

# Carlo J De Luca

## List of Publications by Year in descending order

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74  
papers

10,915  
citations

61984

43  
h-index

95266

68  
g-index

74  
all docs

74  
docs citations

74  
times ranked

6593  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Use of Surface Electromyography in Biomechanics. Journal of Applied Biomechanics, 1997, 13, 135-163.	0.8	2,182
2	Filtering the surface EMG signal: Movement artifact and baseline noise contamination. Journal of Biomechanics, 2010, 43, 1573-1579.	2.1	892
3	Physiology and Mathematics of Myoelectric Signals. IEEE Transactions on Biomedical Engineering, 1979, BME-26, 313-325.	4.2	546
4	Frequency Parameters of the Myoelectric Signal as a Measure of Muscle Conduction Velocity. IEEE Transactions on Biomedical Engineering, 1981, BME-28, 515-523.	4.2	466
5	Lumbar Muscle Fatigue and Chronic Lower Back Pain. Spine, 1989, 14, 992-1001.	2.0	407
6	Common drive of motor units in regulation of muscle force. Trends in Neurosciences, 1994, 17, 299-305.	8.6	397
7	Decomposition of Surface EMG Signals. Journal of Neurophysiology, 2006, 96, 1646-1657.	1.8	383
8	The role of plantar cutaneous sensation in unperturbed stance. Experimental Brain Research, 2004, 156, 505-512.	1.5	336
9	High-yield decomposition of surface EMG signals. Clinical Neurophysiology, 2010, 121, 1602-1615.	1.5	299
10	Surface myoelectric signal cross-talk among muscles of the leg. Electroencephalography and Clinical Neurophysiology, 1988, 69, 568-575.	0.3	280
11	A Procedure for Decomposing the Myoelectric Signal Into Its Constituent Action Potentials - Part I: Technique, Theory, and Implementation. IEEE Transactions on Biomedical Engineering, 1982, BME-29, 149-157.	4.2	259
12	Relationship Between Firing Rate and Recruitment Threshold of Motoneurons in Voluntary Isometric Contractions. Journal of Neurophysiology, 2010, 104, 1034-1046.	1.8	234
13	Use of the surface EMG signal for performance evaluation of back muscles. Muscle and Nerve, 1993, 16, 210-216.	2.2	220
14	Effects of Aging on Motor-Unit Control Properties. Journal of Neurophysiology, 1999, 82, 2081-2091.	1.8	210
15	Firing rates of motor units in human vastus lateralis muscle during fatiguing isometric contractions. Journal of Applied Physiology, 2005, 99, 268-280.	2.5	167
16	Hierarchical control of motor units in voluntary contractions. Journal of Neurophysiology, 2012, 107, 178-195.	1.8	167
17	Inter-electrode spacing of surface EMG sensors: Reduction of crosstalk contamination during voluntary contractions. Journal of Biomechanics, 2012, 45, 555-561.	2.1	153
18	Rank-ordered regulation of motor units. , 1996, 19, 563-573.		148

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19	A technique for the detection, decomposition and analysis of the EMG signal. <i>Electroencephalography and Clinical Neurophysiology</i> , 1984, 58, 175-188.	0.3	144
20	Common Drive in Motor Units of a Synergistic Muscle Pair. <i>Journal of Neurophysiology</i> , 2002, 87, 2200-2204.	1.8	143
21	Hand Dominance and Motor Unit Firing Behavior. <i>Journal of Neurophysiology</i> , 1998, 80, 1373-1382.	1.8	140
22	Recruitment Order of Motor Units in Human Vastus Lateralis Muscle Is Maintained During Fatiguing Contractions. <i>Journal of Neurophysiology</i> , 2003, 90, 2919-2927.	1.8	139
23	Spectral Electromyographic Assessment of Back Muscles in Patients With Low Back Muscles in Patients With Low Back Pain Undergoing Rehabilitation. <i>Spine</i> , 1995, 20, 38-48.	2.0	132
24	Median frequency of the myoelectric signal. <i>European Journal of Applied Physiology and Occupational Physiology</i> , 1984, 52, 258-265.	1.2	130
25	Reduced plantar sensitivity alters postural responses to lateral perturbations of balance. <i>Experimental Brain Research</i> , 2004, 157, 526-536.	1.5	127
26	A Procedure for Decomposing the Myoelectric Signal Into Its Constituent Action Potentials-Part II: Execution and Test for Accuracy. <i>IEEE Transactions on Biomedical Engineering</i> , 1982, BME-29, 158-164.	4.2	123
27	A Note on the Noninvasive Estimation of Muscle Fiber Conduction Velocity. <i>IEEE Transactions on Biomedical Engineering</i> , 1985, BME-32, 341-344.	4.2	120
28	Activation imbalances in lumbar spine muscles in the presence of chronic low back pain. <i>Journal of Applied Physiology</i> , 2003, 94, 1410-1420.	2.5	117
29	Motor unit control and force fluctuation during fatigue. <i>Journal of Applied Physiology</i> , 2009, 107, 235-243.	2.5	112
30	A Combined sEMG and Accelerometer System for Monitoring Functional Activity in Stroke. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2009, 17, 585-594.	4.9	111
31	Fatigue, recovery, and low back pain in varsity rowers. <i>Medicine and Science in Sports and Exercise</i> , 1990, 22, 463-469.	0.4	103
32	Decomposition of surface EMG signals from cyclic dynamic contractions. <i>Journal of Neurophysiology</i> , 2015, 113, 1941-1951.	1.8	88
33	Muscle Fatigue Monitor: A Noninvasive Device for Observing Localized Muscular Fatigue. <i>IEEE Transactions on Biomedical Engineering</i> , 1982, BME-29, 760-768.	4.2	84
34	Dynamical Learning and Tracking of Tremor and Dyskinesia From Wearable Sensors. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2014, 22, 982-991.	4.9	82
35	The compensatory interaction between motor unit firing behavior and muscle force during fatigue. <i>Journal of Neurophysiology</i> , 2016, 116, 1579-1585.	1.8	75
36	Decomposition of indwelling EMG signals. <i>Journal of Applied Physiology</i> , 2008, 105, 700-710.	2.5	74

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37	Neural control of muscle force: indications from a simulation model. <i>Journal of Neurophysiology</i> , 2013, 109, 1548-1570.	1.8	74
38	Biomechanical benefits of the onion-skin motor unit control scheme. <i>Journal of Biomechanics</i> , 2015, 48, 195-203.	2.1	70
39	Recruitment threshold and muscle fiber conduction velocity of single motor units. <i>Journal of Electromyography and Kinesiology</i> , 1991, 1, 116-123.	1.7	67
40	Median frequency of the myoelectric signal. <i>European Journal of Applied Physiology and Occupational Physiology</i> , 1986, 55, 457-464.	1.2	63
41	High-resolution tracking of motor disorders in Parkinson's disease during unconstrained activity. <i>Movement Disorders</i> , 2013, 28, 1080-1087.	3.9	55
42	Preferred sensor sites for surface EMG signal decomposition. <i>Physiological Measurement</i> , 2012, 33, 195-206.	2.1	53
43	Motor unit recruitment and firing rates interaction in the control of human muscles. <i>Brain Research</i> , 1985, 337, 311-319.	2.2	52
44	Electromyographic analysis of standing posture and demi-plie in ballet and modern dancers. <i>Medicine and Science in Sports and Exercise</i> , 1994, 26, 771-782.	0.4	51
45	Unusual motor unit firing behavior in older adults. <i>Brain Research</i> , 1989, 482, 136-140.	2.2	44
46	Motor Unit Recruitment and Proprioceptive Feedback Decrease the Common Drive. <i>Journal of Neurophysiology</i> , 2009, 101, 1620-1628.	1.8	44
47	An Electrode for Recording Single Motor Unit Activity During Strong Muscle Contractions. <i>IEEE Transactions on Biomedical Engineering</i> , 1972, BME-19, 367-372.	4.2	42
48	The relation between the myoelectric signal and physiological properties of constant-force isometric contractions. <i>Electroencephalography and Clinical Neurophysiology</i> , 1978, 45, 681-698.	0.3	41
49	Muscle Fatigue Monitor (MFM): Second Generation. <i>IEEE Transactions on Biomedical Engineering</i> , 1985, BME-32, 75-78.	4.2	37
50	Firing Rate Interactions Among Human Orbicularis Oris Motor Units. <i>International Journal of Neuroscience</i> , 1992, 64, 167-175.	1.6	36
51	Reply to Farina and Enoka: The Reconstruct-and-Test Approach Is the Most Appropriate Validation for Surface EMG Signal Decomposition to Date. <i>Journal of Neurophysiology</i> , 2011, 105, 983-984.	1.8	36
52	Electromyographic analysis of grand-pli?? in ballet and modern dancers. <i>Medicine and Science in Sports and Exercise</i> , 1998, 30, 1708-1720.	0.4	31
53	Synchronization of motor unit firings: an epiphenomenon of firing rate characteristics not common inputs. <i>Journal of Neurophysiology</i> , 2016, 115, 178-192.	1.8	29
54	Control of upper-limb prostheses. <i>Journal of Medical Engineering and Technology</i> , 1978, 2, 57-61.	1.4	28

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55	A model for a motor unit train recorded during constant force isometric contractions. <i>Biological Cybernetics</i> , 1975, 19, 159-167.	1.3	27
56	Lateral dominance and motor unit firing behavior. <i>Brain Research</i> , 1992, 576, 165-167.	2.2	27
57	Error reduction in EMG signal decomposition. <i>Journal of Neurophysiology</i> , 2014, 112, 2718-2728.	1.8	24
58	Transposed firing activation of motor units. <i>Journal of Neurophysiology</i> , 2014, 112, 962-970.	1.8	21
59	Clarification of methods used to validate surface EMG decomposition algorithms as described by Farina et al. (2014). <i>Journal of Applied Physiology</i> , 2015, 118, 1084-1084.	2.5	21
60	Multiple Motor Unit Recordings of Laryngeal Muscles: The Technique of Vector Laryngeal Electromyography. <i>Laryngoscope</i> , 2002, 112, 2196-2203.	2.0	17
61	Ordered Motor-Unit Firing Behavior in Acute Cerebellar Stroke. <i>Journal of Neurophysiology</i> , 2006, 96, 2769-2774.	1.8	17
62	Is the notion of central fatigue based on a solid foundation?. <i>Journal of Neurophysiology</i> , 2016, 115, 967-977.	1.8	16
63	Technique for detecting MUAP propagation from high-threshold motor units. <i>Journal of Electromyography and Kinesiology</i> , 1991, 1, 75-80.	1.7	14
64	Compression Induced Damage on In-Situ Severed and Intact Nerves. <i>Orthopedics</i> , 1987, 10, 777-784.	1.1	14
65	Statistically rigorous calculations do not support common input and long-term synchronization of motor-unit firings. <i>Journal of Neurophysiology</i> , 2014, 112, 2729-2744.	1.8	13
66	Decomposition and Analysis of Intramuscular Electromyographic Signals. , 1999, , 757-776.		13
67	Improved resolution of pulse superpositions in a knowledge-based system EMG decomposition. , 2004, 2006, 69-71.		12
68	Aliasing rejection in Precision Decomposition of EMG signals. , 2008, 2008, 4972-5.		11
69	A simulation study for a surface EMG sensor that detects distinguishable motor unit action potentials. <i>Journal of Neuroscience Methods</i> , 2008, 168, 54-63.	2.5	9
70	Multi-Receiver Precision Decomposition of Intramuscular EMG Signals. , 2006, 2006, 1252-5.		7
71	Surface EMG signal decomposition using empirically sustainable biosignal separation principles. , 2009, 2009, 4986-9.		5
72	Multi-Receiver Precision Decomposition of Intramuscular EMG Signals. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	2

#	ARTICLE	IF	CITATIONS
73	Letters to the editor. Muscle and Nerve, 1995, 18, 1490-1497.	2.2	1
74	The common input notion, conceived and sustained by conjecture. Journal of Neurophysiology, 2016, 115, 1079-1080.	1.8	1