John G Semmler

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7305377/publications.pdf

Version: 2024-02-01

94 papers	4,643 citations	109311 35 h-index	106340 65 g-index
109 all docs	109 docs citations	109 times ranked	3619 citing authors

#	Article	IF	Citations
1	Mechanisms that contribute to differences in motor performance between young and old adults. Journal of Electromyography and Kinesiology, 2003, 13, 1-12.	1.7	455
2	Training adaptations in the behavior of human motor units. Journal of Applied Physiology, 2006, 101, 1766-1775.	2.5	235
3	Motor Unit Synchronization and Neuromuscular Performance. Exercise and Sport Sciences Reviews, 2002, 30, 8-14.	3.0	185
4	Motor unit discharge and force tremor in skill- and strength-trained individuals. Experimental Brain Research, 1998, 119, 27-38.	1.5	182
5	Motor cortex plasticity induced by paired associative stimulation is enhanced in physically active individuals. Journal of Physiology, 2009, 587, 5831-5842.	2.9	156
6	Corticomotor plasticity and learning of a ballistic thumb training task are diminished in older adults. Journal of Applied Physiology, 2009, 107, 1874-1883.	2.5	152
7	Age-related differences in corticospinal control during functional isometric contractions in left and right hands. Journal of Applied Physiology, 2005, 99, 1483-1493.	2.5	144
8	Motor-Unit Activity Differs With Load Type During a Fatiguing Contraction. Journal of Neurophysiology, 2005, 93, 1381-1392.	1.8	136
9	A single bout of aerobic exercise promotes motor cortical neuroplasticity. Journal of Applied Physiology, 2013, 114, 1174-1182.	2.5	129
10	Neural adaptations to strength training: Moving beyond transcranial magnetic stimulation and reflex studies. Acta Physiologica, 2011, 202, 119-140.	3.8	128
11	Motor unit synchronisation is enhanced during slow lengthening contractions of a hand muscle. Journal of Physiology, 2002, 545, 681-695.	2.9	114
12	Long-term activity in upper- and lower-limb muscles of humans. Journal of Applied Physiology, 2001, 91, 2224-2232.	2.5	111
13	Motor-Unit Synchronization Is Not Responsible for Larger Motor-Unit Forces in Old Adults. Journal of Neurophysiology, 2000, 84, 358-366.	1.8	103
14	Corticomotor excitability and plasticity following complex visuomotor training in young and old adults. European Journal of Neuroscience, 2011, 34, 1847-1856.	2.6	99
15	Inter- and intra-subject variability of motor cortex plasticity following continuous theta-burst stimulation. Neuroscience, 2015, 304, 266-278.	2.3	93
16	Reduced motor cortex plasticity following inhibitory rTMS in older adults. Clinical Neurophysiology, 2010, 121, 441-447.	1.5	90
17	Motor-Unit Coherence and Its Relation With Synchrony Are Influenced by Training. Journal of Neurophysiology, 2004, 92, 3320-3331.	1.8	89
18	Eccentric exercise increases EMG amplitude and force fluctuations during submaximal contractions of elbow flexor muscles. Journal of Applied Physiology, 2007, 103, 979-989.	2.5	85

#	Article	IF	Citations
19	Motor Unit Synchronization Is Increased in Biceps Brachii After Exercise-Induced Damage to Elbow Flexor Muscles. Journal of Neurophysiology, 2008, 99, 1008-1019.	1.8	81
20	Gender Differences in the Fatigability of Human Skeletal Muscle. Journal of Neurophysiology, 1999, 82, 3590-3593.	1.8	78
21	Differential modulation of motor cortex excitability in BDNF Met allele carriers following experimentally induced and useâ€dependent plasticity. European Journal of Neuroscience, 2012, 36, 2640-2649.	2.6	75
22	Influence of handedness on motor unit discharge properties and force tremor. Experimental Brain Research, 1995, 104, 115-25.	1.5	74
23	Hemispheric differences in use-dependent corticomotor plasticity in young and old adults. Experimental Brain Research, 2010, 205, 57-68.	1.5	73
24	Priming theta burst stimulation enhances motor cortex plasticity in young but not old adults. Brain Stimulation, 2017, 10, 298-304.	1.6	69
25	Motor-Unit Coherence During Isometric Contractions Is Greater in a Hand Muscle of Older Adults. Journal of Neurophysiology, 2003, 90, 1346-1349.	1.8	66
26	Low-frequency common modulation of soleus motor unit discharge is enhanced during postural control in humans. Experimental Brain Research, 2006, 175, 584-595.	1.5	65
27	Relationship between motor unit short-term synchronization and common drive in human first dorsal interosseous muscle. Brain Research, 1997, 767, 314-320.	2.2	62
28	Limb immobilization alters muscle activation patterns during a fatiguing isometric contraction. Muscle and Nerve, 2000, 23, 1381-1392.	2.2	61
29	Hemispheric Differences in Motor Cortex Excitability During a Simple Index Finger Abduction Task in Humans. Journal of Neurophysiology, 1998, 79, 1246-1254.	1.8	57
30	Age-related Differences in Short- and Long-interval Intracortical Inhibition in a Human Hand Muscle. Brain Stimulation, 2014, 7, 665-672.	1.6	51
31	A comparison of cross-correlation and surface EMG techniques used to quantify motor unit synchronization in humans. Journal of Neuroscience Methods, 1999, 90, 47-55.	2.5	43
32	Low-frequency fatigue and neuromuscular performance after exercise-induced damage to elbow flexor muscles. Journal of Applied Physiology, 2008, 105, 1146-1155.	2.5	43
33	Investigating TMSâ€“EEG Indices of Long-Interval Intracortical Inhibition at Different Interstimulus Intervals. Brain Stimulation, 2017, 10, 65-74.	1.6	41
34	Age-related changes in corticospinal excitability and intracortical inhibition after upper extremity motor learning: a systematic review and meta-analysis. Neurobiology of Aging, 2017, 55, 61-71.	3.1	39
35	Ageâ€related changes in late Iâ€waves influence motor cortex plasticity induction in older adults. Journal of Physiology, 2018, 596, 2597-2609.	2.9	37
36	Eccentric Muscle Damage Has Variable Effects on Motor Unit Recruitment Thresholds and Discharge Patterns in Elbow Flexor Muscles. Journal of Neurophysiology, 2009, 102, 413-423.	1.8	35

#	Article	IF	Citations
37	Adaptations in biceps brachii motor unit activity after repeated bouts of eccentric exercise in elbow flexor muscles. Journal of Neurophysiology, 2011, 105, 1225-1235.	1.8	35
38	Probing changes in corticospinal excitability following theta burst stimulation of the human primary motor cortex. Clinical Neurophysiology, 2016, 127, 740-747.	1.5	34
39	Eccentric muscle damage increases intermuscular coherence during a fatiguing isometric contraction. Acta Physiologica, 2013, 208, 362-375.	3.8	31
40	A comparison of two methods for estimating 50% of the maximal motor evoked potential. Clinical Neurophysiology, 2015, 126, 2337-2341.	1.5	31
41	Increased intracortical inhibition in elderly adults with anteriorâ€“posterior current flow: A TMS study. Clinical Neurophysiology, 2016, 127, 635-640.	1.5	31
42	Acute Exercise at Different Intensities Influences Corticomotor Excitability and Performance of a Ballistic Thumb Training Task. Neuroscience, 2019, 412, 29-39.	2.3	30
43	Age-related Differences in Pre- and Post-synaptic Motor Cortex Inhibition are Task Dependent. Brain Stimulation, 2015, 8, 926-936.	1.6	29
44	Motor unit synchronization measured by cross-correlation is not influenced by short-term strength training of a hand muscle. Experimental Brain Research, 2006, 175, 745-753.	1.5	28
45	Cortical inhibition assessed using paired-pulse TMS-EEG is increased in older adults. Brain Stimulation, 2018, 11, 545-557.	1.6	28
46	Supplementary motor areaâ€”primary motor cortex facilitation in younger but not older adults. Neurobiology of Aging, 2018, 64, 85-91.	3.1	28
47	Effects of hyperglycemia on cortical response to esophageal distension in normal subjects. Digestive Diseases and Sciences, 1999, 44, 279-285.	2.3	27
48	Diminished task-related adjustments of common inputs to hand muscle motor neurons in older adults. Experimental Brain Research, 2006, 172, 507-518.	1.5	27
49	Motor cortex plasticity induced by theta burst stimulation is impaired in patients with obstructive sleep apnoea. European Journal of Neuroscience, 2013, 37, 1844-1852.	2.6	26
50	Motor unit activity after eccentric exercise and muscle damage in humans. Acta Physiologica, 2014, 210, 754-767.	3.8	26
51	Compound group I excitatory input is differentially distributed to motoneurones of the human tibialis anterior. Neuroscience Letters, 1994, 178, 206-210.	2.1	25
52	Age-related changes in late synaptic inputs to corticospinal neurons and their functional significance: A paired-pulse TMS study. Brain Stimulation, 2020, 13, 239-246.	1.6	25
53	Modulation of short- and long-interval intracortical inhibition with increasing motor evoked potential amplitude in a human hand muscle. Clinical Neurophysiology, 2014, 125, 1440-1450.	1.5	24
54	Modulating motor cortical neuroplasticity with priming paired associative stimulation in young and old adults. Clinical Neurophysiology, 2017, 128, 763-769.	1.5	24

#	Article	IF	Citations
55	Preferential Activation of Unique Motor Cortical Networks With Transcranial Magnetic Stimulation: A Review of the Physiological, Functional, and Clinical Evidence. Neuromodulation, 2021, 24, 813-828.	0.8	23
56	Conventional or threshold-hunting TMS? A tale of two SICIs. Brain Stimulation, 2018, 11, 1296-1305.	1.6	22
57	Reduced short-interval intracortical inhibition after eccentric muscle damage in human elbow flexor muscles. Journal of Applied Physiology, 2012, 113, 929-936.	2.5	21
58	Impaired neuromuscular function during isometric, shortening, and lengthening contractions after exercise-induced damage to elbow flexor muscles. Journal of Applied Physiology, 2008, 105, 502-509.	2.5	20
59	Short-term immobilization influences use-dependent cortical plasticity and fine motor performance. Neuroscience, 2016, 330, 247-256.	2.3	20
60	Intermittent single-joint fatiguing exercise reduces TMS-EEG measures of cortical inhibition. Journal of Neurophysiology, 2019, 121, 471-479.	1.8	20
61	Crossed motor innervation of the base of human tongue. Journal of Neurophysiology, 2015, 113, 3499-3510.	1.8	19
62	Intracortical Inhibition Assessed with Paired-Pulse Transcranial Magnetic Stimulation is Modulated during Shortening and Lengthening Contractions in Young and Old Adults. Brain Stimulation, 2016, 9, 258-267.	1.6	16
63	Transcranial Magnetic Stimulation-Electroencephalography Measures of Cortical Neuroplasticity Are Altered after Mild Traumatic Brain Injury. Journal of Neurotrauma, 2019, 36, 2774-2784.	3.4	16
64	FUNCTIONAL OUTCOMES AFTER DISTAL BICEPS BRACHII REPAIR: A CASE SERIES. International Journal of Sports Physical Therapy, 2016, 11, 962-970.	1.3	14
65	Task-related changes in intracortical inhibition assessed with paired- and triple-pulse transcranial magnetic stimulation. Journal of Neurophysiology, 2015, 113, 1470-1479.	1.8	13
66	Mechanisms of the deep, slow-wave, sleep-related increase of upper airway muscle tone in healthy humans. Journal of Applied Physiology, 2017, 122, 1304-1312.	2.5	13
67	Loadâ€dependent modulation of alpha oscillations during working memory encoding and retention in young and older adults. Psychophysiology, 2021, 58, e13719.	2.4	13
68	The Medial Sural Artery as Recipient Vessel and the Impact on the Medial Gastrocnemius. Annals of Plastic Surgery, 2011, 67, 382-386.	0.9	12
69	Modulation of Motor Cortex Plasticity by Repetitive Paired-Pulse TMS at Late I-Wave Intervals Is Influenced by Intracortical Excitability. Brain Sciences, 2021, 11, 121.	2.3	11
70	Age-related changes in motor cortex plasticity assessed with non-invasive brain stimulation: an update and new perspectives. Experimental Brain Research, 2021, 239, 2661-2678.	1.5	11
71	Motor unit activity in upper airway muscles genioglossus and tensor palatini. Respiratory Physiology and Neurobiology, 2013, 188, 362-369.	1.6	10
72	Increasing motor cortex plasticity with spaced paired associative stimulation at different intervals in older adults. European Journal of Neuroscience, 2017, 46, 2674-2683.	2.6	10

#	Article	IF	Citations
73	Primary motor cortex function and motor skill acquisition: insights from threshold-hunting TMS. Experimental Brain Research, 2020, 238, 1745-1757.	1.5	10
74	Interactions Between Cerebellum and the Intracortical Excitatory Circuits of Motor Cortex: a Mini-Review. Cerebellum, 2022, 21, 159-166.	2.5	10
75	Older Adults Differentially Modulate Transcranial Magnetic Stimulationâ€“Electroencephalography Measures of Cortical Inhibition during Maximal Single-joint Exercise. Neuroscience, 2020, 425, 181-193.	2.3	9
76	TMS coil orientation and muscle activation influence lower limb intracortical excitability. Brain Research, 2020, 1746, 147027.	2.2	9
77	The effect of hyperglycaemia on cerebral potentials evoked by rapid rectal distension in healthy humans. European Journal of Clinical Investigation, 1999, 29, 512-518.	3.4	7
78	Common drive to the upper airway muscle genioglossus during inspiratory loading. Journal of Neurophysiology, 2015, 114, 2883-2892.	1.8	7
79	Visuomotor task acquisition is reduced by priming paired associative stimulation in older adults. Neurobiology of Aging, 2019, 81, 67-76.	3.1	7
80	Characterising the influence of cerebellum on the neuroplastic modulation of intracortical motor circuits. PLoS ONE, 2020, 15, e0236005.	2.5	7
81	Investigating the influence of paired-associative stimulation on multi-session skill acquisition and retention in older adults. Clinical Neurophysiology, 2020, 131, 1497-1507.	1.5	7
82	Threshold Tracked Short-Interval Intracortical Inhibition More Closely Predicts the Cortical Response to Transcranial Magnetic Stimulation. Neuromodulation, 2022, 25, 614-623.	0.8	5
83	Single joint fatiguing exercise decreases long but not shortâ€“interval intracortical inhibition in older adults. Experimental Brain Research, 2021, 239, 47-58.	1.5	4
84	Cerebellar transcranial direct current stimulation disrupts neuroplasticity of intracortical motor circuits. PLoS ONE, 2022, 17, e0271311.	2.5	4
85	The Role of Alpha Power in the Suppression of Anticipated Distractors During Verbal Working Memory. Brain Topography, 2021, 34, 102-109.	1.8	3
86	Motor cortex plasticity and visuomotor skill learning in upper and lower limbs of endurance-trained cyclists. European Journal of Applied Physiology, 2022, 122, 169-184.	2.5	2
87	Does predictive cueing of presentation time modulate alpha power and facilitate visual working memory performance in younger and older adults?. Brain and Cognition, 2022, 159, 105861.	1.8	2
88	Exercise, effort, and limb position sense. Journal of Applied Physiology, 2006, 100, 1099-1100.	2.5	1
89	Boosting brain plasticity in older adults with non-invasive brain co-stimulation. Clinical Neurophysiology, 2021, 132, 1334-1335.	1.5	1
90	Submaximal isometric fatiguing exercise of the elbow flexors has no age-related effect on GABAB mediated inhibition. Journal of Applied Physiology, 2021, , .	2.5	1

#	Article	IF	Citations
91	Modulation of intracortical inhibition during shortening and lengthening contractions of a hand muscle in young and old adults. Brain Stimulation, 2015, 8, 344.	1.6	0
92	Reproducibility and predictability of neuroplastic responses induced by continuous theta-burst stimulation. Brain Stimulation, 2015, 8, 364-365.	1.6	0
93	TEMPORARY REMOVAL: Priming theta burst stimulation enhances motor cortex plasticity in young but not old adults. Brain Stimulation, 2016, , .	1.6	0
94	Exercise can help rewire the brain: neuroplasticity and motor cortex function in physically active individuals. , 2011, , 26-28.		0