeletal Modeling Allows Personalized Biomechanical Analysis of Gait. Lecture Notes in Computer Science, 2006, , 58-66.	1.3	21
106	Muscular effort in multiple sclerosis patients during powered wheelchair manoeuvres. Clinical Biomechanics, 2004, 19, 929-938.	1.2	20
107	Influence of altered gait patterns on the hip joint contact forces. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 352-359.	1.6	20
108	Differences in knee adduction moment between healthy subjects and patients with osteoarthritis depend on the knee axis definition. Gait and Posture, 2017, 53, 104-109.	1.4	20

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109	Augmented Ligament Reconstruction Partially Restores Hindfoot and Midfoot Kinematics After Lateral Ligament Ruptures. American Journal of Sports Medicine, 2019, 47, 1921-1930.	4.2	20
110	In Silico-Enhanced Treatment and Rehabilitation Planning for Patients with Musculoskeletal Disorders: Can Musculoskeletal Modelling and Dynamic Simulations Really Impact Current Clinical Practice?. Applied Sciences (Switzerland), 2020, 10, 7255.	2.5	20
111	Forefoot deformation during stance: Does the forefoot collapse during loading?. Gait and Posture, 2014, 39, 40-47.	1.4	19
112	Does surgical approach or prosthesis type affect hip joint loading one year after surgery?. Gait and Posture, 2016, 44, 74-82.	1.4	19
113	Symmetry in Triple Hop Distance Hides Asymmetries in Knee Function After ACL Reconstruction in Athletes at Return to Sports. American Journal of Sports Medicine, 2022, 50, 441-450.	4.2	19
114	Image based methods to generate subject-specific musculoskeletal models for gait analysis. International Congress Series, 2005, 1281, 62-67.	0.2	18
115	Functional knee axis based on isokinetic dynamometry data: Comparison of two methods, MRI validation, and effect on knee joint kinematics. Journal of Biomechanics, 2011, 44, 2595-2600.	2.1	18
116	A physiology-based inverse dynamic analysis of human gait using sequential convex programming: a comparative study. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 1093-1102.	1.6	18
117	Computed tomography-based joint locations affect calculation of joint moments during gait when compared to scaling approaches. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1238-1251.	1.6	18
118	The role of altered proximal femoral geometry in impaired pelvis stability and hip control during CP gait: A simulation study. Gait and Posture, 2016, 44, 61-67.	1.4	18
119	Similar sensorimotor transformations control balance during standing and walking. PLoS Computational Biology, 2021, 17, e1008369.	3.2	18
120	In vitro analysis of muscle activity illustrates mediolateral decoupling of hind and mid foot bone motion. Gait and Posture, 2013, 38, 56-61.	1.4	17
121	Muscle contributions to centre of mass acceleration during turning gait in typically developing children: A simulation study. Journal of Biomechanics, 2015, 48, 4238-4245.	2.1	17
122	Automated quantification of glenoid bone defects using 3-dimensional measurements. Journal of Shoulder and Elbow Surgery, 2020, 29, 1050-1058.	2.6	17
123	Dynamic simulation of human motion: numerically efficient inclusion of muscle physiology byÂconvexÂoptimization. Optimization and Engineering, 2008, 9, 213-238.	2.4	16
124	The added value of an actuated ankle-foot orthosis to restore normal gait function in patients with spinal cord injury: A systematic review. Journal of Rehabilitation Medicine, 2012, 44, 299-309.	1.1	16
125	Evaluation of predicted knee function for component malrotation in total knee arthroplasty. Medical Engineering and Physics, 2017, 40, 56-64.	1.7	16
126	Performance on Balance Evaluation Systems Test (BESTest) Impacts Health-Related Quality of Life in Adult Spinal Deformity Patients. Spine, 2018, 43, 637-646.	2.0	16

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127	Functional MRI can detect changes in intratissue strains in a full thickness and critical sized ovine cartilage defect model. Journal of Biomechanics, 2018, 66, 18-25.	2.1	16
128	The Exo4Work shoulder exoskeleton effectively reduces muscle and joint loading during simulated occupational tasks above shoulder height. Applied Ergonomics, 2022, 103, 103800.	3.1	16
129	Estimation of hamstring length at initial contact based on kinematic gait data. Gait and Posture, 2004, 20, 61-66.	1.4	15
130	Increased sensory noise and not muscle weakness explains changes in non-stepping postural responses following stance perturbations in healthy elderly. Gait and Posture, 2018, 59, 122-127.	1.4	15
131	Functional assessment of strains around a full-thickness and critical sized articular cartilage defect under compressive loading using MRI. Osteoarthritis and Cartilage, 2018, 26, 1710-1721.	1.3	15
132	12 Degrees of Freedom Muscle Force Driven Fibril-Reinforced Poroviscoelastic Finite Element Model of the Knee Joint. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 123-133.	4.9	15
133	Muscle contributions to center of mass acceleration adapt to asymmetric walking in healthy subjects. Gait and Posture, 2013, 38, 739-744.	1.4	14
134	Topographical Variation of Human Femoral Articular Cartilage Thickness, T1rho and T2 Relaxation Times Is Related to Local Loading during Walking. Cartilage, 2019, 10, 229-237.	2.7	14
135	Virtual Reality Balance Games Provide Little Muscular Challenge to Prevent Muscle Weakness in Healthy Older Adults. Games for Health Journal, 2020, 9, 227-236.	2.0	14
136	The Effect of Saddle Position on Maximal Power Output and Moment Generating Capacity of Lower Limb Muscles during Isokinetic Cycling. Journal of Applied Biomechanics, 2011, 27, 1-7.	0.8	13
137	Quantifying individual muscle contribution to three-dimensional reaching tasks. Gait and Posture, 2012, 35, 579-584.	1.4	12
138	Inertial control as novel technique for in vitro gait simulations. Journal of Biomechanics, 2015, 48, 392-395.	2.1	12
139	ESB Clinical Biomechanics Award 2020: Pelvis and hip movement strategies discriminate typical and pathological femoral growth â€“ Insights gained from a multi-scale mechanobiological modelling framework. Clinical Biomechanics, 2021, 87, 105405.	1.2	12
140	Less hip joint loading only during running rather than walking in elderly compared to young adults. Gait and Posture, 2017, 53, 155-161.	1.4	11
141	Development and validation of a modeling workflow for the generation of image-based, subject-specific thoracolumbar models of spinal deformity. Journal of Biomechanics, 2020, 110, 109946.	2.1	11
142	Specimen-specific tibial kinematics model for in vitro gait simulations. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2013, 227, 454-463.	1.8	10
143	Changes in proprioceptive weighting during quiet standing in women with early and established knee osteoarthritis compared to healthy controls. Gait and Posture, 2016, 44, 184-188.	1.4	10
144	Joint power generation differentiates young and adult sprinters during the transition from block start into acceleration: a cross-sectional study. Sports Biomechanics, 2017, 16, 452-462.	1.6	10

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145	Effect of a prehop on the muscle-tendon interaction during vertical jumps. Journal of Applied Physiology, 2018, 124, 1203-1211.	2.5	10
146	Patients With Medial Knee Osteoarthritis Reduce Medial Knee Contact Forces by Altering Trunk Kinematics, Progression Speed, and Stepping Strategy During Stair Ascent and Descent: A Pilot Study. Journal of Applied Biomechanics, 2019, 35, 280-289.	0.8	10
147	Hip Muscle Forces and Contact Loading During Squatting After Cam-Type FAI Surgery. Journal of Bone and Joint Surgery - Series A, 2020, 102, 34-42.	3.0	10
148	Inertial Sensor-to-Segment Calibration for Accurate 3D Joint Angle Calculation for Use in OpenSim. Sensors, 2022, 22, 3259.	3.8	10
149	Extrinsic Muscle Forces Affect Ankle Loading Before and After Total Ankle Arthroplasty. Clinical Orthopaedics and Related Research, 2015, 473, 3028-3037.	1.5	9
150	Gait alterations can reduce the risk of edge loading. Journal of Orthopaedic Research, 2016, 34, 1069-1076.	2.3	9
151	Subjects with medial and lateral tibiofemoral articular cartilage defects do not alter compartmental loading during walking. Clinical Biomechanics, 2018, 60, 149-156.	1.2	9
152	Botulinum toxin injections minimally affect modelled muscle forces during gait in children with cerebral palsy. Gait and Posture, 2020, 82, 54-60.	1.4	9
153	Towards the Monitoring of Functional Status in a Free-Living Environment for People with Hip or Knee Osteoarthritis: Design and Evaluation of the JOLO Blended Care App. Sensors, 2020, 20, 6967.	3.8	9
154	Pre-treatmentÂEMG can be used to model post-treatment muscle coordination during walkingÂin children with cerebral palsy. PLoS ONE, 2020, 15, e0228851.	2.5	9
155	Movement Quality Parameters during Gait Assessed by a Single Accelerometer in Subjects with Osteoarthritis and Following Total Joint Arthroplasty. Sensors, 2022, 22, 2955.	3.8	9
156	Reliability of 3D Lower Extremity Movement Analysis by Means of Inertial Sensor Technology during Transitional Tasks. Sensors, 2018, 18, 2638.	3.8	8
157	The Differential Effect of Arm Movements during Gait on the Forward Acceleration of the Centre of Mass in Children with Cerebral Palsy and Typically Developing Children. Frontiers in Human Neuroscience, 2017, 11, 96.	2.0	7
158	Single-event multilevel surgery, but not botulinum toxin injections normalize joint loading in cerebral palsy patients. Clinical Biomechanics, 2020, 76, 105025.	1.2	7
159	Automated muscle elongation measurement during reverse shoulder arthroplasty planning. Journal of Shoulder and Elbow Surgery, 2021, 30, 561-571.	2.6	7
160	Robustness of kinematic weighting and scaling concepts for musculoskeletal simulation. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 720-729.	1.6	6
161	Non-rigid deformation to include subject-specific detail in musculoskeletal models of CP children with proximal femoral deformity and its effect on muscle and contact forces during gait. Computer Methods in Biomechanics and Biomedical Engineering, 2019, 22, 376-385.	1.6	6
162	The effect of hip muscle weakness and femoral bony deformities on gait performance. Gait and Posture, 2021, 83, 280-286.	1.4	6

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163	Between-Limb Symmetry in ACL and Tibiofemoral Contact Forces in Athletes After ACL Reconstruction and Clearance for Return to Sport. Orthopaedic Journal of Sports Medicine, 2022, 10, 232596712210847.	1.7	6
164	Sensitivity analysis of hip joint centre estimation based on three-dimensional CT scans. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 539-546.	1.6	5
165	Variation of the clavicleâ€™s muscle insertion footprints â€“ a cadaveric study. Scientific Reports, 2019, 9, 16293.	3.3	5
166	A probabilistic method to estimate gait kinetics in the absence of ground reaction force measurements. Journal of Biomechanics, 2019, 96, 109327.	2.1	5
167	Subject-specific geometry affects acetabular contact pressure during gait more than subject-specific loading patterns. Computer Methods in Biomechanics and Biomedical Engineering, 2019, 22, 1323-1333.	1.6	5
168	Computationally Efficient Optimization Method to Quantify the Required Surgical Accuracy for a Ligament Balanced TKA. IEEE Transactions on Biomedical Engineering, 2021, 68, 3273-3280.	4.2	5
169	An Extended Dynamometer Setup to Improve the Accuracy of Knee Joint Moment Assessment. IEEE Transactions on Biomedical Engineering, 2013, 60, 1202-1208.	4.2	4
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