James M Wakeling

List of Publications by Citations

64 papers	1,253 citations	21 h-index	33 g-index
65 ext. papers	1,493 ext. citations	3 avg, IF	5.16 L-index

#	Paper	IF	Citations
64	The effect of intramuscular fat on skeletal muscle mechanics: implications for the elderly and obese. *Journal of the Royal Society Interface*, **2015**, 12, 20150365	4.1	97
63	Muscle fibre recruitment can respond to the mechanics of the muscle contraction. *Journal of the Royal Society Interface*, **2006**, 3, 533-44	4.1	82
62	Neuromechanics of muscle synergies during cycling. *Journal of Neurophysiology*, **2009**, 101, 843-54	3.2	73
61	Movement mechanics as a determinate of muscle structure, recruitment and coordination. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2011**, 366, 1554-64	5.8	67
60	Motor units are recruited in a task-dependent fashion during locomotion. *Journal of Experimental Biology*, **2004**, 207, 3883-90	3	57
59	Patterns of motor recruitment can be determined using surface EMG. *Journal of Electromyography and Kinesiology*, **2009**, 19, 199-207	2.5	56
58	Why are Antagonist Muscles Co-activated in My Simulation? A Musculoskeletal Model for Analysing Human Locomotor Tasks. *Annals of Biomedical Engineering*, **2017**, 45, 2762-2774	4.7	48
57	A muscle's force depends on the recruitment patterns of its fibers. *Annals of Biomedical Engineering* , **2012**, 40, 1708-20	4.7	42
56	Muscle gearing during isotonic and isokinetic movements in the ankle plantarflexors. *European Journal of Applied Physiology*, **2013**, 113, 437-47	3.4	41
55	The recruitment of different compartments within a muscle depends on the mechanics of the movement. *Biology Letters*, **2009**, 5, 30-4	3.6	41
54	Comparison of human gastrocnemius forces predicted by Hill-type muscle models and estimated from ultrasound images. *Journal of Experimental Biology*, **2017**, 220, 1643-1653	3	40
53	Computational methods for quantifying in vivo muscle fascicle curvature from ultrasound images. *Journal of Biomechanics*, **2011**, 44, 2538-43	2.9	36
52	The effect of external compression on the mechanics of muscle contraction. *Journal of Applied Biomechanics*, **2013**, 29, 360-4	1.2	34
51	Motor unit recruitment patterns 1: responses to changes in locomotor velocity and incline. *Journal of Experimental Biology*, **2008**, 211, 1882-92	3	34
50	Structural and mechanical properties of the human Achilles tendon: Sex and strength effects. *Journal of Biomechanics*, **2015**, 48, 3530-3	2.9	31
49	3D fascicle orientations in triceps surae. *Journal of Applied Physiology*, **2013**, 115, 116-25	3.7	31
48	Quantifying Achilles tendon force in vivo from ultrasound images. *Journal of Biomechanics*, **2016**, 49, 3200-3207	2.9	29

47	Shifting gears: dynamic muscle shape changes and force-velocity behavior in the medial gastrocnemius. *Journal of Applied Physiology*, **2017**, 123, 1433-1442	3.7	28
46	Validation of Hill-type muscle models in relation to neuromuscular recruitment and force-velocity properties: predicting patterns of in vivo muscle force. *Integrative and Comparative Biology*, **2014**, 54, 1072-83	2.8	27
45	EMG analysis tuned for determining the timing and level of activation in different motor units. *Journal of Electromyography and Kinesiology*, **2011**, 21, 557-65	2.5	24
44	Muscle coordination limits efficiency and power output of human limb movement under a wide range of mechanical demands. *Journal of Neurophysiology*, **2015**, 114, 3283-95	3.2	21
43	Regionalizing muscle activity causes changes to the magnitude and direction of the force from whole muscles-a modeling study. *Frontiers in Physiology*, **2014**, 5, 298	4.6	20
42	The effects of training aids on the longissimus dorsi in the equine back. *Comparative Exercise Physiology*, **2008**, 5, 111	0.7	20
41	Achilles tendon moment arms: the importance of measuring at constant tendon load when using the tendon excursion method. *Journal of Biomechanics*, **2015**, 48, 1206-9	2.9	19
40	Size, History-Dependent, Activation and Three-Dimensional Effects on the Work and Power Produced During Cyclic Muscle Contractions. *Integrative and Comparative Biology*, **2018**, 58, 232-250	2.8	17
39	Muscle-specific indices to characterise the functional behaviour of human lower-limb muscles during locomotion. *Journal of Biomechanics*, **2019**, 89, 134-138	2.9	16
38	Transverse Strains in Muscle Fascicles during Voluntary Contraction: A 2D Frequency Decomposition of B-Mode Ultrasound Images. *International Journal of Biomedical Imaging*, **2014**, 2014, 352910	5.2	15
37	Multidimensional models for predicting muscle structure and fascicle pennation. *Journal of Theoretical Biology*, **2015**, 382, 57-63	2.3	14
36	3D curvature of muscle fascicles in triceps surae. *Journal of Applied Physiology*, **2014**, 117, 1388-97	3.7	14
35	Passive and dynamic muscle architecture during transverse loading for gastrocnemius medialis in man. *Journal of Biomechanics*, **2019**, 86, 160-166	2.9	14
34	Muscle shortening velocity depends on tissue inertia and level of activation during submaximal contractions. *Biology Letters*, **2016**, 12,	3.6	13
33	Is there sufficient evidence to claim muscle units are not localised and functionally grouped within the human gastrocnemius?. *Journal of Physiology*, **2016**, 594, 1953-4	3.9	13
32	Passive Muscle-Tendon Unit Gearing Is Joint Dependent in Human Medial Gastrocnemius. *Frontiers in Physiology*, **2016**, 7, 95	4.6	12
31	Geometric models to explore mechanisms of dynamic shape change in skeletal muscle. *Royal Society Open Science*, **2018**, 5, 172371	3.3	12
30	Does a two-element muscle model offer advantages when estimating ankle plantar flexor forces during human cycling?. *Journal of Biomechanics*, **2018**, 68, 6-13	2.9	10

29	Early deactivation of slower muscle fibres at high movement frequencies. *Journal of Experimental Biology*, **2014**, 217, 3528-34	3	10
28	Identification of regional activation by factorization of high-density surface EMG signals: A comparison of Principal Component Analysis and Non-negative Matrix factorization. *Journal of Electromyography and Kinesiology*, **2018**, 41, 116-123	2.5	10
27	A modelling approach for exploring muscle dynamics during cyclic contractions. *PLoS Computational Biology*, **2018**, 14, e1006123	5	10
26	Keep calm and hang on: EMG activation in the forelimb musculature of three-toed sloths (). *Journal of Experimental Biology*, **2020**, 223,	3	9
25	Transverse anisotropy in the deformation of the muscle during dynamic contractions. *Journal of Experimental Biology*, **2018**, 221,	3	9
24	The Energy of Muscle Contraction. I. Tissue Force and Deformation During Fixed-End Contractions. *Frontiers in Physiology*, **2020**, 11, 813	4.6	7
23	Impact of transversal calf muscle loading on plantarflexion. *Journal of Biomechanics*, **2019**, 85, 37-42	2.9	7
22	Metabolic cost underlies task-dependent variations in motor unit recruitment. *Journal of the Royal Society Interface*, **2018**, 15,	4.1	6
21	Impact of Multidirectional Transverse Calf Muscle Loading on Calf Muscle Force in Young Adults. *Frontiers in Physiology*, **2018**, 9, 1148	4.6	5
20	The Energy of Muscle Contraction. II. Transverse Compression and Work. *Frontiers in Physiology*, **2020**, 11, 538522	4.6	5
19	During Cycling What Limits Maximum Mechanical Power Output at Cadences above 120 rpm?. *Medicine and Science in Sports and Exercise*, **2020**, 52, 214-224	1.2	4
18	Added mass in rat plantaris muscle causes a reduction in mechanical work. *Journal of Experimental Biology*, **2020**, 223,	3	4
17	How Do the Mechanical Demands of Cycling Affect the Information Content of the EMG?. *Medicine and Science in Sports and Exercise*, **2018**, 50, 2518-2525	1.2	4
16	Regional Vastus Medialis and Vastus Lateralis Activation in Females with Patellofemoral Pain. *Medicine and Science in Sports and Exercise*, **2019**, 51, 411-420	1.2	3
15	Carotid sinus hypersensitivity: block of the sternocleidomastoid muscle does not affect responses to carotid sinus massage in healthy young adults. *Physiological Reports*, **2017**, 5, e13448	2.6	2
14	Modelling muscle forces: from scaled fibres to physiological task-groups. *Procedia IUTAM*, **2011**, 2, 317-326		2
13	The energy of muscle contraction. IV. Greater mass of larger muscles decreases contraction efficiency. *Journal of the Royal Society Interface*, **2021**, 18, 20210484	4.1	2
12	Lower-limb muscle function is influenced by changing mechanical demands in cycling. *Journal of Experimental Biology*, **2021**, 224,	3	1

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11	The Energy of Muscle Contraction. III. Kinetic Energy During Cyclic Contractions. *Frontiers in Physiology*, **2021**, 12, 628819	4.6	1
10	EMG Signals Can Reveal Information Sharing between Consecutive Pedal Cycles. *Medicine and Science in Sports and Exercise*, **2021**, 53, 2436-2444	1.2	1
9	Canoe slalom C1 stroke technique during international competitions. *Sports Biomechanics*, **2021**, 1-12	2.2	1
8	Task-dependent recruitment across ankle extensor muscles and between mechanical demands is driven by the metabolic cost of muscle contraction. *Journal of the Royal Society Interface*, **2021**, 18, 20200765	4.1	1
7	Relationships Between Stepping-Reaction Movement Patterns and Clinical Measures of Balance, Motor Impairment, and Step Characteristics After Stroke. *Physical Therapy*, **2021**, 101,	3.3	1
6	Development of a Feedback System to Control Power in Cycling. *Proceedings (mdpi)*, **2020**, 49, 22	0.3	
5	Kinetics and Muscular Function in Alpine Skiing **2010**, 78-90		
4	In-vivo quantification of 3D muscle architecture in Triceps Surae muscle. *FASEB Journal*, **2012**, 26, 1078.29	0.9	
3	The Effect of Multidirectional Loading on Contractions of the M. Medial Gastrocnemius. *Frontiers in Physiology*, **2020**, 11, 601799	4.6	
2	Mapping of electrodermal activity (EDA) during outdoor community-level mobility tasks in individuals with lower-limb amputation. *Journal of Rehabilitation and Assistive Technologies Engineering*, **2021**, 8, 20556683211006837	1.7	
1	Does the stimulus provoking a stepping reaction correlate with step characteristics and clinical measures of balance and mobility post-stroke?. *Clinical Biomechanics*, **2022**, 93, 105595	2.2	