

# Scott L Delp

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

268  
papers

23,738  
citations

84  
h-index

148  
g-index

292  
ext. papers

28,823  
ext. citations

5.5  
avg, IF

7.13  
L-index

#	Paper	IF	Citations
268	Coupled exoskeleton assistance simplifies control and maintains metabolic benefits: A simulation study.. <i>PLoS ONE</i> , <b>2022</b> , 17, e0261318	3.7	1
267	Assessing inertial measurement unit locations for freezing of gait detection and patient preference.. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2022</b> , 19, 20	5.3	3
266	Simulated Exoskeletons with Coupled Degrees-of-Freedom Reduce the Metabolic Cost of Walking. <i>Biosystems and Biorobotics</i> , <b>2022</b> , 389-393	0.2	
265	OpenSense: An open-source toolbox for inertial-measurement-unit-based measurement of lower extremity kinematics over long durations.. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2022</b> , 19, 22	5.3	5
264	Non-invasive electrical stimulation of peripheral nerves for the management of tremor.. <i>Journal of the Neurological Sciences</i> , <b>2022</b> , 435, 120195	3.2	1
263	Assessment of Extractability and Accuracy of Electronic Health Record Data for Joint Implant Registries. <i>JAMA Network Open</i> , <b>2021</b> , 4, e211728	10.4	1
262	A neural network to predict the knee adduction moment in patients with osteoarthritis using anatomical landmarks obtainable from 2D video analysis. <i>Osteoarthritis and Cartilage</i> , <b>2021</b> , 29, 346-356	6.2	7
261	A marker registration method to improve joint angles computed by constrained inverse kinematics. <i>PLoS ONE</i> , <b>2021</b> , 16, e0252425	3.7	3
260	Wearable sensors enable personalized predictions of clinical laboratory measurements. <i>Nature Medicine</i> , <b>2021</b> , 27, 1105-1112	50.5	30
259	An open-source and wearable system for measuring 3D human motion in real-time. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2021</b> , PP,	5	8
258	Sensing leg movement enhances wearable monitoring of energy expenditure. <i>Nature Communications</i> , <b>2021</b> , 12, 4312	17.4	4
257	Deep reinforcement learning for modeling human locomotion control in neuromechanical simulation. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2021</b> , 18, 126	5.3	10
256	Open Source Software for Automatic Subregional Assessment of Knee Cartilage Degradation Using Quantitative T2 Relaxometry and Deep Learning. <i>Cartilage</i> , <b>2021</b> , 19476035211042406	3	1
255	Biceps femoris long head sarcomere and fascicle length adaptations after 3 weeks of eccentric exercise training. <i>Journal of Sport and Health Science</i> , <b>2021</b> , 11, 43-43	8.2	5
254	Transcutaneous Afferent Patterned Stimulation Therapy Reduces Hand Tremor for One Hour in Essential Tremor Patients. <i>Frontiers in Neuroscience</i> , <b>2020</b> , 14, 530300	5.1	5
253	Pre-operative gastrocnemius lengths in gait predict outcomes following gastrocnemius lengthening surgery in children with cerebral palsy. <i>PLoS ONE</i> , <b>2020</b> , 15, e0233706	3.7	7
252	Automated Classification of Radiographic Knee Osteoarthritis Severity Using Deep Neural Networks. <i>Radiology: Artificial Intelligence</i> , <b>2020</b> , 2, e190065	8.7	17

251	Foot strike pattern during running alters muscle-tendon dynamics of the gastrocnemius and the soleus. <i>Scientific Reports</i> , <b>2020</b> , 10, 5872	4.9	13
250	Microendoscopy detects altered muscular contractile dynamics in a mouse model of amyotrophic lateral sclerosis. <i>Scientific Reports</i> , <b>2020</b> , 10, 457	4.9	3
249	The turning and barrier course reveals gait parameters for detecting freezing of gait and measuring the efficacy of deep brain stimulation. <i>PLoS ONE</i> , <b>2020</b> , 15, e0231984	3.7	10
248	OpenSim Moco: Musculoskeletal optimal control. <i>PLoS Computational Biology</i> , <b>2020</b> , 16, e1008493	5	18
247	Prospective Home-use Study on Non-invasive Neuromodulation Therapy for Essential Tremor. <i>Tremor and Other Hyperkinetic Movements</i> , <b>2020</b> , 10, 29	2	13
246	High-fidelity musculoskeletal modeling reveals that motor planning variability contributes to the speed-accuracy tradeoff. <i>ELife</i> , <b>2020</b> , 9,	8.9	6
245	Artificial Intelligence for Prosthetics: Challenge Solutions. <i>The Springer Series on Challenges in Machine Learning</i> , <b>2020</b> , 69-128	7.3	7
244	The effects of motor modularity on performance, learning and generalizability in upper-extremity reaching: a computational analysis. <i>Journal of the Royal Society Interface</i> , <b>2020</b> , 17, 20200011	4.1	4
243	Testing Simulated Assistance Strategies on a Hip-Knee-Ankle Exoskeleton: a Case Study <b>2020</b> ,		8
242	Deep neural networks enable quantitative movement analysis using single-camera videos. <i>Nature Communications</i> , <b>2020</b> , 11, 4054	17.4	37
241	Rapid volumetric gagCEST imaging of knee articular cartilage at 3 T: evaluation of improved dynamic range and an osteoarthritic population. <i>NMR in Biomedicine</i> , <b>2020</b> , 33, e4310	4.4	3
240	The turning and barrier course reveals gait parameters for detecting freezing of gait and measuring the efficacy of deep brain stimulation <b>2020</b> , 15, e0231984		
239	The turning and barrier course reveals gait parameters for detecting freezing of gait and measuring the efficacy of deep brain stimulation <b>2020</b> , 15, e0231984		
238	The turning and barrier course reveals gait parameters for detecting freezing of gait and measuring the efficacy of deep brain stimulation <b>2020</b> , 15, e0231984		
237	The turning and barrier course reveals gait parameters for detecting freezing of gait and measuring the efficacy of deep brain stimulation <b>2020</b> , 15, e0231984		
236	Medical device surveillance with electronic health records. <i>Npj Digital Medicine</i> , <b>2019</b> , 2, 94	15.7	23
235	Predicting gait adaptations due to ankle plantarflexor muscle weakness and contracture using physics-based musculoskeletal simulations. <i>PLoS Computational Biology</i> , <b>2019</b> , 15, e1006993	5	43
234	An Acute Randomized Controlled Trial of Noninvasive Peripheral Nerve Stimulation in Essential Tremor. <i>Neuromodulation</i> , <b>2019</b> , 22, 537-545	3.1	23

233	Automatic real-time gait event detection in children using deep neural networks. <i>PLoS ONE</i> , <b>2019</b> , 14, e0211466	3.7	33
232	Rapid energy expenditure estimation for ankle assisted and inclined loaded walking. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2019</b> , 16, 67	5.3	9
231	Six weeks of personalized gait retraining to offload the medial compartment of the knee reduces pain more than sham gait retraining. <i>Osteoarthritis and Cartilage</i> , <b>2019</b> , 27, S28	6.2	3
230	Best practices for analyzing large-scale health data from wearables and smartphone apps. <i>Npj Digital Medicine</i> , <b>2019</b> , 2, 45	15.7	61
229	Connecting the legs with a spring improves human running economy. <i>Journal of Experimental Biology</i> , <b>2019</b> , 222,	3	21
228	Weakly supervised classification of aortic valve malformations using unlabeled cardiac MRI sequences. <i>Nature Communications</i> , <b>2019</b> , 10, 3111	17.4	40
227	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. <i>Integrative Organismal Biology</i> , <b>2019</b> , 1, obz022	2.3	13
226	Muscle Contributions to Upper-Extremity Movement and Work From a Musculoskeletal Model of the Human Shoulder. <i>Frontiers in Neurobotics</i> , <b>2019</b> , 13, 90	3.4	14
225	Patellofemoral cartilage stresses are most sensitive to variations in vastus medialis muscle forces. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2019</b> , 22, 206-216	2.1	10
224	Learning one's genetic risk changes physiology independent of actual genetic risk. <i>Nature Human Behaviour</i> , <b>2019</b> , 3, 48-56	12.8	59
223	Noninvasive neuromodulation in essential tremor demonstrates relief in a sham-controlled pilot trial. <i>Movement Disorders</i> , <b>2018</b> , 33, 1182-1183	7	20
222	Age Influences Biomechanical Changes After Participation in an Anterior Cruciate Ligament Injury Prevention Program. <i>American Journal of Sports Medicine</i> , <b>2018</b> , 46, 598-606	6.8	13
221	Perspectives on Sharing Models and Related Resources in Computational Biomechanics Research. <i>Journal of Biomechanical Engineering</i> , <b>2018</b> , 140,	2.1	8
220	OpenSim: Simulating musculoskeletal dynamics and neuromuscular control to study human and animal movement. <i>PLoS Computational Biology</i> , <b>2018</b> , 14, e1006223	5	274
219	Learning to Run Challenge: Synthesizing Physiologically Accurate Motion Using Deep Reinforcement Learning. <i>The Springer Series on Challenges in Machine Learning</i> , <b>2018</b> , 101-120	7.3	11
218	Subject-specific toe-in or toe-out gait modifications reduce the larger knee adduction moment peak more than a non-personalized approach. <i>Journal of Biomechanics</i> , <b>2018</b> , 66, 103-110	2.9	33
217	Estimating the effect size of surgery to improve walking in children with cerebral palsy from retrospective observational clinical data. <i>Scientific Reports</i> , <b>2018</b> , 8, 16344	4.9	8
216	Introduction to NIPS 2017 Competition Track. <i>The Springer Series on Challenges in Machine Learning</i> , <b>2018</b> , 1-23	7.3	

215	Robust Physics-based Motion Retargeting with Realistic Body Shapes. <i>Computer Graphics Forum</i> , <b>2018</b> , 37, 81-92	2.4	4
214	Microendoscopy reveals positive correlation in multiscale length changes and variable sarcomere lengths across different regions of human muscle. <i>Journal of Applied Physiology</i> , <b>2018</b> ,	3.7	28
213	Machine learning in human movement biomechanics: Best practices, common pitfalls, and new opportunities. <i>Journal of Biomechanics</i> , <b>2018</b> , 81, 1-11	2.9	138
212	Acute changes in foot strike pattern and cadence affect running parameters associated with tibial stress fractures. <i>Journal of Biomechanics</i> , <b>2018</b> , 76, 1-7	2.9	35
211	A Brainstem-Spinal Cord Inhibitory Circuit for Mechanical Pain Modulation by GABA and Enkephalins. <i>Neuron</i> , <b>2017</b> , 93, 822-839.e6	13.9	152
210	Prostaglandin E2 is essential for efficacious skeletal muscle stem-cell function, augmenting regeneration and strength. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 6675-6684	11.5	94
209	Muscle-tendon mechanics explain unexpected effects of exoskeleton assistance on metabolic rate during walking. <i>Journal of Experimental Biology</i> , <b>2017</b> , 220, 2082-2095	3	45
208	Sanativo Wound Healing Product Does Not Accelerate Reepithelialization in a Mouse Cutaneous Wound Healing Model. <i>Plastic and Reconstructive Surgery</i> , <b>2017</b> , 139, 343-352	2.7	6
207	Preparatory co-activation of the ankle muscles may prevent ankle inversion injuries. <i>Journal of Biomechanics</i> , <b>2017</b> , 52, 17-23	2.9	36
206	Simulating ideal assistive devices to reduce the metabolic cost of walking with heavy loads. <i>PLoS ONE</i> , <b>2017</b> , 12, e0180320	3.7	61
205	Large-scale physical activity data reveal worldwide activity inequality. <i>Nature</i> , <b>2017</b> , 547, 336-339	50.4	449
204	Biomechanical Effects of an Injury Prevention Program in Preadolescent Female Soccer Athletes. <i>American Journal of Sports Medicine</i> , <b>2017</b> , 45, 294-301	6.8	34
203	ShortFuse: Biomedical Time Series Representations in the Presence of Structured Information. <i>Proceedings of Machine Learning Research</i> , <b>2017</b> , 68, 59-74	0.4	1
202	Simulation-Based Design for Wearable Robotic Systems: An Optimization Framework for Enhancing a Standing Long Jump. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2016</b> , 63, 894-903	5	28
201	A fast multi-obstacle muscle wrapping method using natural geodesic variations. <i>Multibody System Dynamics</i> , <b>2016</b> , 36, 195-219	2.8	22
200	Changes in sarcomere lengths of the human vastus lateralis muscle with knee flexion measured using in vivo microendoscopy. <i>Journal of Biomechanics</i> , <b>2016</b> , 49, 2989-2994	2.9	24
199	Beyond the brain: Optogenetic control in the spinal cord and peripheral nervous system. <i>Science Translational Medicine</i> , <b>2016</b> , 8, 337rv5	17.5	106
198	Gait biomechanics in the era of data science. <i>Journal of Biomechanics</i> , <b>2016</b> , 49, 3759-3761	2.9	48

197	InVivo Interrogation of Spinal Mechanosensory Circuits. <i>Cell Reports</i> , <b>2016</b> , 17, 1699-1710	10.6	44
196	Optogenetic and chemogenetic strategies for sustained inhibition of pain. <i>Scientific Reports</i> , <b>2016</b> , 6, 30570	4.9	55
195	Structural foundations of optogenetics: Determinants of channelrhodopsin ion selectivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 822-9	11.5	136
194	Simulating Ideal Assistive Devices to Reduce the Metabolic Cost of Running. <i>PLoS ONE</i> , <b>2016</b> , 11, e0163417	3.7	73
193	A Biomechanical Model of the Scapulothoracic Joint to Accurately Capture Scapular Kinematics during Shoulder Movements. <i>PLoS ONE</i> , <b>2016</b> , 11, e0141028	3.7	66
192	Stretching Your Energetic Budget: How Tendon Compliance Affects the Metabolic Cost of Running. <i>PLoS ONE</i> , <b>2016</b> , 11, e0150378	3.7	59
191	Full-Body Musculoskeletal Model for Muscle-Driven Simulation of Human Gait. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2016</b> , 63, 2068-79	5	307
190	Optogenetic approaches addressing extracellular modulation of neural excitability. <i>Scientific Reports</i> , <b>2016</b> , 6, 23947	4.9	22
189	Human soleus sarcomere lengths measured using in vivo microendoscopy at two ankle flexion angles. <i>Journal of Biomechanics</i> , <b>2016</b> , 49, 4164-4167	2.9	15
188	Is my model good enough? Best practices for verification and validation of musculoskeletal models and simulations of movement. <i>Journal of Biomechanical Engineering</i> , <b>2015</b> , 137, 020905	2.1	288
187	Use it or lose it: multiscale skeletal muscle adaptation to mechanical stimuli. <i>Biomechanics and Modeling in Mechanobiology</i> , <b>2015</b> , 14, 195-215	3.8	80
186	Running with a load increases leg stiffness. <i>Journal of Biomechanics</i> , <b>2015</b> , 48, 1003-8	2.9	50
185	Self-Tracking Energy Transfer for Neural Stimulation in Untethered Mice. <i>Physical Review Applied</i> , <b>2015</b> , 4,	4.3	29
184	Wirelessly powered, fully internal optogenetics for brain, spinal and peripheral circuits in mice. <i>Nature Methods</i> , <b>2015</b> , 12, 969-74	21.6	364
183	The mobilize center: an NIH big data to knowledge center to advance human movement research and improve mobility. <i>Journal of the American Medical Informatics Association: JAMIA</i> , <b>2015</b> , 22, 1120-5	8.6	20
182	Making a meaningful impact: modelling simultaneous frictional collisions in spatial multibody systems. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2015</b> , 471, 20140859	2.4	14
181	The Role of Cartilage Stress in Patellofemoral Pain. <i>Medicine and Science in Sports and Exercise</i> , <b>2015</b> , 47, 2416-22	1.2	14
180	Muscle velocity and inertial force from phase contrast MRI. <i>Journal of Magnetic Resonance Imaging</i> , <b>2015</b> , 42, 526-32	5.6	3

179	Predictive simulation generates human adaptations during loaded and inclined walking. <i>PLoS ONE</i> , <b>2015</b> , 10, e0121407	3.7	58
178	T1D Dispersion in Articular Cartilage: Relationship to Material Properties and Macromolecular Content. <i>Cartilage</i> , <b>2015</b> , 6, 113-22	3	16
177	In Vivo Imaging of Human Sarcomere Twitch Dynamics in Individual Motor Units. <i>Neuron</i> , <b>2015</b> , 88, 1109-1120	3.9	38
176	How tibiofemoral alignment and contact locations affect predictions of medial and lateral tibiofemoral contact forces. <i>Journal of Biomechanics</i> , <b>2015</b> , 48, 644-650	2.9	106
175	Musculoskeletal modelling of an ostrich ( <i>Struthio camelus</i> ) pelvic limb: influence of limb orientation on muscular capacity during locomotion. <i>PeerJ</i> , <b>2015</b> , 3, e1001	3.1	59
174	Rejuvenation of the muscle stem cell population restores strength to injured aged muscles. <i>Nature Medicine</i> , <b>2014</b> , 20, 255-64	50.5	439
173	Changes in tibiofemoral forces due to variations in muscle activity during walking. <i>Journal of Orthopaedic Research</i> , <b>2014</b> , 32, 769-76	3.8	79
172	Virally mediated optogenetic excitation and inhibition of pain in freely moving nontransgenic mice. <i>Nature Biotechnology</i> , <b>2014</b> , 32, 274-8	44.5	154
171	Differences in muscle activity between natural forefoot and rearfoot strikers during running. <i>Journal of Biomechanics</i> , <b>2014</b> , 47, 3593-7	2.9	48
170	Quantified self and human movement: a review on the clinical impact of wearable sensing and feedback for gait analysis and intervention. <i>Gait and Posture</i> , <b>2014</b> , 40, 11-9	2.6	246
169	Are subject-specific musculoskeletal models robust to the uncertainties in parameter identification?. <i>PLoS ONE</i> , <b>2014</b> , 9, e112625	3.7	116
168	Musculoskeletal modelling deconstructs the paradoxical effects of elastic ankle exoskeletons on plantar-flexor mechanics and energetics during hopping. <i>Journal of Experimental Biology</i> , <b>2014</b> , 217, 4018-28	3.8	34
167	3D finite element models of shoulder muscles for computing lines of actions and moment arms. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2014</b> , 17, 829-37	2.1	47
166	Neuroscience. Optogenetic regeneration. <i>Science</i> , <b>2014</b> , 344, 44-5	33.3	5
165	Improved Muscle Wrapping Algorithms Using Explicit Path-Error Jacobians. <i>Mechanisms and Machine Science</i> , <b>2014</b> , 395-403	0.3	3
164	Muscle contributions to vertical and fore-aft accelerations are altered in subjects with crouch gait. <i>Gait and Posture</i> , <b>2013</b> , 38, 86-91	2.6	47
163	Optical inhibition of motor nerve and muscle activity in vivo. <i>Muscle and Nerve</i> , <b>2013</b> , 47, 916-21	3.4	29
162	Subject-specific knee joint geometry improves predictions of medial tibiofemoral contact forces. <i>Journal of Biomechanics</i> , <b>2013</b> , 46, 2778-86	2.9	170

161	Toe-in gait reduces the first peak knee adduction moment in patients with medial compartment knee osteoarthritis. <i>Journal of Biomechanics</i> , <b>2013</b> , 46, 122-8	2.9	130
160	Changes in in vivo knee contact forces through gait modification. <i>Journal of Orthopaedic Research</i> , <b>2013</b> , 31, 434-40	3.8	31
159	Patellar maltracking is prevalent among patellofemoral pain subjects with patella alta: an upright, weightbearing MRI study. <i>Journal of Orthopaedic Research</i> , <b>2013</b> , 31, 448-57	3.8	53
158	A rolling constraint reproduces ground reaction forces and moments in dynamic simulations of walking, running, and crouch gait. <i>Journal of Biomechanics</i> , <b>2013</b> , 46, 1772-6	2.9	22
157	Men and women adopt similar walking mechanics and muscle activation patterns during load carriage. <i>Journal of Biomechanics</i> , <b>2013</b> , 46, 2522-8	2.9	69
156	Muscle contributions to fore-aft and vertical body mass center accelerations over a range of running speeds. <i>Journal of Biomechanics</i> , <b>2013</b> , 46, 780-7	2.9	169
155	How muscle fiber lengths and velocities affect muscle force generation as humans walk and run at different speeds. <i>Journal of Experimental Biology</i> , <b>2013</b> , 216, 2150-60	3	146
154	Stabilisation of walking by intrinsic muscle properties revealed in a three-dimensional muscle-driven simulation. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , <b>2013</b> , 16, 451-62 <sup>1</sup>		43
153	WHAT IS A MOMENT ARM? CALCULATING MUSCLE EFFECTIVENESS IN BIOMECHANICAL MODELS USING GENERALIZED COORDINATES <b>2013</b> , 2013,		45
152	Flexing computational muscle: modeling and simulation of musculotendon dynamics. <i>Journal of Biomechanical Engineering</i> , <b>2013</b> , 135, 021005	2.1	268
151	Six-week gait retraining program reduces knee adduction moment, reduces pain, and improves function for individuals with medial compartment knee osteoarthritis. <i>Journal of Orthopaedic Research</i> , <b>2013</b> , 31, 1020-5	3.8	141
150	Sarcomere lengths in human extensor carpi radialis brevis measured by microendoscopy. <i>Muscle and Nerve</i> , <b>2013</b> , 48, 286-92	3.4	28
149	Optical control of neuronal excitation and inhibition using a single opsin protein, ChR2. <i>Scientific Reports</i> , <b>2013</b> , 3, 3110	4.9	34
148	Optogenetic control of targeted peripheral axons in freely moving animals. <i>PLoS ONE</i> , <b>2013</b> , 8, e72691	3.7	125
147	Patients with patellofemoral pain exhibit elevated bone metabolic activity at the patellofemoral joint. <i>Journal of Orthopaedic Research</i> , <b>2012</b> , 30, 209-13	3.8	51
146	Grand challenge competition to predict in vivo knee loads. <i>Journal of Orthopaedic Research</i> , <b>2012</b> , 30, 503-13	3.8	334
145	Predicting the metabolic cost of incline walking from muscle activity and walking mechanics. <i>Journal of Biomechanics</i> , <b>2012</b> , 45, 1842-9	2.9	82
144	Contributions of muscles to mediolateral ground reaction force over a range of walking speeds. <i>Journal of Biomechanics</i> , <b>2012</b> , 45, 2438-43	2.9	66

143	How much muscle strength is required to walk in a crouch gait?. <i>Journal of Biomechanics</i> , <b>2012</b> , 45, 2564-9	2.9	84
142	Compressive tibiofemoral force during crouch gait. <i>Gait and Posture</i> , <b>2012</b> , 35, 556-60	2.6	201
141	How robust is human gait to muscle weakness?. <i>Gait and Posture</i> , <b>2012</b> , 36, 113-9	2.6	164
140	Upper Limb Muscle Volumes in Adults <b>2012</b> , 355-373		0
139	Comparison of MRI and <sup>18</sup> F-NaF PET/CT in patients with patellofemoral pain. <i>Journal of Magnetic Resonance Imaging</i> , <b>2012</b> , 36, 928-32	5.6	34
138	Patellar tilt correlates with vastus lateralis: vastus medialis activation ratio in maltracking patellofemoral pain patients. <i>Journal of Orthopaedic Research</i> , <b>2012</b> , 30, 927-33	3.8	60
137	Optimizing Locomotion Controllers Using Biologically-Based Actuators and Objectives. <i>ACM Transactions on Graphics</i> , <b>2012</b> , 31,	7.6	115
136	Simbios: an NIH national center for physics-based simulation of biological structures. <i>Journal of the American Medical Informatics Association: JAMIA</i> , <b>2012</b> , 19, 186-9	8.6	6
135	Patellar maltracking correlates with vastus medialis activation delay in patellofemoral pain patients. <i>American Journal of Sports Medicine</i> , <b>2011</b> , 39, 590-8	6.8	68
134	Can biomechanical variables predict improvement in crouch gait?. <i>Gait and Posture</i> , <b>2011</b> , 34, 197-201	2.6	45
133	Simbody: multibody dynamics for biomedical research. <i>Procedia IUTAM</i> , <b>2011</b> , 2, 241-261		127
132	New MR imaging methods for metallic implants in the knee: artifact correction and clinical impact. <i>Journal of Magnetic Resonance Imaging</i> , <b>2011</b> , 33, 1121-7	5.6	66
131	Differences in patellofemoral kinematics between weight-bearing and non-weight-bearing conditions in patients with patellofemoral pain. <i>Journal of Orthopaedic Research</i> , <b>2011</b> , 29, 312-7	3.8	78
130	Simulation of human movement: applications using OpenSim. <i>Procedia IUTAM</i> , <b>2011</b> , 2, 186-198		40
129	OpenSim: a musculoskeletal modeling and simulation framework for investigations and exchange. <i>Procedia IUTAM</i> , <b>2011</b> , 2, 212-232		138
128	Mechanics, modulation and modelling: how muscles actuate and control movement. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2011</b> , 366, 1463-5	5.8	8
127	Fibre operating lengths of human lower limb muscles during walking. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2011</b> , 366, 1530-9	5.8	79
126	Architectural Design and Function of Human Back Muscles <b>2011</b> , 54-69		

125	Imaging and Musculoskeletal Modeling to Investigate the Mechanical Etiology of Patellofemoral Pain <b>2011</b> , 269-286		4
124	Orderly recruitment of motor units under optical control in vivo. <i>Nature Medicine</i> , <b>2010</b> , 16, 1161-5	50.5	150
123	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. <i>Physical Therapy</i> , <b>2010</b> , 90, 269-79	3.3	93
122	Short telomeres and stem cell exhaustion model Duchenne muscular dystrophy in mdx/mTR mice. <i>Cell</i> , <b>2010</b> , 143, 1059-71	56.2	351
121	A model of the lower limb for analysis of human movement. <i>Annals of Biomedical Engineering</i> , <b>2010</b> , 38, 269-79	4.7	528
120	Minimal formulation of joint motion for biomechanisms. <i>Nonlinear Dynamics</i> , <b>2010</b> , 62, 291-303	5	46
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8	Predicting gait adaptations due to ankle plantarflexor muscle weakness and contracture using physics-based musculoskeletal simulations		2
7	Deep reinforcement learning for modeling human locomotion control in neuromechanical simulation		3
6	Connecting the legs with a spring improves human running economy		2
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