James M Wakeling

List of Publications by Year
in descending order

64 papers	1,762 citations	279778 23 h-index	302107 39 g-index
65 all docs	65 docs citations	65 times ranked	1497 citing authors

#	Article	IF	Citations
1	The effect of intramuscular fat on skeletal muscle mechanics: implications for the elderly and obese. Journal of the Royal Society Interface, 2015, 12, 20150365.	3.4	152
2	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.	2.5	122
3	Muscle fibre recruitment can respond to the mechanics of the muscle contraction. Journal of the Royal Society Interface, 2006, 3, 533-544.	3.4	100
4	Movement mechanics as a determinate of muscle structure, recruitment and coordination. Philosophical Transactions of the Royal Society B: Biological Sciences, 2011, 366, 1554-1564.	4.0	88
5	Neuromechanics of Muscle Synergies During Cycling. Journal of Neurophysiology, 2009, 101, 843-854.	1.8	84
6	Patterns of motor recruitment can be determined using surface EMG. Journal of Electromyography and Kinesiology, 2009, 19, 199-207.	1.7	70
7	Comparison of human gastrocnemius forces predicted by Hill-type muscle models and estimated from ultrasound images. Journal of Experimental Biology, 2017, 220, 1643-1653.	1.7	68
8	Motor units are recruited in a task-dependent fashion during locomotion. Journal of Experimental Biology, 2004, 207, 3883-3890.	1.7	60
9	Structural and mechanical properties of the human Achilles tendon: Sex and strength effects. Journal of Biomechanics, 2015, 48, 3530-3533.	2.1	52
10	Muscle gearing during isotonic and isokinetic movements in the ankle plantarflexors. European Journal of Applied Physiology, 2013, 113, 437-447.	2.5	50
11	Shifting gears: dynamic muscle shape changes and force-velocity behavior in the medial gastrocnemius. Journal of Applied Physiology, 2017, 123, 1433-1442.	2.5	50
12	The recruitment of different compartments within a muscle depends on the mechanics of the movement. Biology Letters, 2009, 5, 30-34.	2.3	49
13	A Muscleâ€™s Force Depends on the Recruitment Patterns of Its Fibers. Annals of Biomedical Engineering, 2012, 40, 1708-1720.	2.5	48
14	The Effect of External Compression on the Mechanics of Muscle Contraction. Journal of Applied Biomechanics, 2013, 29, 360-364.	0.8	48
15	Quantifying Achilles tendon force in vivo from ultrasound images. Journal of Biomechanics, 2016, 49, 3200-3207.	2.1	42
16	Computational methods for quantifying in vivo muscle fascicle curvature from ultrasound images. Journal of Biomechanics, 2011, 44, 2538-2543.	2.1	39
17	Motor unit recruitment patterns 1: responses to changes in locomotor velocity and incline. Journal of Experimental Biology, 2008, 211, 1882-1892.	1.7	36
18	3D fascicle orientations in triceps surae. Journal of Applied Physiology, 2013, 115, 116-125.	2.5	35

#	Article	IF	Citations
19	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, 1072-1083.	2.0	33
20	Muscle-specific indices to characterise the functional behaviour of human lower-limb muscles during locomotion. Journal of Biomechanics, 2019, 89, 134-138.	2.1	33
21	EMG analysis tuned for determining the timing and level of activation in different motor units. Journal of Electromyography and Kinesiology, 2011, 21, 557-565.	1.7	31
22	The effects of training aids on the longissimus dorsi in the equine back. Comparative Exercise Physiology, 2008, 5, 111.	0.6	28
23	Muscle coordination limits efficiency and power output of human limb movement under a wide range of mechanical demands. Journal of Neurophysiology, 2015, 114, 3283-3295.	1.8	27
24	The Energy of Muscle Contraction. I. Tissue Force and Deformation During Fixed-End Contractions. Frontiers in Physiology, 2020, 11, 813.	2.8	27
25	Regionalizing muscle activity causes changes to the magnitude and direction of the force from whole musclesÃ¢â‚¬â€a modeling study. Frontiers in Physiology, 2014, 5, 298.	2.8	23
26	Achilles tendon moment arms: The importance of measuring at constant tendon load when using the tendon excursion method. Journal of Biomechanics, 2015, 48, 1206-1209.	2.1	21
27	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.	2.0	21
28	Muscle shortening velocity depends on tissue inertia and level of activation during submaximal contractions. Biology Letters, 2016, 12, 20151041.	2.3	20
29	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.	1.7	20
30	Transverse Strains in Muscle Fascicles during Voluntary Contraction: A 2D Frequency Decomposition of B-Mode Ultrasound Images. International Journal of Biomedical Imaging, 2014, 2014, 1-9.	3.9	18
31	Multidimensional models for predicting muscle structure and fascicle pennation. Journal of Theoretical Biology, 2015, 382, 57-63.	1.7	17
32	Geometric models to explore mechanisms of dynamic shape change in skeletal muscle. Royal Society Open Science, 2018, 5, 172371.	2.4	17
33	Passive and dynamic muscle architecture during transverse loading for gastrocnemius medialis in man. Journal of Biomechanics, 2019, 86, 160-166.	2.1	17
34	3D curvature of muscle fascicles in triceps surae. Journal of Applied Physiology, 2014, 117, 1388-1397.	2.5	16
35	Transverse anisotropy in the deformation of the muscle during dynamic contractions. Journal of Experimental Biology, 2018, 221, .	1.7	16
36	A modelling approach for exploring muscle dynamics during cyclic contractions. PLoS Computational Biology, 2018, 14, e1006123.	3.2	16

#	Article	IF	Citations
37	Early deactivation of slower muscle fibres at high movement frequencies. Journal of Experimental Biology, 2014, 217, 3528-34.	1.7	14
38	Passive Muscle-Tendon Unit Gearing Is Joint Dependent in Human Medial Gastrocnemius. Frontiers in Physiology, 2016, 7, 95.	2.8	14
39	Is there sufficient evidence to claim muscle units are not localised and functionally grouped within the human gastrocnemius?. Journal of Physiology, 2016, 594, 1953-1954.	2.9	14
40	The Energy of Muscle Contraction. II. Transverse Compression and Work. Frontiers in Physiology, 2020, 11, 538522.	2.8	13
41	Keep calm and hang on: EMG activation in the forelimb musculature of three-toed sloths (<i>Bradypus) Tj ETQq1 1 0.784314 rgBT /Ove	1.7	13
42	Does a two-element muscle model offer advantages when estimating ankle plantar flexor forces during human cycling?. Journal of Biomechanics, 2018, 68, 6-13.	2.1	12
43	Metabolic cost underlies task-dependent variations in motor unit recruitment. Journal of the Royal Society Interface, 2018, 15, 20180541.	3.4	11
44	Impact of transversal calf muscle loading on plantarflexion. Journal of Biomechanics, 2019, 85, 37-42.	2.1	9
45	Added mass in rat plantaris muscle causes a reduction in mechanical work. Journal of Experimental Biology, 2020, 223, .	1.7	9
46	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.	0.4	8
47	Impact of Multidirectional Transverse Calf Muscle Loading on Calf Muscle Force in Young Adults. Frontiers in Physiology, 2018, 9, 1148.	2.8	8
48	During Cycling What Limits Maximum Mechanical Power Output at Cadences above 120 rpm?. Medicine and Science in Sports and Exercise, 2020, 52, 214-224.	0.4	7
49	Regional Vastus Medialis and Vastus Lateralis Activation in Females with Patellofemoral Pain. Medicine and Science in Sports and Exercise, 2019, 51, 411-420.	0.4	6
50	The Effect of Multidirectional Loading on Contractions of the M. Medial Gastrocnemius. Frontiers in Physiology, 2020, 11, 601799.	2.8	4
51	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.	3.4	4
52	Modelling muscle forces: from scaled fibres to physiological task-groups. Procedia IUTAM, 2011, 2, 317-326.	1.2	3
53	The Energy of Muscle Contraction. III. Kinetic Energy During Cyclic Contractions. Frontiers in Physiology, 2021, 12, 628819.	2.8	3
54	Canoe slalom C1 stroke technique during international competitions. Sports Biomechanics, 2021, , 1-12.	1.6	3

#	ARTICLE	IF	CITATIONS
55	The energy of muscle contraction. IV. Greater mass of larger muscles decreases contraction efficiency. Journal of the Royal Society Interface, 2021, 18, 20210484.	3.4	3
56	Lower-limb muscle function is influenced by changing mechanical demands in cycling. Journal of Experimental Biology, 2021, 224, .	1.7	3
57	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.	1.7	2
58	Relationships Between Stepping-Reaction Movement Patterns and Clinical Measures of Balance, Motor Impairment, and Step Characteristics After Stroke. Physical Therapy, 2021, 101, .	2.4	2
59	Development of a Feedback System to Control Power in Cycling. Proceedings (mdpi), 2020, 49, .	0.2	1
60	EMG Signals Can Reveal Information Sharing between Consecutive Pedal Cycles. Medicine and Science in Sports and Exercise, 2021, Publish Ahead of Print, 2436-2444.	0.4	1
61	Stroke technique in C1 canoe slalom: a simulation study. Sports Biomechanics, 0, , 1-11.	1.6	1
62	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, 205566832110068.	0.9	0
63	Inâ€vivo quantification of 3D muscle architecture in Triceps Surae muscle. FASEB Journal, 2012, 26, 1078.29.	0.5	0
64	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.	1.2	0