

# Taian M. Vieira

## List of Publications by Year in descending order

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85  
papers

2,084  
citations

304743

22  
h-index

265206

42  
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88  
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88  
docs citations

88  
times ranked

1896  
citing authors

#	ARTICLE	IF	CITATIONS
1	Interpreting Signal Amplitudes in Surface Electromyography Studies in Sport and Rehabilitation Sciences. <i>Frontiers in Physiology</i> , 2017, 8, 985.	2.8	265
2	Advances in Surface EMG: Recent Progress in Detection and Processing Techniques. <i>Critical Reviews in Biomedical Engineering</i> , 2010, 38, 305-345.	0.9	132
3	Postural activation of the human medial gastrocnemius muscle: are the muscle units spatially localised?. <i>Journal of Physiology</i> , 2011, 589, 431-443.	2.9	97
4	Automatic segmentation of surface EMG images: Improving the estimation of neuromuscular activity. <i>Journal of Biomechanics</i> , 2010, 43, 2149-2158.	2.1	92
5	Advances in Surface EMG: Recent Progress in Clinical Research Applications. <i>Critical Reviews in Biomedical Engineering</i> , 2010, 38, 347-379.	0.9	87
6	Insights gained into the interpretation of surface electromyograms from the gastrocnemius muscles: A simulation study. <i>Journal of Biomechanics</i> , 2011, 44, 1096-1103.	2.1	71
7	Complexity Analysis of Surface Electromyography for Assessing the Myoelectric Manifestation of Muscle Fatigue: A Review. <i>Entropy</i> , 2020, 22, 529.	2.2	69
8	Myoelectric activity along human gastrocnemius medialis: Different spatial distributions of postural and electrically elicited surface potentials. <i>Journal of Electromyography and Kinesiology</i> , 2013, 23, 43-50.	1.7	61
9	Surface EMG and muscle fatigue: multi-channel approaches to the study of myoelectric manifestations of muscle fatigue. <i>Physiological Measurement</i> , 2017, 38, R27-R60.	2.1	60
10	The Accurate Assessment of Muscle Excitation Requires the Detection of Multiple Surface Electromyograms. <i>Exercise and Sport Sciences Reviews</i> , 2021, 49, 23-34.	3.0	58
11	Recruitment of motor units in the medial gastrocnemius muscle during human quiet standing: is recruitment intermittent? What triggers recruitment?. <i>Journal of Neurophysiology</i> , 2012, 107, 666-676.	1.8	55
12	Postural sway changes during pregnancy: A descriptive study using stabilometry. <i>European Journal of Obstetrics, Gynecology and Reproductive Biology</i> , 2009, 147, 25-28.	1.1	54
13	How much does the human medial gastrocnemius muscle contribute to ankle torques outside the sagittal plane?. <i>Human Movement Science</i> , 2013, 32, 753-767.	1.4	49
14	Spatial variation and inconsistency between estimates of onset of muscle activation from EMG and ultrasound. <i>Scientific Reports</i> , 2017, 7, 42011.	3.3	46
15	Are the myoelectric manifestations of fatigue distributed regionally in the human medial gastrocnemius muscle?. <i>Journal of Electromyography and Kinesiology</i> , 2011, 21, 929-938.	1.7	45
16	Is the stabilization of quiet upright stance in humans driven by synchronized modulations of the activity of medial and lateral gastrocnemius muscles?. <i>Journal of Applied Physiology</i> , 2010, 108, 85-97.	2.5	42
17	A novel system of electrodes transparent to ultrasound for simultaneous detection of myoelectric activity and B-mode ultrasound images of skeletal muscles. <i>Journal of Applied Physiology</i> , 2013, 115, 1203-1214.	2.5	42
18	An overview of age-related changes in postural control during quiet standing tasks using classical and modern stabilometric descriptors. <i>Journal of Electromyography and Kinesiology</i> , 2009, 19, e513-e519.	1.7	41

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19	Estimation procedures affect the center of pressure frequency analysis. <i>Brazilian Journal of Medical and Biological Research</i> , 2009, 42, 665-673.	1.5	36
20	Specificity of surface EMG recordings for gastrocnemius during upright standing. <i>Scientific Reports</i> , 2017, 7, 13300.	3.3	36
21	Territory and fiber orientation of vastus medialis motor units: A Surface electromyography investigation. <i>Muscle and Nerve</i> , 2015, 52, 1057-1065.	2.2	33
22	Motor unit discharge characteristics and walking performance of individuals with multiple sclerosis. <i>Journal of Neurophysiology</i> , 2018, 119, 1273-1282.	1.8	26
23	Motor unit activity, force steadiness, and perceived fatigability are correlated with mobility in older adults. <i>Journal of Neurophysiology</i> , 2018, 120, 1988-1997.	1.8	25
24	Longing for a Longitudinal Proxy: Acutely Measured Surface EMG Amplitude is not a Validated Predictor of Muscle Hypertrophy. <i>Sports Medicine</i> , 2022, 52, 193-199.	6.5	24
25	Spatial variation of compound muscle action potentials across human gastrocnemius medialis. <i>Journal of Neurophysiology</i> , 2015, 114, 1617-1627.	1.8	23
26	Novel Insights Into Biarticular Muscle Actions Gained From High-Density Electromyogram. <i>Exercise and Sport Sciences Reviews</i> , 2021, 49, 179-187.	3.0	23
27	Force control during submaximal isometric contractions is associated with walking performance in persons with multiple sclerosis. <i>Journal of Neurophysiology</i> , 2020, 123, 2191-2200.	1.8	21
28	Motor units in vastus lateralis and in different vastus medialis regions show different firing properties during low-level, isometric knee extension contraction. <i>Human Movement Science</i> , 2018, 58, 307-314.	1.4	20
29	Physical and electrophysiological motor unit characteristics are revealed with simultaneous high-density electromyography and ultrafast ultrasound imaging. <i>Scientific Reports</i> , 2022, 12, .	3.3	20
30	Do surface electromyograms provide physiological estimates of conduction velocity from the medial gastrocnemius muscle?. <i>Journal of Electromyography and Kinesiology</i> , 2013, 23, 319-325.	1.7	19
31	Do sweep rowers symmetrically activate their low back muscles during indoor rowing?. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2015, 25, e339-52.	2.9	19
32	Modulation of tibialis anterior muscle activity changes with upright stance width. <i>Journal of Electromyography and Kinesiology</i> , 2015, 25, 168-174.	1.7	19
33	The Spatial Distribution of Ankle Muscles Activity Discriminates Aged from Young Subjects during Standing. <i>Frontiers in Human Neuroscience</i> , 2017, 11, 190.	2.0	18
34	Changes in tibialis anterior architecture affect the amplitude of surface electromyograms. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2017, 14, 81.	4.6	17
35	Between-day reliability of triceps surae responses to standing perturbations in people post-stroke and healthy controls: A high-density surface EMG investigation. <i>Gait and Posture</i> , 2016, 44, 103-109.	1.4	16
36	Electrode position markedly affects knee torque in tetanic, stimulated contractions. <i>European Journal of Applied Physiology</i> , 2016, 116, 335-342.	2.5	15

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37	Variations in the Spatial Distribution of the Amplitude of Surface Electromyograms Are Unlikely Explained by Changes in the Length of Medial Gastrocnemius Fibres with Knee Joint Angle. PLoS ONE, 2015, 10, e0126888.	2.5	15
38	Filtered Virtual Reference: A New Method for the Reduction of Power Line Interference With Minimal Distortion of Monopolar Surface EMG. IEEE Transactions on Biomedical Engineering, 2015, 62, 2638-2647.	4.2	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	Innervation zone locations distribute medially within the pectoralis major muscle during bench press exercise. Journal of Electromyography and Kinesiology, 2019, 46, 8-13.	1.7	14
41	Optimization of surface electrodes location for H-reflex recordings in soleus muscle. Journal of Electromyography and Kinesiology, 2017, 34, 14-23.	1.7	13
42	Development and testing of acoustically-matched hydrogel-based electrodes for simultaneous EMG-ultrasound detection. Medical Engineering and Physics, 2019, 64, 74-79.	1.7	13
43	Is myoelectric activity distributed equally within the rectus femoris muscle during loaded, squat exercises?. Journal of Electromyography and Kinesiology, 2017, 33, 10-19.	1.7	12
44	Challenging Standing Balance Reduces the Asymmetry of Motor Control of Postural Sway Poststroke. Motor Control, 2019, 23, 327-343.	0.6	12
45	Endurance-exercise training adaptations in spinal motoneurons: potential functional relevance to locomotor output and assessment in humans. European Journal of Applied Physiology, 2022, 122, 1367-1381.	2.5	12
46	Effect of TMS coil orientation on the spatial distribution of motor evoked potentials in an intrinsic hand muscle. Biomedizinische Technik, 2018, 63, 635-645.	0.8	11
47	Localised sampling of myoelectric activity may provide biased estimates of cocontraction for gastrocnemius though not for soleus and tibialis anterior muscles. Journal of Electromyography and Kinesiology, 2018, 38, 34-43.	1.7	11
48	Contraction level, but not force direction or wrist position, affects the spatial distribution of motor unit recruitment in the biceps brachii muscle. European Journal of Applied Physiology, 2020, 120, 853-860.	2.5	11
49	Young, Healthy Subjects Can Reduce the Activity of Calf Muscles When Provided with EMG Biofeedback in Upright Stance. Frontiers in Physiology, 2016, 7, 158.	2.8	10
50	Regional modulation of the ankle plantarflexor muscles associated with standing external perturbations across different directions. Experimental Brain Research, 2020, 238, 39-50.	1.5	10
51	Is the firing rate of motor units in different vastus medialis regions modulated similarly during isometric contractions?. Muscle and Nerve, 2018, 57, 279-286.	2.2	9
52	Does the activity of ankle plantar flexors differ between limbs while healthy, young subjects stand at ease?. Journal of Biomechanics, 2018, 81, 140-144.	2.1	9
53	Electrical nerve stimulation modulates motor unit activity in contralateral biceps brachii during steady isometric contractions. Journal of Neurophysiology, 2018, 120, 2603-2613.	1.8	9
54	Design and Characterization of a Textile Electrode System for the Detection of High-Density sEMG. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 1110-1119.	4.9	8

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55	Electrodesâ€™ Configuration Influences the Agreement Between Surface EMG and B-Mode Ultrasound Detection of Motor Unit Fasciculation. <i>IEEE Access</i> , 2021, 9, 98110-98120.	4.2	8
56	Maintenance of standing posture during multi-directional leaning demands the recruitment of task-specific motor units in the ankle plantarflexors. <i>Experimental Brain Research</i> , 2021, 239, 2569-2581.	1.5	8
57	DeformaÃ§Ã£o relativa e frouxidÃ£o do tendÃ£o calcanear durante mobilizaÃ§Ã£o articular passiva atravÃ©s de ultra-sonografia por imagem. <i>Brazilian Journal of Physical Therapy</i> , 2008, 12, 366-372.	2.5	7
58	Effect of contraction force and knee joint angle on the spatial representation of soleus activity using high-density surface EMG. <i>Biomedizinische Technik</i> , 2014, 59, 399-411.	0.8	7
59	Design and Test of a Biomechanical Model for the Estimation of Knee Joint Angle During Indoor Rowing: Implications for FES-Rowing Protocols in Paraplegia. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2018, 26, 2145-2152.	4.9	7
60	Textured insoles affect the plantar pressure distribution while elite rowers perform on an indoor rowing machine. <i>PLoS ONE</i> , 2017, 12, e0187202.	2.5	6
61	Postural Muscle Unit Plasticity in Stroke Survivors: Altered Distribution of Gastrocnemius' Action Potentials. <i>Frontiers in Neurology</i> , 2019, 10, 686.	2.4	6
62	Understanding regional activation of thoraco-lumbar muscles in chronic low back pain and its relationship to clinically relevant domains. <i>BMC Musculoskeletal Disorders</i> , 2021, 22, 432.	1.9	6
63	Upper Limbs Musculoskeletal OpenSim Model: Customization and Assessment. <i>Mechanisms and Machine Science</i> , 2021, , 162-170.	0.5	5
64	Physiological arousal accompanying postural responses to external perturbations after stroke. <i>Clinical Neurophysiology</i> , 2017, 128, 935-944.	1.5	4
65	Nonâ€uniform excitation of the pectoralis major muscle during flat and inclined bench press exercises. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2022, 32, 381-390.	2.9	4
66	NEW FRONTIERS FOR MUSCLE FUNCTION INVESTIGATION: INTEGRATION OF SURFACE EMG AND 3D ECOGRAPHIC IMAGES. <i>Journal of Mechanics in Medicine and Biology</i> , 2015, 15, 1540029.	0.7	3
67	Does the amplitude of biceps brachii M waves increase similarly in both limbs during staircase, electrically elicited contractions?. <i>Physiological Measurement</i> , 2018, 39, 085005.	2.1	3
68	Potential of the first and second phases of the M wave after maximal voluntary contractions in the biceps brachii muscle. <i>Medical and Biological Engineering and Computing</i> , 2019, 57, 2231-2244.	2.8	3
69	Identification of muscle fasciculations from surface EMG: comparison with ultrasound-based detection. , 2019, 2019, 5117-5120.		3
70	High density EMG investigation of h-reflex distribution over the soleus muscle. , 2015, 2015, 3460-3.		2
71	The M waves of the biceps brachii have a stationary (shoulder-like) component in the first phase: implications and recommendations for M-wave analysis. <i>Physiological Measurement</i> , 2021, 42, 015007.	2.1	2
72	Surface EMG for Human-Machine Interfaces: New Knowledge and Open Issues. <i>Mechanisms and Machine Science</i> , 2018, , 911-918.	0.5	2

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73	The peripheral origin of tap-induced muscle contraction revealed by multi-electrode surface electromyography in human vastus medialis. <i>Scientific Reports</i> , 2020, 10, 2256.	3.3	2
74	Design of a Programmable and Modular Neuromuscular Electrical Stimulator Integrated Into a Wireless Body Sensor Network. <i>IEEE Access</i> , 2021, 9, 163284-163296.	4.2	2
75	Does the global temporal activation differ in triceps surae during standing balance?. , 2015, 2015, 3464-7.		1
76	Estimation of the CoM and CoP using a 3D body scanning systems: Validation with force plate: A case study. , 2016, , .		1
77	Upper limbs cranking for post-stroke rehabilitation: a pilot study on healthy subjects. , 2020, , .		1
78	Timing and Modulation of Activity in the Lower Limb Muscles During Indoor Rowing: What Are the Key Muscles to Target in FES-Rowing Protocols?. <i>Sensors</i> , 2020, 20, 1666.	3.8	1
79	Changes in supramaximal M-wave amplitude at different regions of biceps brachii following eccentric exercise of the elbow flexors. <i>European Journal of Applied Physiology</i> , 2021, 121, 307-318.	2.5	1
80	The Importance of an Objective Assessment to Identify Functional Constraints of Young Skier Athletes. <i>Journal of ASTM International</i> , 2008, 5, 1-5.	0.2	1
81	Are the forearm muscles excited equally in different, professional piano players?. <i>PLoS ONE</i> , 2022, 17, e0265575.	2.5	1
82	Electromyographic activities of shoulder muscles during Handwheelchair.Q vs pushrim wheelchair propulsion. <i>Medical Engineering and Physics</i> , 2022, 106, 103833.	1.7	1
83	The effect of lymph drainage on the myoelectric manifestation of vastus lateralis fatigue: Preliminary results. , 2015, 2015, 6671-4.		0
84	Motor Units Discriminated From High-density, Surface Electromyography Require Careful Scrutiny.. <i>Medicine and Science in Sports and Exercise</i> , 2017, 49, 776.	0.4	0
85	Differences in Mobility Among Older Adults are Associated with Motor Unit Activity and Muscle Strength. <i>Medicine and Science in Sports and Exercise</i> , 2017, 49, 1030.	0.4	0