

# John G Semmler

## List of Publications by Citations

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93  
papers

3,783  
citations

32  
h-index

60  
g-index

109  
ext. papers

4,293  
ext. citations

3.4  
avg, IF

5.59  
L-index

#	Paper	IF	Citations
93	Mechanisms that contribute to differences in motor performance between young and old adults. <i>Journal of Electromyography and Kinesiology</i> , <b>2003</b> , 13, 1-12	2.5	393
92	Training adaptations in the behavior of human motor units. <i>Journal of Applied Physiology</i> , <b>2006</b> , 101, 1766-75	3.7	204
91	Motor unit discharge and force tremor in skill- and strength-trained individuals. <i>Experimental Brain Research</i> , <b>1998</b> , 119, 27-38	2.3	161
90	Motor unit synchronization and neuromuscular performance. <i>Exercise and Sport Sciences Reviews</i> , <b>2002</b> , 30, 8-14	6.7	158
89	Age-related differences in corticospinal control during functional isometric contractions in left and right hands. <i>Journal of Applied Physiology</i> , <b>2005</b> , 99, 1483-93	3.7	129
88	Motor-unit activity differs with load type during a fatiguing contraction. <i>Journal of Neurophysiology</i> , <b>2005</b> , 93, 1381-92	3.2	125
87	Corticomotor plasticity and learning of a ballistic thumb training task are diminished in older adults. <i>Journal of Applied Physiology</i> , <b>2009</b> , 107, 1874-83	3.7	125
86	Motor cortex plasticity induced by paired associative stimulation is enhanced in physically active individuals. <i>Journal of Physiology</i> , <b>2009</b> , 587, 5831-42	3.9	120
85	Neural adaptations to strength training: moving beyond transcranial magnetic stimulation and reflex studies. <i>Acta Physiologica</i> , <b>2011</b> , 202, 119-40	5.6	106
84	Motor unit synchronisation is enhanced during slow lengthening contractions of a hand muscle. <i>Journal of Physiology</i> , <b>2002</b> , 545, 681-95	3.9	105
83	A single bout of aerobic exercise promotes motor cortical neuroplasticity. <i>Journal of Applied Physiology</i> , <b>2013</b> , 114, 1174-82	3.7	104
82	Motor-unit synchronization is not responsible for larger motor-unit forces in old adults. <i>Journal of Neurophysiology</i> , <b>2000</b> , 84, 358-66	3.2	98
81	Long-term activity in upper- and lower-limb muscles of humans. <i>Journal of Applied Physiology</i> , <b>2001</b> , 91, 2224-32	3.7	92
80	Corticomotor excitability and plasticity following complex visuomotor training in young and old adults. <i>European Journal of Neuroscience</i> , <b>2011</b> , 34, 1847-56	3.5	85
79	Eccentric exercise increases EMG amplitude and force fluctuations during submaximal contractions of elbow flexor muscles. <i>Journal of Applied Physiology</i> , <b>2007</b> , 103, 979-89	3.7	80
78	Motor-unit coherence and its relation with synchrony are influenced by training. <i>Journal of Neurophysiology</i> , <b>2004</b> , 92, 3320-31	3.2	80
77	Motor unit synchronization is increased in biceps brachii after exercise-induced damage to elbow flexor muscles. <i>Journal of Neurophysiology</i> , <b>2008</b> , 99, 1008-19	3.2	73

76	Reduced motor cortex plasticity following inhibitory rTMS in older adults. <i>Clinical Neurophysiology</i> , <b>2010</b> , 121, 441-7	4.3	70
75	Gender differences in the fatigability of human skeletal muscle. <i>Journal of Neurophysiology</i> , <b>1999</b> , 82, 3590-3	3.2	66
74	Inter- and intra-subject variability of motor cortex plasticity following continuous theta-burst stimulation. <i>Neuroscience</i> , <b>2015</b> , 304, 266-78	3.9	65
73	Motor-unit coherence during isometric contractions is greater in a hand muscle of older adults. <i>Journal of Neurophysiology</i> , <b>2003</b> , 90, 1346-9	3.2	62
72	Differential modulation of motor cortex excitability in BDNF Met allele carriers following experimentally induced and use-dependent plasticity. <i>European Journal of Neuroscience</i> , <b>2012</b> , 36, 2640-9	3.5	60
71	Limb immobilization alters muscle activation patterns during a fatiguing isometric contraction. <i>Muscle and Nerve</i> , <b>2000</b> , 23, 1381-92	3.4	58
70	Hemispheric differences in use-dependent corticomotor plasticity in young and old adults. <i>Experimental Brain Research</i> , <b>2010</b> , 205, 57-68	2.3	57
69	Relationship between motor unit short-term synchronization and common drive in human first dorsal interosseous muscle. <i>Brain Research</i> , <b>1997</b> , 767, 314-20	3.7	56
68	Influence of handedness on motor unit discharge properties and force tremor. <i>Experimental Brain Research</i> , <b>1995</b> , 104, 115-25	2.3	56
67	Hemispheric differences in motor cortex excitability during a simple index finger abduction task in humans. <i>Journal of Neurophysiology</i> , <b>1998</b> , 79, 1246-54	3.2	53
66	Low-frequency common modulation of soleus motor unit discharge is enhanced during postural control in humans. <i>Experimental Brain Research</i> , <b>2006</b> , 175, 584-95	2.3	52
65	Priming theta burst stimulation enhances motor cortex plasticity in young but not old adults. <i>Brain Stimulation</i> , <b>2017</b> , 10, 298-304	5.1	50
64	A comparison of cross-correlation and surface EMG techniques used to quantify motor unit synchronization in humans. <i>Journal of Neuroscience Methods</i> , <b>1999</b> , 90, 47-55	3	43
63	Age-related differences in short- and long-interval intracortical inhibition in a human hand muscle. <i>Brain Stimulation</i> , <b>2014</b> , 7, 665-72	5.1	40
62	Low-frequency fatigue and neuromuscular performance after exercise-induced damage to elbow flexor muscles. <i>Journal of Applied Physiology</i> , <b>2008</b> , 105, 1146-55	3.7	37
61	Age-related changes in corticospinal excitability and intracortical inhibition after upper extremity motor learning: a systematic review and meta-analysis. <i>Neurobiology of Aging</i> , <b>2017</b> , 55, 61-71	5.6	32
60	Investigating TMS-EEG Indices of Long-Interval Intracortical Inhibition at Different Interstimulus Intervals. <i>Brain Stimulation</i> , <b>2017</b> , 10, 65-74	5.1	31
59	Adaptations in biceps brachii motor unit activity after repeated bouts of eccentric exercise in elbow flexor muscles. <i>Journal of Neurophysiology</i> , <b>2011</b> , 105, 1225-35	3.2	31

58	Eccentric muscle damage has variable effects on motor unit recruitment thresholds and discharge patterns in elbow flexor muscles. <i>Journal of Neurophysiology</i> , <b>2009</b> , 102, 413-23	3.2	30
57	Diminished task-related adjustments of common inputs to hand muscle motor neurons in older adults. <i>Experimental Brain Research</i> , <b>2006</b> , 172, 507-18	2.3	26
56	Increased intracortical inhibition in elderly adults with anterior-posterior current flow: A TMS study. <i>Clinical Neurophysiology</i> , <b>2016</b> , 127, 635-640	4.3	25
55	Eccentric muscle damage increases intermuscular coherence during a fatiguing isometric contraction. <i>Acta Physiologica</i> , <b>2013</b> , 208, 362-75	5.6	25
54	Compound group I excitatory input is differentially distributed to motoneurons of the human tibialis anterior. <i>Neuroscience Letters</i> , <b>1994</b> , 178, 206-10	3.3	25
53	A comparison of two methods for estimating 50% of the maximal motor evoked potential. <i>Clinical Neurophysiology</i> , <b>2015</b> , 126, 2337-41	4.3	24
52	Effects of hyperglycemia on cortical response to esophageal distension in normal subjects. <i>Digestive Diseases and Sciences</i> , <b>1999</b> , 44, 279-85	4	24
51	Age-related Differences in Pre- and Post-synaptic Motor Cortex Inhibition are Task Dependent. <i>Brain Stimulation</i> , <b>2015</b> , 8, 926-36	5.1	23
50	Motor cortex plasticity induced by theta burst stimulation is impaired in patients with obstructive sleep apnoea. <i>European Journal of Neuroscience</i> , <b>2013</b> , 37, 1844-52	3.5	23
49	Cortical inhibition assessed using paired-pulse TMS-EEG is increased in older adults. <i>Brain Stimulation</i> , <b>2018</b> , 11, 545-557	5.1	22
48	Probing changes in corticospinal excitability following theta burst stimulation of the human primary motor cortex. <i>Clinical Neurophysiology</i> , <b>2016</b> , 127, 740-747	4.3	21
47	Motor unit activity after eccentric exercise and muscle damage in humans. <i>Acta Physiologica</i> , <b>2014</b> , 210, 754-67	5.6	21
46	Modulation of short- and long-interval intracortical inhibition with increasing motor evoked potential amplitude in a human hand muscle. <i>Clinical Neurophysiology</i> , <b>2014</b> , 125, 1440-50	4.3	19
45	Motor unit synchronization measured by cross-correlation is not influenced by short-term strength training of a hand muscle. <i>Experimental Brain Research</i> , <b>2006</b> , 175, 745-53	2.3	19
44	Acute Exercise at Different Intensities Influences Corticomotor Excitability and Performance of a Ballistic Thumb Training Task. <i>Neuroscience</i> , <b>2019</b> , 412, 29-39	3.9	18
43	Impaired neuromuscular function during isometric, shortening, and lengthening contractions after exercise-induced damage to elbow flexor muscles. <i>Journal of Applied Physiology</i> , <b>2008</b> , 105, 502-9	3.7	18
42	Supplementary motor area-primary motor cortex facilitation in younger but not older adults. <i>Neurobiology of Aging</i> , <b>2018</b> , 64, 85-91	5.6	17
41	Reduced short-interval intracortical inhibition after eccentric muscle damage in human elbow flexor muscles. <i>Journal of Applied Physiology</i> , <b>2012</b> , 113, 929-36	3.7	17

40	Crossed motor innervation of the base of human tongue. <i>Journal of Neurophysiology</i> , <b>2015</b> , 113, 3499-5102	16
39	Modulating motor cortical neuroplasticity with priming paired associative stimulation in young and old adults. <i>Clinical Neurophysiology</i> , <b>2017</b> , 128, 763-769	4.3 15
38	Age-related changes in late I-waves influence motor cortex plasticity induction in older adults. <i>Journal of Physiology</i> , <b>2018</b> , 596, 2597-2609	3.9 15
37	FUNCTIONAL OUTCOMES AFTER DISTAL BICEPS BRACHII REPAIR: A CASE SERIES. <i>International Journal of Sports Physical Therapy</i> , <b>2016</b> , 11, 962-970	1.4 13
36	Task-related changes in intracortical inhibition assessed with paired- and triple-pulse transcranial magnetic stimulation. <i>Journal of Neurophysiology</i> , <b>2015</b> , 113, 1470-9	3.2 12
35	Short-term immobilization influences use-dependent cortical plasticity and fine motor performance. <i>Neuroscience</i> , <b>2016</b> , 330, 247-56	3.9 12
34	Mechanisms of the deep, slow-wave, sleep-related increase of upper airway muscle tone in healthy humans. <i>Journal of Applied Physiology</i> , <b>2017</b> , 122, 1304-1312	3.7 11
33	Intracortical Inhibition Assessed with Paired-Pulse Transcranial Magnetic Stimulation is Modulated during Shortening and Lengthening Contractions in Young and Old Adults. <i>Brain Stimulation</i> , <b>2016</b> , 9, 258-67	5.1 11
32	The medial sural artery as recipient vessel and the impact on the medial gastrocnemius. <i>Annals of Plastic Surgery</i> , <b>2011</b> , 67, 382-6	1.7 11
31	Age-related changes in late synaptic inputs to corticospinal neurons and their functional significance: A paired-pulse TMS study. <i>Brain Stimulation</i> , <b>2020</b> , 13, 239-246	5.1 11
30	Transcranial Magnetic Stimulation-Electroencephalography Measures of Cortical Neuroplasticity Are Altered after Mild Traumatic Brain Injury. <i>Journal of Neurotrauma</i> , <b>2019</b> , 36, 2774-2784	5.4 10
29	Conventional or threshold-hunting TMS? A tale of two SICIs. <i>Brain Stimulation</i> , <b>2018</b> , 11, 1296-1305	5.1 10
28	Intermittent single-joint fatiguing exercise reduces TMS-EEG measures of cortical inhibition. <i>Journal of Neurophysiology</i> , <b>2019</b> , 121, 471-479	3.2 9
27	Motor unit activity in upper airway muscles genioglossus and tensor palatini. <i>Respiratory Physiology and Neurobiology</i> , <b>2013</b> , 188, 362-9	2.8 8
26	Increasing motor cortex plasticity with spaced paired associative stimulation at different intervals in older adults. <i>European Journal of Neuroscience</i> , <b>2017</b> , 46, 2674-2683	3.5 7
25	Preferential Activation of Unique Motor Cortical Networks With Transcranial Magnetic Stimulation: A Review of the Physiological, Functional, and Clinical Evidence. <i>Neuromodulation</i> , <b>2021</b> , 24, 813-828	3.1 7
24	The effect of hyperglycaemia on cerebral potentials evoked by rapid rectal distension in healthy humans. <i>European Journal of Clinical Investigation</i> , <b>1999</b> , 29, 512-8	4.6 6
23	Older Adults Differentially Modulate Transcranial Magnetic Stimulation-Electroencephalography Measures of Cortical Inhibition during Maximal Single-joint Exercise. <i>Neuroscience</i> , <b>2020</b> , 425, 181-193	3.9 6

22	Visuomotor task acquisition is reduced by priming paired associative stimulation in older adults. <i>Neurobiology of Aging</i> , <b>2019</b> , 81, 67-76	5.6	5
21	Primary motor cortex function and motor skill acquisition: insights from threshold-hunting TMS. <i>Experimental Brain Research</i> , <b>2020</b> , 238, 1745-1757	2.3	5
20	Load-dependent modulation of alpha oscillations during working memory encoding and retention in young and older adults. <i>Psychophysiology</i> , <b>2021</b> , 58, e13719	4.1	5
19	Investigating the influence of paired-associative stimulation on multi-session skill acquisition and retention in older adults. <i>Clinical Neurophysiology</i> , <b>2020</b> , 131, 1497-1507	4.3	4
18	Common drive to the upper airway muscle genioglossus during inspiratory loading. <i>Journal of Neurophysiology</i> , <b>2015</b> , 114, 2883-92	3.2	4
17	Characterising the influence of cerebellum on the neuroplastic modulation of intracortical motor circuits. <i>PLoS ONE</i> , <b>2020</b> , 15, e0236005	3.7	4
16	TMS coil orientation and muscle activation influence lower limb intracortical excitability. <i>Brain Research</i> , <b>2020</b> , 1746, 147027	3.7	3
15	Interactions Between Cerebellum and the Intracortical Excitatory Circuits of Motor Cortex: a Mini-Review. <i>Cerebellum</i> , <b>2021</b> , 1	4.3	2
14	Single joint fatiguing exercise decreases long but not short-interval intracortical inhibition in older adults. <i>Experimental Brain Research</i> , <b>2021</b> , 239, 47-58	2.3	2
13	Exercise, effort, and limb position sense. <i>Journal of Applied Physiology</i> , <b>2006</b> , 100, 1099-100	3.7	1
12	Motor cortex plasticity and visuomotor skill learning in upper and lower limbs of endurance-trained cyclists. <i>European Journal of Applied Physiology</i> , <b>2021</b> , 1	3.4	1
11	Load-dependent modulation of alpha oscillations during working memory encoding and retention in young and older adults		1
10	The Role of Alpha Power in the Suppression of Anticipated Distractors During Verbal Working Memory. <i>Brain Topography</i> , <b>2021</b> , 34, 102-109	4.3	1
9	Age-related changes in motor cortex plasticity assessed with non-invasive brain stimulation: an update and new perspectives. <i>Experimental Brain Research</i> , <b>2021</b> , 239, 2661-2678	2.3	0
8	Exercise can help rewire the brain: neuroplasticity and motor cortex function in physically active individuals <b>2011</b> , 26-28		
7	Does predictive cueing of presentation time modulate alpha power and facilitate visual working memory performance in younger and older adults?. <i>Brain and Cognition</i> , <b>2022</b> , 159, 105861	2.7	
6	Characterising the influence of cerebellum on the neuroplastic modulation of intracortical motor circuits <b>2020</b> , 15, e0236005		
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