

Jacques Duchateau

List of Publications by Year in descending order

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96
papers

9,003
citations

50273

46
h-index

43886

91
g-index

99
all docs

99
docs citations

99
times ranked

6081
citing authors

#	ARTICLE	IF	CITATIONS
1	Muscle fatigue: what, why and how it influences muscle function. <i>Journal of Physiology</i> , 2008, 586, 11-23.	2.9	847
2	Rate of force development: physiological and methodological considerations. <i>European Journal of Applied Physiology</i> , 2016, 116, 1091-1116.	2.5	803
3	Changes in single motor unit behaviour contribute to the increase in contraction speed after dynamic training in humans. <i>Journal of Physiology</i> , 1998, 513, 295-305.	2.9	575
4	Translating Fatigue to Human Performance. <i>Medicine and Science in Sports and Exercise</i> , 2016, 48, 2228-2238.	0.4	527
5	Neural Contributions to Muscle Fatigue. <i>Medicine and Science in Sports and Exercise</i> , 2016, 48, 2294-2306.	0.4	330
6	Age-related decline in rate of torque development is accompanied by lower maximal motor unit discharge frequency during fast contractions. <i>Journal of Applied Physiology</i> , 2008, 104, 739-746.	2.5	254
7	Motor unit behaviour and contractile changes during fatigue in the human first dorsal interosseus. <i>Journal of Physiology</i> , 2001, 534, 903-912.	2.9	240
8	Training adaptations in the behavior of human motor units. <i>Journal of Applied Physiology</i> , 2006, 101, 1766-1775.	2.5	235
9	Effect of static stretch training on neural and mechanical properties of the human plantar-flexor muscles. <i>Muscle and Nerve</i> , 2004, 29, 248-255.	2.2	185
10	Human motor unit recordings: Origins and insight into the integrated motor system. <i>Brain Research</i> , 2011, 1409, 42-61.	2.2	175
11	Motor unit recruitment order during voluntary and electrically induced contractions in the tibialis anterior. <i>Experimental Brain Research</i> , 1997, 114, 117-123.	1.5	167
12	Electrical Stimulation as a Modality to Improve Performance of the Neuromuscular System. <i>Exercise and Sport Sciences Reviews</i> , 2007, 35, 180-185.	3.0	156
13	Muscle fatigue during concentric and eccentric contractions. <i>Muscle and Nerve</i> , 2000, 23, 1727-1735.	2.2	152
14	Neural control of lengthening contractions. <i>Journal of Experimental Biology</i> , 2016, 219, 197-204.	1.7	150
15	Muscle Fatigue and the Mechanisms of Task Failure. <i>Exercise and Sport Sciences Reviews</i> , 2004, 32, 44-49.	3.0	148
16	Neuromuscular Electrical Stimulation and Voluntary Exercise. <i>Sports Medicine</i> , 1992, 14, 100-113.	6.5	144
17	Neural control of shortening and lengthening contractions: influence of task constraints. <i>Journal of Physiology</i> , 2008, 586, 5853-5864.	2.9	143
18	Neural Aspects of Muscle Stretching. <i>Exercise and Sport Sciences Reviews</i> , 2006, 34, 154-158.	3.0	138

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19	Effect of time of day on force variation in a human muscle. , 1999, 22, 1380-1387.		137
20	Unraveling the neurophysiology of muscle fatigue. Journal of Electromyography and Kinesiology, 2011, 21, 208-219.	1.7	135
21	Voluntary activation during maximal contraction with advancing age: a brief review. European Journal of Applied Physiology, 2007, 100, 543-551.	2.5	132
22	Age-related fatigability of the ankle dorsiflexor muscles during concentric and eccentric contractions. European Journal of Applied Physiology, 2007, 100, 515-525.	2.5	126
23	Muscle stretching and motoneuron excitability. European Journal of Applied Physiology and Occupational Physiology, 1988, 58, 47-52.	1.2	125
24	Reflex regulation during sustained and intermittent submaximal contractions in humans. Journal of Physiology, 2002, 541, 959-967.	2.9	124
25	Mechanisms of decreased motoneurone excitation during passive muscle stretching. Experimental Brain Research, 2001, 137, 163-169.	1.5	123
26	The relative lengthening of the myotendinous structures in the medial gastrocnemius during passive stretching differs among individuals. Journal of Applied Physiology, 2009, 106, 169-177.	2.5	112
27	Rate Coding and the Control of Muscle Force. Cold Spring Harbor Perspectives in Medicine, 2017, 7, a029702.	6.2	102
28	Postactivation potentiation in a human muscle: effect on the rate of torque development of tetanic and voluntary isometric contractions. Journal of Applied Physiology, 2007, 102, 1394-1401.	2.5	99
29	Insights into the neural control of eccentric contractions. Journal of Applied Physiology, 2014, 116, 1418-1425.	2.5	95
30	Inappropriate interpretation of surface EMG signals and muscle fiber characteristics impedes understanding of the control of neuromuscular function. Journal of Applied Physiology, 2015, 119, 1516-1518.	2.5	95
31	Mechanical Properties and Behaviour of Motor Units in the Tibialis Anterior During Voluntary Contractions. Applied Physiology, Nutrition, and Metabolism, 1997, 22, 585-597.	1.7	94
32	Ageing does not affect voluntary activation of the ankle dorsiflexors during isometric, concentric, and eccentric contractions. Journal of Applied Physiology, 2005, 99, 31-38.	2.5	93
33	Specific modulation of motor unit discharge for a similar change in fascicle length during shortening and lengthening contractions in humans. Journal of Physiology, 2006, 577, 753-765.	2.9	89
34	Spinal Mechanisms Contribute to Differences in the Time to Failure of Submaximal Fatiguing Contractions Performed With Different Loads. Journal of Neurophysiology, 2008, 99, 1096-1104.	1.8	87
35	Specific modulation of corticospinal and spinal excitabilities during maximal voluntary isometric, shortening and lengthening contractions in synergist muscles. Journal of Physiology, 2011, 589, 2901-2916.	2.9	87
36	Cortical and Spinal Modulation of Antagonist Coactivation During a Submaximal Fatiguing Contraction in Humans. Journal of Neurophysiology, 2008, 99, 554-563.	1.8	86

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37	Neural Adaptations with Chronic Activity Patterns in Able-Bodied Humans. <i>American Journal of Physical Medicine and Rehabilitation</i> , 2002, 81, S17-S27.	1.4	77
38	Age-related influence of vision and proprioception on Ia presynaptic inhibition in soleus muscle during upright stance. <i>Journal of Physiology</i> , 2012, 590, 5541-5554.	2.9	76
39	Preceding muscle activity influences motor unit discharge and rate of torque development during ballistic contractions in humans. <i>Journal of Physiology</i> , 2005, 562, 635-644.	2.9	73
40	Maximal discharge rate of motor units determines the maximal rate of force development during ballistic contractions in human. <i>Frontiers in Human Neuroscience</i> , 2014, 8, 234.	2.0	73
41	Spinal reflexes and coactivation of ankle muscles during a submaximal fatiguing contraction. <i>Journal of Applied Physiology</i> , 2005, 99, 1182-1188.	2.5	71
42	Training effects of sub-maximal electrostimulation in a human muscle. <i>Medicine and Science in Sports and Exercise</i> , 1988, 20, 99-104.	0.4	66
43	Postactivation potentiation in human muscle is not related to the type of maximal conditioning contraction. <i>Muscle and Nerve</i> , 2004, 30, 328-336.	2.2	66
44	Change in Muscle Fascicle Length Influences the Recruitment and Discharge Rate of Motor Units During Isometric Contractions. <i>Journal of Neurophysiology</i> , 2005, 94, 3126-3133.	1.8	65
45	Effects of Noradrenaline and Dopamine on Supraspinal Fatigue in Well-Trained Men. <i>Medicine and Science in Sports and Exercise</i> , 2012, 44, 2299-2308.	0.4	64
46	Load-dependent muscle strategy during plantarflexion in humans. <i>Journal of Electromyography and Kinesiology</i> , 1999, 9, 1-11.	1.7	55
47	Distinguishing between Fatigue and Fatigability in Multiple Sclerosis. <i>Neurorehabilitation and Neural Repair</i> , 2021, 35, 960-973.	2.9	54
48	Postactivation potentiation influences differently the nonlinear summation of contractions in young and elderly adults. <i>Journal of Applied Physiology</i> , 2005, 98, 1243-1250.	2.5	53
49	Specific modulation of spinal and cortical excitabilities during lengthening and shortening submaximal and maximal contractions in plantar flexor muscles. <i>Journal of Applied Physiology</i> , 2014, 117, 1440-1450.	2.5	49
50	Influence of age and posture on spinal and corticospinal excitability. <i>Experimental Gerontology</i> , 2015, 69, 62-69.	2.8	49
51	Effects of short-term training combining strength and balance exercises on maximal strength and upright standing steadiness in elderly adults. <i>Experimental Gerontology</i> , 2015, 61, 38-46.	2.8	47
52	Electrical Stimulation of Muscle: Electrophysiology and Rehabilitation. <i>Physiology</i> , 2020, 35, 40-56.	3.1	47
53	Twitch Analysis as an Approach to Motor Unit Activation During Electrical Stimulation. <i>Applied Physiology, Nutrition, and Metabolism</i> , 1994, 19, 451-461.	1.7	46
54	Age-related changes in the behavior of the muscle-tendon unit of the gastrocnemius medialis during upright stance. <i>Journal of Applied Physiology</i> , 2012, 112, 296-304.	2.5	46

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55	Postactivation potentiation in a human muscle: effect on the load-velocity relation of tetanic and voluntary shortening contractions. <i>Journal of Applied Physiology</i> , 2007, 103, 1318-1325.	2.5	44
56	Effects of a combined essential amino acids/carbohydrate supplementation on muscle mass, architecture and maximal strength following heavy-load training. <i>European Journal of Applied Physiology</i> , 2010, 110, 479-488.	2.5	40
57	The neural control of coactivation during fatiguing contractions revisited. <i>Journal of Electromyography and Kinesiology</i> , 2014, 24, 780-788.	1.7	37
58	Contributions of slow and fast muscles of triceps surae to a cyclic movement. <i>European Journal of Applied Physiology and Occupational Physiology</i> , 1986, 55, 476-481.	1.2	33
59	Distribution of motor unit properties across human muscles. <i>Journal of Applied Physiology</i> , 2022, 132, 1-13.	2.5	32
60	Influence of neural adjustments and muscle oxygenation on task failure during sustained isometric contractions with elbow flexor muscles. <i>Experimental Physiology</i> , 2012, 97, 918-929.	2.0	31
61	Strength Training: In Search of Optimal Strategies to Maximize Neuromuscular Performance. <i>Exercise and Sport Sciences Reviews</i> , 2021, 49, 2-14.	3.0	28
62	Acute effect of muscle stretching on the steadiness of sustained submaximal contractions of the plantar flexor muscles. <i>Journal of Applied Physiology</i> , 2011, 110, 407-415.	2.5	27
63	Velocity-dependent muscle strategy during plantarflexion in humans. <i>Journal of Electromyography and Kinesiology</i> , 1996, 6, 225-233.	1.7	26
64	Discharge properties of motor units during steady isometric contractions performed with the dorsiflexor muscles. <i>Journal of Applied Physiology</i> , 2012, 112, 1897-1905.	2.5	26
65	Modulation of reflex responses in activated ankle dorsiflexors differs in healthy young and elderly subjects. <i>European Journal of Applied Physiology</i> , 2011, 111, 1909-1916.	2.5	22
66	M-wave potentiation after voluntary contractions of different durations and intensities in the tibialis anterior. <i>Journal of Applied Physiology</i> , 2015, 118, 953-964.	2.5	22
67	Is the SÅrensen test valid to assess muscle fatigue of the trunk extensor muscles?. <i>Journal of Back and Musculoskeletal Rehabilitation</i> , 2016, 29, 31-40.	1.1	21
68	Postactivation potentiation of short tetanic contractions is differently influenced by stimulation frequency in young and elderly adults. <i>European Journal of Applied Physiology</i> , 2008, 103, 449-459.	2.5	20
69	The repeated bout effect of eccentric exercise is not associated with changes in voluntary activation. <i>European Journal of Applied Physiology</i> , 2010, 108, 1065-1074.	2.5	19
70	Peripheral muscle fatigue in hospitalised geriatric patients is associated with circulating markers of inflammation. <i>Experimental Gerontology</i> , 2017, 95, 128-135.	2.8	15
71	Leucine-enriched protein supplementation does not influence neuromuscular adaptations in response to a 6-month strength training programme in older adults. <i>Experimental Gerontology</i> , 2016, 82, 58-66.	2.8	14
72	Efficacy of a new strength training design: the 3/7 method. <i>European Journal of Applied Physiology</i> , 2019, 119, 1093-1104.	2.5	14

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73	Effects of load magnitude on muscular activity and tissue oxygenation during repeated elbow flexions until failure. <i>European Journal of Applied Physiology</i> , 2013, 113, 1895-1904.	2.5	13
74	Évolution et adaptations à l'entraînement du système neuromusculaire au cours du vieillissement. <i>Science and Sports</i> , 2006, 21, 199-203.	0.5	12
75	Effects of Short-Term Dexamethasone Administration on Corticospinal Excitability. <i>Medicine and Science in Sports and Exercise</i> , 2014, 46, 695-701.	0.4	12
76	Comparison of muscle activity and tissue oxygenation during strength training protocols that differ by their organisation, rest interval between sets, and volume. <i>European Journal of Applied Physiology</i> , 2016, 116, 1795-1806.	2.5	12
77	Anodal transcranial direct current stimulation does not influence the neural adjustments associated with fatiguing contractions in a hand muscle. <i>European Journal of Applied Physiology</i> , 2019, 119, 597-609.	2.5	10
78	Effect of a Periodized Power Training Program on the Functional Performances and Contractile Properties of the Quadriceps in Sprinters. <i>Research Quarterly for Exercise and Sport</i> , 2012, 83, 540-545.	1.4	9
79	Paths of discovery in motoneuron neurobiology. <i>Brain Research</i> , 2011, 1409, 1-2.	2.2	7
80	Spinal and corticospinal pathways are differently modulated when standing at the bottom and the top of a three-step staircase in young and older adults. <i>European Journal of Applied Physiology</i> , 2017, 117, 1165-1174.	2.5	7
81	Acute Effect of Noradrenergic Modulation on Motor Output Adjustment in Men. <i>Medicine and Science in Sports and Exercise</i> , 2018, 50, 1579-1587.	0.4	7
82	Aftereffects of prolonged Achilles tendon vibration on postural control are reduced in older adults. <i>Experimental Gerontology</i> , 2020, 131, 110822.	2.8	7
83	Changes in corticospinal excitability during the preparation phase of ballistic and ramp contractions. <i>Journal of Physiology</i> , 2021, 599, 1551-1566.	2.9	7
84	Short vs. long pulses for testing knee extensor neuromuscular properties: does it matter?. <i>European Journal of Applied Physiology</i> , 2018, 118, 361-369.	2.5	5
85	Initial conditions influence the characteristics of ballistic contractions in the ankle dorsiflexors. <i>European Journal of Applied Physiology</i> , 2010, 110, 805-814.	2.5	4
86	Effects of tendon vibration and age on force reproduction task performed with wrist flexors. <i>Experimental Brain Research</i> , 2022, 240, 941-951.	1.5	4
87	Effet du crocheteur myo-aponévrotique du triceps sural sur la tension passive et l'architecture musculaire à l'étirement. <i>Kinesithérapie</i> , 2009, 9, 56-61.	0.1	3
88	Modulation of the Hoffmann reflex in soleus and medial gastrocnemius during stair ascent and descent in young and older adults. <i>Gait and Posture</i> , 2019, 68, 115-121.	1.4	3
89	Muscle Function. , 2019, , 129-157.		3
90	Forearm muscles fatigue induced by repetitive braking on a motorcycle is best discriminated by specific kinetic parameters. <i>PLoS ONE</i> , 2021, 16, e0246242.	2.5	3

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91	Relation entre les modifications de lâ€™architecture musculo-tendineuse et le dÃ©veloppement de la tension pendant lâ€™Ã©tirement passif du triceps sural. <i>KinesithÃ©rapie</i> , 2006, 6, 29-33.	0.1	2
92	Le vieillissement du systÃ©me neuromusculaire: de la sarcopÃ©nie Ã la dynapÃ©nie. <i>KinesithÃ©rapie</i> , 2014, 14, 45-51.	0.1	2
93	Neural Correlates to the Increase in Maximal Force after Dexamethasone Administration. <i>Medicine and Science in Sports and Exercise</i> , 2018, 50, 218-224.	0.4	2
94	The slack test does not assess maximal shortening velocity of muscle fascicle in human. <i>Journal of Experimental Biology</i> , 2018, 221, .	1.7	2
95	Changes of agonist and synergist muscles activity during a sustained submaximal brake-pulling gesture. <i>Journal of Electromyography and Kinesiology</i> , 2022, 65, 102677.	1.7	2
96	Muscle synergy and fast movements. <i>Journal of Biomechanics</i> , 1994, 27, 722.	2.1	1