Carolynn Patten

List of Publications by Year
in descending order

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90 papers	6,170 citations	70961 41 h-index	71532 76 g-index
98 all docs	98 docs citations	98 times ranked	6047 citing authors

#	Article	IF	Citations
1	RELIABILITY OF GAIT PERFORMANCE TESTS IN MEN AND WOMEN WITH HEMIPARESIS AFTER STROKE. Journal of Rehabilitation Medicine, 2005, 37, 75-82.	0.8	919
2	Gait differences between individuals with post-stroke hemiparesis and non-disabled controls at matched speeds. Gait and Posture, 2005, 22, 51-56.	0.6	569
3	Motor unit discharge behavior in older adults during maximal-effort contractions. Journal of Applied Physiology, 1995, 79, 1908-1913.	1.2	269
4	Weakness and strength training in persons with poststroke hemiplegia: Rationale, method, and efficacy. Journal of Rehabilitation Research and Development, 2004, 41, 293.	1.6	265
5	Pilot study of Lokomat versus manual-assisted treadmill training for locomotor recovery post-stroke. Journal of NeuroEngineering and Rehabilitation, 2009, 6, 18.	2.4	255
6	Reproducibility and Minimal Detectable Change of Three-Dimensional Kinematic Analysis of Reaching Tasks in People With Hemiparesis After Stroke. Physical Therapy, 2008, 88, 652-663.	1.1	230
7	Capacity to increase walking speed is limited by impaired hip and ankle power generation in lower functioning persons post-stroke. Gait and Posture, 2009, 29, 129-137.	0.6	180
8	Longitudinal decline of lower extremity muscle power in healthy and mobility-limited older adults: influence of muscle mass, strength, composition, neuromuscular activation and single fiber contractile properties. European Journal of Applied Physiology, 2014, 114, 29-39.	1.2	173
9	Adaptations in maximal motor unit discharge rate to strength training in young and older adults. Muscle and Nerve, 2001, 24, 542-550.	1.0	147
10	Concurrent neuromechanical and functional gains following upper-extremity power training post-stroke. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 1.	2.4	138
11	Adaptations in motor unit discharge activity with force control training in young and older human adults. European Journal of Applied Physiology, 2000, 83, 128-143.	1.2	123
12	T 2Mapping of Muscle. Seminars in Musculoskeletal Radiology, 2003, 7, 297-307.	0.4	123
13	Strengthening to Promote Functional Recovery Poststroke: An Evidence-Based Review. Topics in Stroke Rehabilitation, 2008, 15, 177-199.	1.0	115
14	Gait deviations associated with post-stroke hemiparesis: improvement during treadmill walking using weight support, speed, support stiffness, and handrail hold. Gait and Posture, 2005, 22, 57-62.	0.6	113
15	Repetitive Transcranial Magnetic Stimulation of Motor Cortex after Stroke. American Journal of Physical Medicine and Rehabilitation, 2012, 91, 254-270.	0.7	113
16	An Accelerometry-Based System for the Assessment of Balance and Postural Sway. Gerontology, 1998, 44, 40-45.	1.4	107
17	Comparative Effects of Light or Heavy Resistance Power Training for Improving Lower Extremity Power and Physical Performance in Mobility-Limited Older Adults. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2015, 70, 374-380.	1.7	106
18	Neuromuscular determinants of maximum walking speed in well-functioning older adults. Experimental Gerontology, 2013, 48, 358-363.	1.2	98

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19	Muscle power failure in mobility-limited older adults: preserved single fiber function despite lower whole muscle size, quality and rate of neuromuscular activation. European Journal of Applied Physiology, 2012, 112, 2289-2301.	1.2	88
20	Interlimb Influences on Paretic Leg Function in Poststroke Hemiparesis. Journal of Neurophysiology, 2005, 93, 2460-2473.	0.9	77
21	Muscle Performance and Physical Function Are Associated With Voluntary Rate of Neuromuscular Activation in Older Adults. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2011, 66A, 115-121.	1.7	77
22	Impaired Voluntary Neuromuscular Activation Limits Muscle Power in Mobility-Limited Older Adults. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2010, 65A, 495-502.	1.7	74
23	Muscle Synergies Facilitate Computational Prediction of Subject-Specific Walking Motions. Frontiers in Bioengineering and Biotechnology, 2016, 4, 77.	2.0	73
24	The specific contributions of force and velocity to muscle power in older adults. Experimental Gerontology, 2012, 47, 608-613.	1.2	72
25	Force control deficits in chronic stroke: grip formation and release phases. Experimental Brain Research, 2011, 211, 1-15.	0.7	71
26	Longitudinal Decline of Neuromuscular Activation and Power in Healthy Older Adults. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2013, 68, 1419-1425.	1.7	71
27	Effects of velocity on maximal torque production in poststroke hemiparesis. Muscle and Nerve, 2004, 30, 732-742.	1.0	67
28	Maximal motor unit discharge rates in the quadriceps muscles of older weight lifters. Medicine and Science in Sports and Exercise, 1999, 31, 1638.	0.2	66
29	Joint moment work during the stance-to-swing transition in hemiparetic subjects. Journal of Biomechanics, 2008, 41, 877-883.	0.9	61
30	A physiology based inverse dynamic analysis of human gait: potential and perspectives. Computer Methods in Biomechanics and Biomedical Engineering, 2009, 12, 563-574.	0.9	61
31	Combined Functional Task Practice and Dynamic High Intensity Resistance Training Promotes Recovery of Upper-extremity Motor Function in Post-stroke Hemiparesis. Journal of Neurologic Physical Therapy, 2006, 30, 99-115.	0.7	60
32	Does Unilateral Pedaling Activate a Rhythmic Locomotor Pattern in the Nonpedaling Leg in Post-Stroke Hemiparesis?. Journal of Neurophysiology, 2006, 95, 3154-3163.	0.9	59
33	Repetitive Transcranial Magnetic Stimulation (rTMS) Therapy in Parkinson Disease: A Metaâ€Analysis. PM and R, 2016, 8, 356-366.	0.9	58
34	Lower extremity EMG-driven modeling of walking with automated adjustment of musculoskeletal geometry. PLoS ONE, 2017, 12, e0179698.	1.1	57
35	Activation impairment alters muscle torqueâ€“velocity in the knee extensors of persons with post-stroke hemiparesis. Clinical Neurophysiology, 2006, 117, 2328-2337.	0.7	56
36	Treadmill training with harness support: Selection of parameters for individuals with poststroke hemiparesis. Journal of Rehabilitation Research and Development, 2006, 43, 485.	1.6	55

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37	Eccentric Versus Concentric Resistance Training to Enhance Neuromuscular Activation and Walking Speed Following Stroke. Neurorehabilitation and Neural Repair, 2013, 27, 335-344.	1.4	54
38	Effects of Aerobic Fitness on Aging-Related Changes of Interhemispheric Inhibition and Motor Performance. Frontiers in Aging Neuroscience, 2013, 5, 66.	1.7	46
39	Does Inhibitory Repetitive Transcranial Magnetic Stimulation Augment Functional Task Practice to Improve Arm Recovery in Chronic Stroke?. Stroke Research and Treatment, 2014, 2014, 1-10.	0.5	46
40	Reliability of elbow stretch reflex assessment in chronic post-stroke hemiparesis. Clinical Neurophysiology, 2005, 116, 1870-1878.	0.7	45
41	Reliability of concentric and eccentric torque during isokinetic knee extension in post-stroke hemiparesis. Clinical Biomechanics, 2006, 21, 395-404.	0.5	44
42	Methodological Choices in Muscle Synergy Analysis Impact Differentiation of Physiological Characteristics Following Stroke. Frontiers in Computational Neuroscience, 2017, 11, 78.	1.2	43
43	Reliability and responsiveness of elbow trajectory tracking. Journal of Rehabilitation Research and Development, 2003, 40, 487.	1.6	43
44	Impaired Limb Shortening following Stroke: Whatâ€™s in a Name?. PLoS ONE, 2014, 9, e110140.	1.1	41
45	Differential Effects of Power Training Versus Functional Task Practice on Compensation and Restoration of Arm Function After Stroke. Neurorehabilitation and Neural Repair, 2012, 26, 842-854.	1.4	38
46	Bimanual force control strategies in chronic stroke: Finger extension versus power grip. Neuropsychologia, 2012, 50, 2536-2545.	0.7	38
47	Electromyography Exposes Heterogeneity in Muscle Co-Contraction following Stroke. Frontiers in Neurology, 2017, 8, 699.	1.1	33
48	Visual feedback alters force control and functional activity in the visuomotor network after stroke. NeuroImage: Clinical, 2018, 17, 505-517.	1.4	33
49	Upper-extremity H-reflex measurement post-stroke: Reliability and inter-limb differences. Clinical Neurophysiology, 2012, 123, 1606-1615.	0.7	29
50	Head and Body Center of Gravity Control Strategies: Adaptations Following Vestibular Rehabilitation. Acta Oto-Laryngologica, 2003, 123, 32-40.	0.3	26
51	Reliability of Dynamic Muscle Performance in the Hemiparetic Upper Limb. Journal of Neurologic Physical Therapy, 2005, 29, 9-17.	0.7	25
52	Can Measured Synergy Excitations Accurately Construct Unmeasured Muscle Excitations?. Journal of Biomechanical Engineering, 2018, 140, .	0.6	23
53	Gait asymmetry pattern following stroke determines acute response to locomotor task. Gait and Posture, 2020, 77, 300-307.	0.6	21
54	A majority rule approach for region-of-interest-guided streamline fiber tractography. Brain Imaging and Behavior, 2016, 10, 1137-1147.	1.1	20

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55	How Well Do Commonly Used Co-contraction Indices Approximate Lower Limb Joint Stiffness Trends During Gait for Individuals Post-stroke?. Frontiers in Bioengineering and Biotechnology, 2020, 8, 588908.	2.0	20
56	Aging, Aerobic Activity and Interhemispheric Communication. Brain Sciences, 2012, 2, 634-648.	1.1	19
57	Does quadriceps neuromuscular activation capability explain walking speed in older men and women?. Experimental Gerontology, 2014, 55, 49-53.	1.2	19
58	Evaluation of Synergy Extrapolation for Predicting Unmeasured Muscle Excitations from Measured Muscle Synergies. Frontiers in Computational Neuroscience, 2020, 14, 588943.	1.2	19
59	Unexpected Recovery After Robotic Locomotor Training at Physiologic Stepping Speed: A Single-Case Design. Archives of Physical Medicine and Rehabilitation, 2012, 93, 1476-1484.	0.5	16
60	Free-water and free-water corrected fractional anisotropy in primary and premotor corticospinal tracts in chronic stroke. Human Brain Mapping, 2017, 38, 4546-4562.	1.9	16
61	Microstructural properties of premotor pathways predict visuomotor performance in chronic stroke. Human Brain Mapping, 2016, 37, 2039-2054.	1.9	15
62	Neck Dissection: Morbidity and Rehabilitation. Cancer Treatment and Research, 1990, 52, 133-147.	0.2	15
63	Temporal structure of variability decreases in upper extremity movements post stroke. Clinical Biomechanics, 2013, 28, 134-139.	0.5	14
64	Short Intracortical Inhibition During Voluntary Movement Reveals Persistent Impairment Post-stroke. Frontiers in Neurology, 2018, 9, 1105.	1.1	14
65	Reeducating Muscle Force Control in Older Persons through Strength Training. Topics in Geriatric Rehabilitation, 2000, 15, 47-59.	0.2	14
66	Musculoskeletal Model Personalization Affects Metabolic Cost Estimates for Walking. Frontiers in Bioengineering and Biotechnology, 2020, 8, 588925.	2.0	13
67	Absolute Reliability of Gait Parameters Acquired With Markerless Motion Capture in Living Domains. Frontiers in Human Neuroscience, 0, 16, .	1.0	10
68	Speed and Rhythm Affect Temporal Structure of Variability in Reaching Poststroke: A Pilot Study. Journal of Motor Behavior, 2017, 49, 35-45.	0.5	9
69	Pelvic excursion during walking post-stroke: A novel classification system. Gait and Posture, 2018, 62, 395-404.	0.6	9
70	Altered muscle activation patterns (AMAP): an analytical tool to compare muscle activity patterns of hemiparetic gait with a normative profile. Journal of NeuroEngineering and Rehabilitation, 2019, 16, 21.	2.4	9
71	Feasibility of Markerless Motion Capture for Three-Dimensional Gait Assessment in Community Settings. Frontiers in Human Neuroscience, 0, 16, .	1.0	8
72	Slower than normal walking speeds involve a pattern shift in joint and temporal coordination contributions. Experimental Brain Research, 2019, 237, 2973-2982.	0.7	6

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73	The effect of time since stroke, gender, age, and lesion size on thalamus volume in chronic stroke: a pilot study. Scientific Reports, 2020, 10, 20488.	1.6	5
74	Evidence for shared neural information between muscle synergies and corticospinal efficacy. Scientific Reports, 2022, 12, .	1.6	5
75	External biomechanical constraints impair maximal voluntary grip force stability post-stroke. Clinical Biomechanics, 2018, 57, 26-34.	0.5	4
76	Lower extremity long-latency reflexes differentiate walking function after stroke. Experimental Brain Research, 2019, 237, 2595-2605.	0.7	4
77	Effect of Wearable Robotic Leg Orthosis on the Weight Bearing Symmetry during Sit-to-Stand in Individuals Post-stroke. Biosystems and Biorobotics, 2013, , 103-107.	0.2	4
78	So-Called â€˜Foot-Dropâ€™ Post-stroke: Not a Dorsiflexor Impairment. Biosystems and Biorobotics, 2013, , 691-695.	0.2	3
79	Effects of â€˜Intention-Basedâ€™ Robotic Exoskeleton on Muscle Activation Patterns during Overground Walking. Biosystems and Biorobotics, 2013, , 109-113.	0.2	2
80	Invited Commentary on â€œAllowing Intralimb Kinematic Variability During Locomotor Training Poststroke Improves Kinematic Consistency: A Subgroup Analysis From a Randomized Clinical Trialâ€• Physical Therapy, 2009, 89, e7-e8.	1.1	1
81	Robotics for Stroke Recovery. , 2012, , 255-290.		1
82	Its Not About the Muscle. Journal of Neurologic Physical Therapy, 2006, 30, 118-119.	0.7	0
83	Evaluation of a Novel Statistical Method for EMG-to-Moment Estimation During Gait. , 2012, , .		0
84	Poster 48 Enhancing Arm Recovery Post-Stroke: Use of Contralesional Inhibitory rTMS to Augment Functional Task Practice. Archives of Physical Medicine and Rehabilitation, 2013, 94, e28.	0.5	0
85	Upper-extremity spinal reflex inhibition is reproducible and strongly related to grip force poststroke. International Journal of Neuroscience, 2015, 125, 441-448.	0.8	0
86	Priming the Ipsilesional Motor Cortex with Excitatory rTMS to Augment Functional Task Practice Post-Stroke. Archives of Physical Medicine and Rehabilitation, 2016, 97, e93.	0.5	0
87	Does Force Or Velocity Contribute More To Maximal Muscle Power In Older Adults?. Medicine and Science in Sports and Exercise, 2007, 39, S262.	0.2	0
88	Slow rate of neuromuscular activation contributes to impaired movement acceleration and peak power in mobilityâ€limited older adults. FASEB Journal, 2008, 22, 1163.9.	0.2	0
89	Comparative effects of high velocity and low velocity power training on muscle performance, muscle mass and functional ability in mobilityâ€limited elders: a randomized trial. FASEB Journal, 2013, 27, 1150.2.	0.2	0
90	Abstract TMP30: SICI During Voluntary Movement Reveals Persistent Impairment in Cortical Stroke. Stroke, 2016, 47, .	1.0	0