Scott L Delp

List of Publications by Year
in descending order

268 papers	32,791 citations	2970 93 h-index	4880 168 g-index
292 all docs	292 docs citations	292 times ranked	19603 citing authors

#	Article	IF	Citations
1	An Open-Source and Wearable System for Measuring 3D Human Motion in Real-Time. IEEE Transactions on Biomedical Engineering, 2022, 69, 678-688.	2.5	57
2	Simulated Exoskeletons with Coupled Degrees-of-Freedom Reduce theÂMetabolic Cost of Walking. Biosystems and Biorobotics, 2022, , 389-393.	0.2	0
3	Biceps femoris long head sarcomere and fascicle length adaptations after 3 weeks of eccentric exercise training. Journal of Sport and Health Science, 2022, 11, 43-49.	3.3	34
4	Coupled exoskeleton assistance simplifies control and maintains metabolic benefits: A simulation study. PLoS ONE, 2022, 17, e0261318.	1.1	14
5	Assessing inertial measurement unit locations for freezing of gait detection and patient preference. Journal of NeuroEngineering and Rehabilitation, 2022, 19, 20.	2.4	24
6	OpenSense: An open-source toolbox for inertial-measurement-unit-based measurement of lower extremity kinematics over long durations. Journal of NeuroEngineering and Rehabilitation, 2022, 19, 22.	2.4	56
7	Non-invasive electrical stimulation of peripheral nerves for the management of tremor. Journal of the Neurological Sciences, 2022, 435, 120195.	0.3	11
8	Running in the wild: Energetics explain ecological running speeds. Current Biology, 2022, 32, 2309-2315.e3.	1.8	10
9	Changes in foot progression angle during gait reduce the knee adduction moment and do not increase hip moments in individuals with knee osteoarthritis. Journal of Biomechanics, 2022, 141, 111204.	0.9	5
10	Muscle coordination retraining inspired by musculoskeletal simulations reduces knee contact force. Scientific Reports, 2022, 12, .	1.6	24
11	Assessment of Extractability and Accuracy of Electronic Health Record Data for Joint Implant Registries. JAMA Network Open, 2021, 4, e211728.	2.8	7
12	A neural network to predict the knee adduction moment in patients with osteoarthritis using anatomical landmarks obtainable from 2D video analysis. Osteoarthritis and Cartilage, 2021, 29, 346-356.	0.6	30
13	A marker registration method to improve joint angles computed by constrained inverse kinematics. PLoS ONE, 2021, 16, e0252425.	1.1	11
14	Wearable sensors enable personalized predictions of clinical laboratory measurements. Nature Medicine, 2021, 27, 1105-1112.	15.2	121
15	Sensing leg movement enhances wearable monitoring of energy expenditure. Nature Communications, 2021, 12, 4312.	5.8	33
16	Deep reinforcement learning for modeling human locomotion control in neuromechanical simulation. Journal of NeuroEngineering and Rehabilitation, 2021, 18, 126.	2.4	45
17	Open Source Software for Automatic Subregional Assessment of Knee Cartilage Degradation Using Quantitative T2 Relaxometry and Deep Learning. Cartilage, 2021, 13, 747S-756S.	1.4	3
18	Testing Simulated Assistance Strategies on a Hip-Knee-Ankle Exoskeleton: a Case Study. , 2020, , .		20

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19	Deep neural networks enable quantitative movement analysis using single-camera videos. Nature Communications, 2020, 11, 4054.	5.8	133
20	Transcutaneous Afferent Patterned Stimulation Therapy Reduces Hand Tremor for One Hour in Essential Tremor Patients. Frontiers in Neuroscience, 2020, 14, 530300.	1.4	14
21	Pre-operative gastrocnemius lengths in gait predict outcomes following gastrocnemius lengthening surgery in children with cerebral palsy. PLoS ONE, 2020, 15, e0233706.	1.1	19
22	Automated Classification of Radiographic Knee Osteoarthritis Severity Using Deep Neural Networks. Radiology: Artificial Intelligence, 2020, 2, e190065.	3.0	58
23	Foot strike pattern during running alters muscle-tendon dynamics of the gastrocnemius and the soleus. Scientific Reports, 2020, 10, 5872.	1.6	23
24	Microendoscopy detects altered muscular contractile dynamics in a mouse model of amyotrophic lateral sclerosis. Scientific Reports, 2020, 10, 457.	1.6	5
25	The turning and barrier course reveals gait parameters for detecting freezing of gait and measuring the efficacy of deep brain stimulation. PLoS ONE, 2020, 15, e0231984.	1.1	25
26	Rapid volumetric gagCEST imaging of knee articular cartilage at 3 T: evaluation of improved dynamic range and an osteoarthritic population. NMR in Biomedicine, 2020, 33, e4310.	1.6	9
27	Artificial Intelligence for Prosthetics: Challenge Solutions. The Springer Series on Challenges in Machine Learning, 2020, , 69-128.	10.4	14
28	The effects of motor modularity on performance, learning and generalizability in upper-extremity reaching: a computational analysis. Journal of the Royal Society Interface, 2020, 17, 20200011.	1.5	10
29	OpenSim Moco: Musculoskeletal optimal control. PLoS Computational Biology, 2020, 16, e1008493.	1.5	96
30	Prospective Home-use Study on Non-invasive Neuromodulation Therapy for Essential Tremor. Tremor and Other Hyperkinetic Movements, 2020, 10, 29.	1.1	35
31	High-fidelity musculoskeletal modeling reveals that motor planning variability contributes to the speed-accuracy tradeoff. ELife, 2020, 9, .	2.8	9
32	Title is missing!. , 2020, 15, e0231984.		0
33	Title is missing!. , 2020, 15, e0231984.		0
34	Title is missing!. , 2020, 15, e0231984.		0
35	Title is missing!. , 2020, 15, e0231984.		0
36	Best practices for analyzing large-scale health data from wearables and smartphone apps. Npj Digital Medicine, 2019, 2, 45.	5.7	108

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37	Connecting the legs with a spring improves human running economy. Journal of Experimental Biology, 2019, 222, .	0.8	41
38	Weakly supervised classification of aortic valve malformations using unlabeled cardiac MRI sequences. Nature Communications, 2019, 10, 3111.	5.8	65
39	The Interaction of Compliance and Activation on the Force-Length Operating Range and Force Generating Capacity of Skeletal Muscle: A Computational Study using a Guinea Fowl Musculoskeletal Model. Integrative Organismal Biology, 2019, 1, obz022.	0.9	26
40	Muscle Contributions to Upper-Extremity Movement and Work From a Musculoskeletal Model of the Human Shoulder. Frontiers in Neurorobotics, 2019, 13, 90.	1.6	38
41	GagCEST MRI at 3T can detect cartilage differences between healthy and osteoarthritic subjects. Osteoarthritis and Cartilage, 2019, 27, S355-S356.	0.6	1
42	Medical device surveillance with electronic health records. Npj Digital Medicine, 2019, 2, 94.	5.7	44
43	Predicting gait adaptations due to ankle plantarflexor muscle weakness and contracture using physics-based musculoskeletal simulations. PLoS Computational Biology, 2019, 15, e1006993.	1.5	120
44	An Acute Randomized Controlled Trial of Noninvasive Peripheral Nerve Stimulation in Essential Tremor. Neuromodulation, 2019, 22, 537-545.	0.4	52
45	Automatic real-time gait event detection in children using deep neural networks. PLoS ONE, 2019, 14, e0211466.	1.1	66
46	Rapid energy expenditure estimation for ankle assisted and inclined loaded walking. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 67.	2.4	23
47	Gait retraining as a conservative treatment for medial knee osteoarthritis. Osteoarthritis and Cartilage, 2019, 27, S349.	0.6	2
48	Six weeks of personalized gait retraining to offload the medial compartment of the knee reduces pain more than sham gait retraining. Osteoarthritis and Cartilage, 2019, 27, S28.	0.6	6
49	Patellofemoral cartilage stresses are most sensitive to variations in vastus medialis muscle forces. Computer Methods in Biomechanics and Biomedical Engineering, 2019, 22, 206-216.	0.9	16
50	Learning oneâ€™s genetic risk changes physiology independent of actual genetic risk. Nature Human Behaviour, 2019, 3, 48-56.	6.2	91
51	Noninvasive neuromodulation in essential tremor demonstrates relief in a shamâ€controlled pilot trial. Movement Disorders, 2018, 33, 1182-1183.	2.2	38
52	Age Influences Biomechanical Changes After Participation in an Anterior Cruciate Ligament Injury Prevention Program. American Journal of Sports Medicine, 2018, 46, 598-606.	1.9	30
53	Perspectives on Sharing Models and Related Resources in Computational Biomechanics Research. Journal of Biomechanical Engineering, 2018, 140, .	0.6	16
54	Subject-specific toe-in or toe-out gait modifications reduce the larger knee adduction moment peak more than a non-personalized approach. Journal of Biomechanics, 2018, 66, 103-110.	0.9	64

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55	Estimating the effect size of surgery to improve walking in children with cerebral palsy from retrospective observational clinical data. Scientific Reports, 2018, 8, 16344.	1.6	29
56	Introduction to NIPS 2017 Competition Track. The Springer Series on Challenges in Machine Learning, 2018, , 1-23.	10.4	0
57	Robust Physicsâ€based Motion Retargeting with Realistic Body Shapes. Computer Graphics Forum, 2018, 37, 81-92.	1.8	12
58	Microendoscopy reveals positive correlation in multiscale length changes and variable sarcomere lengths across different regions of human muscle. Journal of Applied Physiology, 2018, 125, 1812-1820.	1.2	48
59	Machine learning in human movement biomechanics: Best practices, common pitfalls, and new opportunities. Journal of Biomechanics, 2018, 81, 1-11.	0.9	266
60	Acute changes in foot strike pattern and cadence affect running parameters associated with tibial stress fractures. Journal of Biomechanics, 2018, 76, 1-7.	0.9	59
61	OpenSim: Simulating musculoskeletal dynamics and neuromuscular control to study human and animal movement. PLoS Computational Biology, 2018, 14, e1006223.	1.5	735
62	Learning to Run Challenge: Synthesizing Physiologically Accurate Motion Using Deep Reinforcement Learning. The Springer Series on Challenges in Machine Learning, 2018, , 101-120.	10.4	21
63	A Brainstem-Spinal Cord Inhibitory Circuit for Mechanical Pain Modulation by GABA and Enkephalins. Neuron, 2017, 93, 822-839.e6.	3.8	250
64	Prostaglandin E2 is essential for efficacious skeletal muscle stem-cell function, augmenting regeneration and strength. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6675-6684.	3.3	160
65	Muscle-tendon mechanics explain unexpected effects of exoskeleton assistance on metabolic rate during walking. Journal of Experimental Biology, 2017, 220, 2082-2095.	0.8	73
66	Sanativo Wound Healing Product Does Not Accelerate Reepithelialization in a Mouse Cutaneous Wound Healing Model. Plastic and Reconstructive Surgery, 2017, 139, 343-352.	0.7	8
67	Preparatory co-activation of the ankle muscles may prevent ankle inversion injuries. Journal of Biomechanics, 2017, 52, 17-23.	0.9	58
68	Large-scale physical activity data reveal worldwide activity inequality. Nature, 2017, 547, 336-339.	13.7	675
69	Biomechanical Effects of an Injury Prevention Program in Preadolescent Female Soccer Athletes. American Journal of Sports Medicine, 2017, 45, 294-301.	1.9	63
70	Simulating ideal assistive devices to reduce the metabolic cost of walking with heavy loads. PLoS ONE, 2017, 12, e0180320.	1.1	121
71	ShortFuse: Biomedical Time Series Representations in the Presence of Structured Information. Proceedings of Machine Learning Research, 2017, 68, 59-74.	0.3	1
72	A Biomechanical Model of the Scapulothoracic Joint to Accurately Capture Scapular Kinematics during Shoulder Movements. PLoS ONE, 2016, 11, e0141028.	1.1	106

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73	Stretching Your Energetic Budget: How Tendon Compliance Affects the Metabolic Cost of Running. PLoS ONE, 2016, 11, e0150378.	1.1	95
74	Full-Body Musculoskeletal Model for Muscle-Driven Simulation of Human Gait. IEEE Transactions on Biomedical Engineering, 2016, 63, 2068-2079.	2.5	580
75	Optogenetic approaches addressing extracellular modulation of neural excitability. Scientific Reports, 2016, 6, 23947.	1.6	34
76	Human soleus sarcomere lengths measured using in vivo microendoscopy at two ankle flexion angles. Journal of Biomechanics, 2016, 49, 4164-4167.	0.9	19
77	Changes in sarcomere lengths of the human vastus lateralis muscle with knee flexion measured using in vivo microendoscopy. Journal of Biomechanics, 2016, 49, 2989-2994.	0.9	28
78	Beyond the brain: Optogenetic control in the spinal cord and peripheral nervous system. Science Translational Medicine, 2016, 8, 337rv5.	5.8	129
79	Gait biomechanics in the era of data science. Journal of Biomechanics, 2016, 49, 3759-3761.	0.9	75
80	InÂVivo Interrogation of Spinal Mechanosensory Circuits. Cell Reports, 2016, 17, 1699-1710.	2.9	62
81	Optogenetic and chemogenetic strategies for sustained inhibition of pain. Scientific Reports, 2016, 6, 30570.	1.6	72
82	Structural foundations of optogenetics: Determinants of channelrhodopsin ion selectivity. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 822-829.	3.3	197
83	Simulation-Based Design for Wearable Robotic Systems: An Optimization Framework for Enhancing a Standing Long Jump. IEEE Transactions on Biomedical Engineering, 2016, 63, 894-903.	2.5	40
84	A fast multi-obstacle muscle wrapping method using natural geodesic variations. Multibody System Dynamics, 2016, 36, 195-219.	1.7	31
85	Simulating Ideal Assistive Devices to Reduce the Metabolic Cost of Running. PLoS ONE, 2016, 11, e0163417.	1.1	127
86	Evaluation of an Algorithm to Detect the First Ventilatory Threshold from Heart Rate. Medicine and Science in Sports and Exercise, 2016, 48, 672-673.	0.2	0
87	Making a meaningful impact: modelling simultaneous frictional collisions in spatial multibody systems. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20140859.	1.0	16
88	The Role of Cartilage Stress in Patellofemoral Pain. Medicine and Science in Sports and Exercise, 2015, 47, 2416-2422.	0.2	25
89	Muscle velocity and inertial force from phase contrast MRI. Journal of Magnetic Resonance Imaging, 2015, 42, 526-532.	1.9	3
90	Muscle velocity and inertial force from phase contrast MRI. Journal of Magnetic Resonance Imaging, 2015, 42, spcone-spcone.	1.9	0

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91	Predictive Simulation Generates Human Adaptations during Loaded and Inclined Walking. PLoS ONE, 2015, 10, e0121407.	1.1	91
92	T1Ï•Dispersion in Articular Cartilage. Cartilage, 2015, 6, 113-122.	1.4	21
93	InÂVivo Imaging of Human Sarcomere Twitch Dynamics in Individual Motor Units. Neuron, 2015, 88, 1109-1120.	3.8	56
94	How tibiofemoral alignment and contact locations affect predictions of medial and lateral tibiofemoral contact forces. Journal of Biomechanics, 2015, 48, 644-650.	0.9	166
95	Is My Model Good Enough? Best Practices for Verification and Validation of Musculoskeletal Models and Simulations of Movement. Journal of Biomechanical Engineering, 2015, 137, 020905.	0.6	509
96	Use it or lose it: multiscale skeletal muscle adaptation to mechanical stimuli. Biomechanics and Modeling in Mechanobiology, 2015, 14, 195-215.	1.4	119
97	Running with a load increases leg stiffness. Journal of Biomechanics, 2015, 48, 1003-1008.	0.9	71
98	Self-Tracking Energy Transfer for Neural Stimulation in Untethered Mice. Physical Review Applied, 2015, 4, .	1.5	41
99	Wirelessly powered, fully internal optogenetics for brain, spinal and peripheral circuits in mice. Nature Methods, 2015, 12, 969-974.	9.0	473
100	The mobilize center: an NIH big data to knowledge center to advance human movement research and improve mobility. Journal of the American Medical Informatics Association: JAMIA, 2015, 22, 1120-1125.	2.2	24
101	Musculoskeletal modelling of an ostrich (<i>Struthio camelus</i>) pelvic limb: influence of limb orientation on muscular capacity during locomotion. PeerJ, 2015, 3, e1001.	0.9	111
102	Are Subject-Specific Musculoskeletal Models Robust to the Uncertainties in Parameter Identification?. PLoS ONE, 2014, 9, e112625.	1.1	146
103	Musculoskeletal modelling deconstructs the paradoxical effects of elastic ankle exoskeletons on plantar-flexor mechanics & energetics during hopping. Journal of Experimental Biology, 2014, 217, 4018-28.	0.8	51
104	3D finite element models of shoulder muscles for computing lines of actions and moment arms. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 829-837.	0.9	59
105	Optogenetic Regeneration. Science, 2014, 344, 44-45.	6.0	7
106	Rejuvenation of the muscle stem cell population restores strength to injured aged muscles. Nature Medicine, 2014, 20, 255-264.	15.2	545
107	Changes in tibiofemoral forces due to variations in muscle activity during walking. Journal of Orthopaedic Research, 2014, 32, 769-776.	1.2	109
108	Virally mediated optogenetic excitation and inhibition of pain in freely moving nontransgenic mice. Nature Biotechnology, 2014, 32, 274-278.	9.4	191

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109	Differences in muscle activity between natural forefoot and rearfoot strikers during running. Journal of Biomechanics, 2014, 47, 3593-3597.	0.9	62
110	Quantified self and human movement: A review on the clinical impact of wearable sensing and feedback for gait analysis and intervention. Gait and Posture, 2014, 40, 11-19.	0.6	309
111	Improved Muscle Wrapping Algorithms Using Explicit Path-Error Jacobians. Mechanisms and Machine Science, 2014, , 395-403.	0.3	5
112	Muscle contributions to vertical and fore-aft accelerations are altered in subjects with crouch gait. Gait and Posture, 2013, 38, 86-91.	0.6	58
113	Optical inhibition of motor nerve and muscle activity <i>in vivo</i>. Muscle and Nerve, 2013, 47, 916-921.	1.0	32
114	Subject-specific knee joint geometry improves predictions of medial tibiofemoral contact forces. Journal of Biomechanics, 2013, 46, 2778-2786.	0.9	216
115	Toe-in gait reduces the first peak knee adduction moment in patients with medial compartment knee osteoarthritis. Journal of Biomechanics, 2013, 46, 122-128.	0.9	166
116	Changes in in vivo knee contact forces through gait modification. Journal of Orthopaedic Research, 2013, 31, 434-440.	1.2	42
117	Patellar maltracking is prevalent among patellofemoral pain subjects with patella alta: An upright, weightbearing MRI study. Journal of Orthopaedic Research, 2013, 31, 448-457.	1.2	63
118	A rolling constraint reproduces ground reaction forces and moments in dynamic simulations of walking, running, and crouch gait. Journal of Biomechanics, 2013, 46, 1772-1776.	0.9	27
119	Men and women adopt similar walking mechanics and muscle activation patterns during load carriage. Journal of Biomechanics, 2013, 46, 2522-2528.	0.9	101
120	Muscle contributions to fore-aft and vertical body mass center accelerations over a range of running speeds. Journal of Biomechanics, 2013, 46, 780-787.	0.9	231
121	How muscle fiber lengths and velocities affect muscle force generation as humans walk and run at different speeds. Journal of Experimental Biology, 2013, 216, 2150-60.	0.8	197
122	Stabilisation of walking by intrinsic muscle properties revealed in a three-dimensional muscle-driven simulation. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 451-462.	0.9	75
123	What is a Moment Arm? Calculating Muscle Effectiveness in Biomechanical Models Using Generalized Coordinates. , 2013, 2013, .		60
124	Flexing Computational Muscle: Modeling and Simulation of Musculotendon Dynamics. Journal of Biomechanical Engineering, 2013, 135, 021005.	0.6	465
125	Sixâ€week gait retraining program reduces knee adduction moment, reduces pain, and improves function for individuals with medial compartment knee osteoarthritis. Journal of Orthopaedic Research, 2013, 31, 1020-1025.	1.2	181
126	Sarcomere lengths in human extensor carpi radialis brevis measured by microendoscopy. Muscle and Nerve, 2013, 48, 286-292.	1.0	34

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127	Optical control of neuronal excitation and inhibition using a single opsin protein, ChR2. Scientific Reports, 2013, 3, 3110.	1.6	35
128	Optogenetic Control of Targeted Peripheral Axons in Freely Moving Animals. PLoS ONE, 2013, 8, e72691.	1.1	138
129	Optimizing locomotion controllers using biologically-based actuators and objectives. ACM Transactions on Graphics, 2012, 31, 1-11.	4.9	172
130	Simbios: an NIH national center for physics-based simulation of biological structures. Journal of the American Medical Informatics Association: JAMIA, 2012, 19, 186-189.	2.2	9
131	Predicting the metabolic cost of incline walking from muscle activity and walking mechanics. Journal of Biomechanics, 2012, 45, 1842-1849.	0.9	106
132	Contributions of muscles to mediolateral ground reaction force over a range of walking speeds. Journal of Biomechanics, 2012, 45, 2438-2443.	0.9	88
133	How much muscle strength is required to walk in a crouch gait?. Journal of Biomechanics, 2012, 45, 2564-2569.	0.9	118
134	Compressive tibiofemoral force during crouch gait. Gait and Posture, 2012, 35, 556-560.	0.6	297
135	How robust is human gait to muscle weakness?. Gait and Posture, 2012, 36, 113-119.	0.6	217
136	Upper Limb Muscle Volumes in Adults. , 2012, , 355-373.		2
137	Comparison of MRI and ¹⁸Fâ€NaF PET/CT in patients with patellofemoral pain. Journal of Magnetic Resonance Imaging, 2012, 36, 928-932.	1.9	36
138	Patellar tilt correlates with vastus lateralis: Vastus medialis activation ratio in maltracking patellofemoral pain patients. Journal of Orthopaedic Research, 2012, 30, 927-933.	1.2	78
139	Patients with patellofemoral pain exhibit elevated bone metabolic activity at the patellofemoral joint. Journal of Orthopaedic Research, 2012, 30, 209-213.	1.2	63
140	Grand challenge competition to predict in vivo knee loads. Journal of Orthopaedic Research, 2012, 30, 503-513.	1.2	449
141	Patellar Maltracking Correlates With Vastus Medialis Activation Delay in Patellofemoral Pain Patients. American Journal of Sports Medicine, 2011, 39, 590-598.	1.9	95
142	Can biomechanical variables predict improvement in crouch gait?. Gait and Posture, 2011, 34, 197-201.	0.6	58
143	Simbody: multibody dynamics for biomedical research. Procedia IUTAM, 2011, 2, 241-261.	1.2	193
144	New MR imaging methods for metallic implants in the knee: Artifact correction and clinical impact. Journal of Magnetic Resonance Imaging, 2011, 33, 1121-1127.	1.9	76

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145	Differences in patellofemoral kinematics between weightâ€bearing and nonâ€weightâ€bearing conditions in patients with patellofemoral pain. Journal of Orthopaedic Research, 2011, 29, 312-317.	1.2	93
146	Simulation of human movement: applications using OpenSim. Procedia IUTAM, 2011, 2, 186-198.	1.2	59
147	OpenSim: a musculoskeletal modeling and simulation framework for in silico investigations and exchange. Procedia IUTAM, 2011, 2, 212-232.	1.2	219
148	Mechanics, modulation and modelling: how muscles actuate and control movement. Philosophical Transactions of the Royal Society B: Biological Sciences, 2011, 366, 1463-1465.	1.8	16
149	Fibre operating lengths of human lower limb muscles during walking. Philosophical Transactions of the Royal Society B: Biological Sciences, 2011, 366, 1530-1539.	1.8	112
150	Imaging and Musculoskeletal Modeling to Investigate the Mechanical Etiology of Patellofemoral Pain. , 2011, , 269-286.		4
151	Architectural Design and Function of Human Back Muscles. , 2011, , 54-69.		0
152	A Model of the Lower Limb for Analysis of Human Movement. Annals of Biomedical Engineering, 2010, 38, 269-279.	1.3	659
153	Minimal formulation of joint motion for biomechanisms. Nonlinear Dynamics, 2010, 62, 291-303.	2.7	57
154	Variation of hamstrings lengths and velocities with walking speed. Journal of Biomechanics, 2010, 43, 1522-1526.	0.9	23
155	Contributions of muscles and passive dynamics to swing initiation over a range of walking speeds. Journal of Biomechanics, 2010, 43, 1450-1455.	0.9	31
156	Muscle contributions to support and progression during single-limb stance in crouch gait. Journal of Biomechanics, 2010, 43, 2099-2105.	0.9	170
157	Muscle contributions to propulsion and support during running. Journal of Biomechanics, 2010, 43, 2709-2716.	0.9	608
158	Orderly recruitment of motor units under optical control in vivo. Nature Medicine, 2010, 16, 1161-1165.	15.2	176
159	Can Strength Training Predictably Improve Gait Kinematics? A Pilot Study on the Effects of Hip and Knee Extensor Strengthening on Lower-Extremity Alignment in Cerebral Palsy. Physical Therapy, 2010, 90, 269-279.	1.1	112
160	Short Telomeres and Stem Cell Exhaustion Model Duchenne Muscular Dystrophy in mdx/mTR Mice. Cell, 2010, 143, 1059-1071.	13.5	428
161	Reconstruction and EMG-informed control, simulation and analysis of human movement for athletics: Performance improvement and injury prevention. , 2009, 2009, 6534-7.		10
162	Muscle Contributions to Medial-Lateral Acceleration of the Body During Walking. , 2009, , .		0

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163	Multiecho IDEAL Gradient-Echo Water-Fat Separation for Rapid Assessment of Cartilage Volume at 1.5 T: Initial Experience. Radiology, 2009, 252, 561-567.	3.6	31
164	Using realâ€time MRI to quantify altered joint kinematics in subjects with patellofemoral pain and to evaluate the effects of a patellar brace or sleeve on joint motion. Journal of Orthopaedic Research, 2009, 27, 571-577.	1.2	116
165	Knee muscle forces during walking and running in patellofemoral pain patients and pain-free controls. Journal of Biomechanics, 2009, 42, 898-905.	0.9	202
166	Coarse-Grained Structural Modeling of Molecular Motors Using Multibody Dynamics. Cellular and Molecular Bioengineering, 2009, 2, 366-374.	1.0	15
167	Mechanisms of improved knee flexion after rectus femoris transfer surgery. Journal of Biomechanics, 2009, 42, 614-619.	0.9	68
168	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.	0.6	180
169	Predicting outcomes of rectus femoris transfer surgery. Gait and Posture, 2009, 30, 100-105.	0.6	67
170	Engineered Myosin VI Motors Reveal Minimal Structural Determinants of Directionality and Processivity. Journal of Molecular Biology, 2009, 392, 862-867.	2.0	33
171	New resource for the computation of cartilage biphasic material properties with the interpolant response surface method. Computer Methods in Biomechanics and Biomedical Engineering, 2009, 12, 415-422.	0.9	23
172	Least action principles and their application to constrained and task-level problems in robotics andÂbiomechanics. Multibody System Dynamics, 2008, 19, 303-322.	1.7	33
173	Feasibility of using realâ€time MRI to measure joint kinematics in 1.5T and openâ€bore 0.5T systems. Journal of Magnetic Resonance Imaging, 2008, 28, 158-166.	1.9	42
174	The influence of femoral internal and external rotation on cartilage stresses within the patellofemoral joint. Journal of Orthopaedic Research, 2008, 26, 1627-1635.	1.2	96
175	Posterior cruciate ligament removal contributes to abnormal knee motion during posterior stabilized total knee arthroplasty. Journal of Orthopaedic Research, 2008, 26, 1494-1499.	1.2	22
176	Crouched postures reduce the capacity of muscles to extend the hip and knee during the single-limb stance phase of gait. Journal of Biomechanics, 2008, 41, 960-967.	0.9	132
177	Importance of preswing rectus femoris activity in stiff-knee gait. Journal of Biomechanics, 2008, 41, 2362-2369.	0.9	77
178	Muscle contributions to support and progression over a range of walking speeds. Journal of Biomechanics, 2008, 41, 3243-3252.	0.9	352
179	Minimally invasive high-speed imaging of sarcomere contractile dynamics in mice and humans. Nature, 2008, 454, 784-788.	13.7	294
180	The Simbios National Center: Systems Biology in Motion. Proceedings of the IEEE, 2008, 96, 1266-1280.	16.4	53

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181	Averaging Different Alignment Axes Improves Femoral Rotational Alignment in Computer-Navigated Total Knee Arthroplasty. Journal of Bone and Joint Surgery - Series A, 2008, 90, 2098-2104.	1.4	52
182	iTools: A Framework for Classification, Categorization and Integration of Computational Biology Resources. PLoS ONE, 2008, 3, e2265.	1.1	27
183	Extending the absorbing boundary method to fit dwell-time distributions of molecular motors with complex kinetic pathways. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3171-3176.	3.3	23
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