

Richard Carson

List of Publications by Year in descending order

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140
papers

6,699
citations

47006

47
h-index

74163

75
g-index

143
all docs

143
docs citations

143
times ranked

4821
citing authors

#	ARTICLE	IF	CITATIONS
1	Neural pathways mediating bilateral interactions between the upper limbs. <i>Brain Research Reviews</i> , 2005, 49, 641-662.	9.0	320
2	Expressions of asymmetries and anchoring in bimanual coordination. <i>Human Movement Science</i> , 1994, 13, 3-28.	1.4	215
3	Reliability of the input-output properties of the cortico-spinal pathway obtained from transcranial magnetic and electrical stimulation. <i>Journal of Neuroscience Methods</i> , 2001, 112, 193-202.	2.5	200
4	The sites of neural adaptation induced by resistance training in humans. <i>Journal of Physiology</i> , 2002, 544, 641-652.	2.9	185
5	Neural Adaptations to Resistance Training. <i>Sports Medicine</i> , 2001, 31, 829-840.	6.5	174
6	Consensus for experimental design in electromyography (CEDE) project: Amplitude normalization matrix. <i>Journal of Electromyography and Kinesiology</i> , 2020, 53, 102438.	1.7	170
7	Central and peripheral mediation of human force sensation following eccentric or concentric contractions. <i>Journal of Physiology</i> , 2002, 539, 913-925.	2.9	156
8	Neural pathways mediating cross education of motor function. <i>Frontiers in Human Neuroscience</i> , 2013, 7, 397.	2.0	143
9	Phase Transitions and Critical Fluctuations in Rhythmic Coordination of Ipsilateral Hand and Foot. <i>Journal of Motor Behavior</i> , 1995, 27, 211-224.	0.9	134
10	Modulation of human corticospinal excitability by paired associative stimulation. <i>Frontiers in Human Neuroscience</i> , 2013, 7, 823.	2.0	132
11	Get a grip: individual variations in grip strength are a marker of brain health. <i>Neurobiology of Aging</i> , 2018, 71, 189-222.	3.1	132
12	Asymmetries in the Regulation of Visually Guided Aiming. <i>Journal of Motor Behavior</i> , 1993, 25, 21-32.	0.9	131
13	Excitability changes in human forearm corticospinal projections and spinal reflex pathways during rhythmic voluntary movement of the opposite limb. <i>Journal of Physiology</i> , 2004, 560, 929-940.	2.9	130
14	The Consequences of Resistance Training for Movement Control in Older Adults. <i>Journals of Gerontology - Series A Biological Sciences and Medical Sciences</i> , 2004, 59, M730-M754.	3.6	128
15	Asymmetries in the preparation and control of manual aiming movements.. <i>Canadian Journal of Experimental Psychology</i> , 1993, 47, 570-589.	0.8	112
16	The contribution of vision to asymmetries in manual aiming. <i>Neuropsychologia</i> , 1990, 28, 1215-1220.	1.6	109
17	Interhemispheric switching mediates perceptual rivalry. <i>Current Biology</i> , 2000, 10, 383-392.	3.9	108
18	Manual Asymmetries in the Preparation and Control of Goal-Directed Movements. <i>Brain and Cognition</i> , 2001, 45, 129-140.	1.8	108

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19	Haptic information stabilizes and destabilizes coordination dynamics. Proceedings of the Royal Society B: Biological Sciences, 2001, 268, 1207-1213.	2.6	107
20	Consensus for experimental design in electromyography (CEDE) project: Electrode selection matrix. Journal of Electromyography and Kinesiology, 2019, 48, 128-144.	1.7	95
21	Neuromuscular-skeletal constraints upon the dynamics of unimanual and bimanual coordination. Experimental Brain Research, 2000, 131, 196-214.	1.5	93
22	Governing coordination: behavioural principles and neural correlates. Experimental Brain Research, 2004, 154, 267-274.	1.5	93
23	The Dynamics of Bimanual Circle Drawing. Quarterly Journal of Experimental Psychology Section A: Human Experimental Psychology, 1997, 50, 664-683.	2.3	92
24	Phasic modulation of corticomotor excitability during passive movement of the upper limb: effects of movement frequency and muscle specificity. Brain Research, 2001, 900, 282-294.	2.2	91
25	Interaction of directional, neuromuscular and egocentric constraints on the stability of preferred bimanual coordination patterns. Human Movement Science, 2003, 22, 339-363.	1.4	88
26	Age-related differences in rapid muscle activation after rate of force development training of the elbow flexors. Experimental Brain Research, 2005, 162, 122-132.	1.5	87
27	The effect of obstacle position on reach-to-grasp movements. Experimental Brain Research, 2001, 137, 497-501.	1.5	86
28	The Preparation of Aiming Movements. Brain and Cognition, 1995, 28, 133-154.	1.8	82
29	The contribution of visual feedback to visuomotor adaptation: How much and when?. Brain Research, 2008, 1197, 123-134.	2.2	80
30	Training of Reaching in Stroke Survivors With Severe and Chronic Upper Limb Paresis Using a Novel Nonrobotic Device. Stroke, 2008, 39, 1800-1807.	2.0	80
31	Neuromuscular-skeletal constraints upon the dynamics of perception-action coupling. Experimental Brain Research, 1996, 110, 99-110.	1.5	75
32	Manual asymmetries: Old problems and new directions. Human Movement Science, 1993, 12, 479-506.	1.4	70
33	Neuromuscular electrical stimulation promoted plasticity of the human brain. Journal of Physiology, 2021, 599, 2375-2399.	2.9	67
34	The dynamics of isometric bimanual coordination. Experimental Brain Research, 1990, 105, 465-76.	1.5	65
35	Resistance training enhances the stability of sensorimotor coordination. Proceedings of the Royal Society B: Biological Sciences, 2001, 268, 221-227.	2.6	65
36	Bimanual aiming and overt attention: one law for two hands. Experimental Brain Research, 2003, 153, 59-75.	1.5	65

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37	Characterizing Changes in the Excitability of Corticospinal Projections to Proximal Muscles of the Upper Limb. <i>Brain Stimulation</i> , 2013, 6, 760-768.	1.6	60
38	Duration-dependent effects of the BDNF Val66Met polymorphism on anodal tDCS induced motor cortex plasticity in older adults: a group and individual perspective. <i>Frontiers in Aging Neuroscience</i> , 2015, 7, 107.	3.4	60
39	Real-time error detection but not error correction drives automatic visuomotor adaptation. <i>Experimental Brain Research</i> , 2010, 201, 191-207.	1.5	59
40	Dual adaptation to two opposing visuomotor rotations when each is associated with different regions of workspace. <i>Experimental Brain Research</i> , 2007, 179, 155-165.	1.5	57
41	The Influence of Target Perturbation on Manual Aiming Asymmetries in Right-Handers. <i>Cortex</i> , 1995, 31, 685-697.	2.4	53
42	The influence of joint position on the dynamics of perception-action coupling. <i>Experimental Brain Research</i> , 1998, 121, 103-114.	1.5	53
43	Spontaneous and Intentional Pattern Switching in a Multisegmental Bimanual Coordination Task. <i>Motor Control</i> , 1999, 3, 372-393.	0.6	53
44	Transcallosal connectivity of the human cortical motor network. <i>Brain Structure and Function</i> , 2017, 222, 1243-1252.	2.3	53
45	Interhemispheric inhibition sculpts the output of neural circuits by co-opting the two cerebral hemispheres. <i>Journal of Physiology</i> , 2020, 598, 4781-4802.	2.9	52
46	A new technique for the selective recording of extensor carpi radialis longus and brevis EMG. <i>Journal of Electromyography and Kinesiology</i> , 2000, 10, 249-253.	1.7	51
47	Asymmetries in the discrete and pseudocontinuous regulation of visually guided reaching. <i>Brain and Cognition</i> , 1992, 18, 169-191.	1.8	50
48	Electromyographic activity, H-reflex modulation and corticospinal input to forearm motoneurons during active and passive rhythmic movements. <i>Human Movement Science</i> , 1999, 18, 307-343.	1.4	50
49	Attention as a mediating variable in the dynamics of bimanual coordination. <i>Human Movement Science</i> , 1996, 15, 877-897.	1.4	48
50	Changes in muscle coordination with training. <i>Journal of Applied Physiology</i> , 2006, 101, 1506-1513.	2.5	47
51	Manual Asymmetries. <i>Journal of Motor Behavior</i> , 1989, 21, 38-47.	0.9	46
52	Changes in muscle recruitment patterns during skill acquisition. <i>Experimental Brain Research</i> , 2001, 138, 71-87.	1.5	46
53	Manual asymmetries in the reproduction of a 3-dimensional spatial location. <i>Neuropsychologia</i> , 1990, 28, 99-103.	1.6	43
54	Training-induced changes in the pattern of triceps to biceps activation during reaching tasks after chronic and severe stroke. <i>Experimental Brain Research</i> , 2009, 196, 483-496.	1.5	43

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55	Sensorimotor Learning: Neurocognitive Mechanisms and Individual Differences. Journal of NeuroEngineering and Rehabilitation, 2017, 14, 74.	4.6	42
56	The acquisition of movement skills: Practice enhances the dynamic stability of bimanual coordination. Human Movement Science, 2001, 20, 499-529.	1.4	41
57	Dual-task interference: Attentional and neurophysiological influences. Behavioural Brain Research, 2009, 205, 10-18.	2.2	41
58	Changes in posture alter the attentional demands of voluntary movement. Proceedings of the Royal Society B: Biological Sciences, 1999, 266, 853-857.	2.6	40
59	Bimanual coordination: constraints imposed by the relative timing of homologous muscle activation. Experimental Brain Research, 2004, 156, 27-38.	1.5	39
60	Structural and Functional Cortical Connectivity Mediating Cross Education of Motor Function. Journal of Neuroscience, 2017, 37, 2555-2564.	3.6	38
61	The contribution of inherent and incidental constraints to intentional switching between patterns of bimanual coordination. Human Movement Science, 1996, 15, 565-589.	1.4	37
62	Performance asymmetries and coupling dynamics in the acquisition of multifrequency bimanual coordination. Psychological Research, 1998, 61, 56-70.	1.7	33
63	Asymmetries in the spatial localization of transformed targets. Brain and Cognition, 1992, 20, 227-235.	1.8	32
64	Muscle Coordination During Rapid Force Production by Young and Older Adults. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2005, 60, 232-240.	3.6	32
65	The Dynamical Substructure of Bimanual Coordination. , 1994, , 319-337.		32
66	Neuromuscular Adaptation During Skill Acquisition on a Two Degree-of-Freedom Target-Acquisition Task: Isometric Torque Production. Journal of Neurophysiology, 2005, 94, 3046-3057.	1.8	31
67	The role of impulse variability in manual-aiming asymmetries. Psychological Research, 1993, 55, 291-298.	1.7	29
68	Corticospinal Responses to Motor Training Revealed by Transcranial Magnetic Stimulation. Exercise and Sport Sciences Reviews, 2001, 29, 54-59.	3.0	29
69	Visual feedback alters the variations in corticospinal excitability that arise from rhythmic movements of the opposite limb. Experimental Brain Research, 2005, 161, 325-334.	1.5	29
70	The interference effects of non-rotated versus counter-rotated trials in visuomotor adaptation. Experimental Brain Research, 2007, 180, 629-640.	1.5	29
71	Consensus for experimental design in electromyography (CEDE) project: Terminology matrix. Journal of Electromyography and Kinesiology, 2021, 59, 102565.	1.7	29
72	The preparation of reach to grasp movements in adults with Down syndrome. Human Movement Science, 2001, 20, 587-602.	1.4	28

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73	The control and learning of patterns of interlimb coordination: past and present issues in normal and disordered control. <i>Acta Psychologica</i> , 2002, 110, 129-137.	1.5	28
74	The Synergistic Organization of Muscle Recruitment Constrains Visuomotor Adaptation. <i>Journal of Neurophysiology</i> , 2009, 101, 2263-2269.	1.8	28
75	Vision Modulates Corticospinal Suppression in a Functionally Specific Manner during Movement of the Opposite Limb. <i>Journal of Neuroscience</i> , 2012, 32, 646-652.	3.6	28
76	The Preparation of Reach-To-Grasp Movements in Adults, Children, and Children with Movement Problems. <i>Quarterly Journal of Experimental Psychology Section A: Human Experimental Psychology</i> , 2005, 58, 1249-1263.	2.3	27
77	Neuromuscular Adaptation During Skill Acquisition on a Two Degree-of-Freedom Target-Acquisition Task: Dynamic Movement. <i>Journal of Neurophysiology</i> , 2005, 94, 3058-3068.	1.8	26
78	Training-induced modifications of corticospinal reactivity in severely affected stroke survivors. <i>Experimental Brain Research</i> , 2012, 221, 211-221.	1.5	24
79	The efficacy of colour cues in facilitating adaptation to opposing visuomotor rotations. <i>Experimental Brain Research</i> , 2008, 191, 143-155.	1.5	23
80	Spontaneous transitions in the coordination of a whole body task. <i>Human Movement Science</i> , 2001, 20, 549-562.	1.4	22
81	Anticipatory Planning Reveals Segmentation of Cortical Motor Output During Action Observation. <i>Cerebral Cortex</i> , 2015, 25, 192-201.	2.9	22
82	Consensus for experimental design in electromyography (CEDE) project: High-density surface electromyography matrix. <i>Journal of Electromyography and Kinesiology</i> , 2022, 64, 102656.	1.7	22
83	Manual Asymmetries. <i>Journal of Motor Behavior</i> , 1989, 21, 157-162.	0.9	21
84	Musculo-skeletal constraints on corticospinal input to upper limb motoneurons during coordinated movements. <i>Human Movement Science</i> , 2000, 19, 451-474.	1.4	21
85	Role of peripheral afference during acquisition of a complex coordination task. <i>Experimental Brain Research</i> , 2002, 144, 496-505.	1.5	21
86	The effect of simultaneous contractions of ipsilateral muscles on changes in corticospinal excitability induced by paired associative stimulation (PAS). <i>Neuroscience Letters</i> , 2008, 445, 7-11.	2.1	21
87	SMART Arm with Outcome-Triggered Electrical Stimulation: A Pilot Randomized Clinical Trial. <i>Topics in Stroke Rehabilitation</i> , 2013, 20, 289-298.	1.9	21
88	Visual target separation determines the extent of generalisation between opposing visuomotor rotations. <i>Experimental Brain Research</i> , 2011, 212, 213-224.	1.5	20
89	Tele-Supervised FES-Assisted Exercise for Hemiplegic Upper Limb. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2016, 24, 79-87.	4.9	20
90	Sarcopenia and Neuroscience: Learning to Communicate. <i>Journals of Gerontology - Series A Biological Sciences and Medical Sciences</i> , 2021, 76, 1882-1890.	3.6	20

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91	Bimanual coordination between isometric contractions and rhythmic movements: an asymmetric coupling. <i>Experimental Brain Research</i> , 1999, 129, 0417-0432.	1.5	19
92	Coordination and movement pathology: models of structure and function. <i>Acta Psychologica</i> , 2002, 110, 357-364.	1.5	19
93	Allelic variation at the A218C tryptophan hydroxylase polymorphism influences agitation and aggression in Alzheimer's disease. <i>Neuroscience Letters</i> , 2004, 363, 199-202.	2.1	18
94	The efficacy of SMART Arm training early after stroke for stroke survivors with severe upper limb disability: a protocol for a randomised controlled trial. <i>BMC Neurology</i> , 2013, 13, 71.	1.8	18
95	What Do TMS-Evoked Motor Potentials Tell Us About Motor Learning?. <i>Advances in Experimental Medicine and Biology</i> , 2016, 957, 143-157.	1.6	18
96	Transfer of resistance training to enhance rapid coordinated force production by older adults. <i>Experimental Brain Research</i> , 2004, 159, 225-238.	1.5	17
97	Artificial Gravity Reveals that Economy of Action Determines the Stability of Sensorimotor Coordination. <i>PLoS ONE</i> , 2009, 4, e5248.	2.5	17
98	Neural Adaptations Associated with Interlimb Transfer in a Ballistic Wrist Flexion Task. <i>Frontiers in Human Neuroscience</i> , 2016, 10, 204.	2.0	17
99	A Method for Calculating the Circularity of Movement Trajectories. <i>Journal of Motor Behavior</i> , 1997, 29, 72-84.	0.9	16
100	Postural Context Alters the Stability of Bimanual Coordination by Modulating the Crossed Excitability of Corticospinal Pathways. <i>Journal of Neurophysiology</i> , 2007, 97, 2016-2023.	1.8	16
101	Governing Coordination. Why do Muscles Matter?. <i>Understanding Complex Systems</i> , 2004, , 141-154.	0.6	16
102	Muscle-specific variations in use-dependent crossed-facilitation of corticospinal pathways mediated by transcranial direct current (DC) stimulation. <i>Neuroscience Letters</i> , 2008, 441, 153-157.	2.1	15
103	Paired associative transcranial alternating current stimulation increases the excitability of corticospinal projections in humans. <i>Journal of Physiology</i> , 2015, 593, 1649-1666.	2.9	15
104	The effect of altering a single component of a rehabilitation programme on the functional recovery of stroke patients: a systematic review and meta-analysis. <i>Clinical Rehabilitation</i> , 2014, 28, 107-117.	2.2	14
105	Neural compensation for compliant loads during rhythmic movement. <i>Experimental Brain Research</i> , 2002, 142, 409-417.	1.5	13
106	Effector dynamics of rhythmic wrist activity and its implications for (modeling) bimanual coordination. <i>Human Movement Science</i> , 2004, 23, 285-313.	1.4	13
107	Superimposed vibration confers no additional benefit compared with resistance training alone. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2010, 20, 827-833.	2.9	13
108	Primary motor cortex involvement in initial learning during visuomotor adaptation. <i>Neuropsychologia</i> , 2012, 50, 2515-2523.	1.6	13

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109	Repetitive reaching training combined with transcranial Random Noise Stimulation in stroke survivors with chronic and severe arm paresis is feasible: a pilot, triple-blind, randomised case series. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2017, 14, 46.	4.6	13
110	Unilateral movement preparation causes task-specific modulation of TMS responses in the passive, opposite limb. <i>Journal of Physiology</i> , 2018, 596, 3725-3738.	2.9	12
111	The Timing of Intralimb Coordination. <i>Journal of Motor Behavior</i> , 1999, 31, 113-118.	0.9	11
112	Moving into the New Millennium: Some Perspectives on the Brain in Action. <i>Brain and Cognition</i> , 2000, 42, 153-156.	1.8	11
113	SMART Arm Training With Outcome-Triggered Electrical Stimulation in Subacute Stroke Survivors With Severe Arm Disability: A Randomized Controlled Trial. <i>Neurorehabilitation and Neural Repair</i> , 2017, 31, 1005-1016.	2.9	11
114	The Effect of Volition on the Stability of Bimanual Coordination. <i>Journal of Motor Behavior</i> , 2003, 35, 309-319.	0.9	10
115	Neural mechanisms mediating cross education: With additional considerations for the ageing brain. <i>Neuroscience and Biobehavioral Reviews</i> , 2022, 132, 260-288.	6.1	10
116	Chapter 3 Visual Feedback Processing and Manual Asymmetries: An Evolving Perspective. <i>Advances in Psychology</i> , 1992, 85, 49-65.	0.1	9
117	Neuromuscular and biomechanical factors codetermine the solution to motor redundancy in rhythmic multijoint arm movement. <i>Experimental Brain Research</i> , 2008, 189, 421-434.	1.5	9
118	Have Standard Tests of Cognitive Function Been Misappropriated in the Study of Cognitive Enhancement?. <i>Frontiers in Human Neuroscience</i> , 2017, 11, 276.	2.0	9
119	Common input to different regions of biceps brachii long head. <i>Experimental Brain Research</i> , 2009, 193, 351-359.	1.5	8
120	Let your feet do the walking: constraints on the stability of bipedal coordination. <i>Experimental Brain Research</i> , 2001, 136, 407-412.	1.5	7
121	The Role of the Primary Motor Cortex During Skill Acquisition on a Two-Degrees-of-Freedom Movement Task. <i>Journal of Motor Behavior</i> , 2007, 39, 29-39.	0.9	7
122	Shaping the Effects of Associative Brain Stimulation by Contractions of the Opposite Limb. <i>Frontiers in Psychology</i> , 2018, 9, 2249.	2.1	7
123	Probing interhemispheric dorsal premotor-primary motor cortex interactions with threshold hunting transcranial magnetic stimulation. <i>Clinical Neurophysiology</i> , 2020, 131, 2551-2560.	1.5	7
124	Altered supraspinal motor networks in survivors of poliomyelitis: A cortico-muscular coherence study. <i>Clinical Neurophysiology</i> , 2021, 132, 106-113.	1.5	7
125	A Simple and Unified Approach to Human Voluntary Movements. <i>Journal of Motor Behavior</i> , 2004, 36, 378-380.	0.9	6
126	Interhemispheric inhibition of corticospinal projections to forearm muscles. <i>Clinical Neurophysiology</i> , 2015, 126, 1934-1940.	1.5	5

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127	A Bayesian approach to analysing cortico-cortical associative stimulation induced increases in the excitability of corticospinal projections in humans. <i>Experimental Brain Research</i> , 2021, 239, 21-30.	1.5	5
128	Neuromuscular-Skeletal Origins of Predominant Patterns of Coordination in a Rhythmic Two-Joint Arm Movement. <i>Journal of Motor Behavior</i> , 2006, 38, 7-14.	0.9	4
129	Neuromuscular-skeletal constraints on the acquisition of skill in a discrete torque production task. <i>Experimental Brain Research</i> , 2006, 175, 400-410.	1.5	4
130	Influence of predominant patterns of coordination on the exploitation of interaction torques in a two-joint rhythmic arm movement. <i>Experimental Brain Research</i> , 2006, 175, 439-452.	1.5	4
131	The multifinger force deficit: A protocol to detect incipient cognitive decline. <i>Journal of the American Geriatrics Society</i> , 2022, 70, 1605-1608.	2.6	3
132	A robotic apparatus that dictates torque fields around joints without affecting inherent joint dynamics. <i>Human Movement Science</i> , 2010, 29, 701-712.	1.4	2
133	Neural Enhancement for Independent Living. <i>Journal of Motor Behavior</i> , 2015, 47, 3-5.	0.9	2
134	Characteristics of corticospinal projections to the intrinsic hand muscles in skilled harpists. <i>Neuroscience Letters</i> , 2016, 612, 87-91.	2.1	2
135	What accounts for the association between grip strength and mental functioning in aging people?. <i>Maturitas</i> , 2020, 138, 80-81.	2.4	2
136	The Modulation of Excitability in Corticospinal Pathways during Rhythmic Movement. , 2004, , 155-185.		2
137	Deficits in rate of force production during multifinger tasks are associated with cognitive status.. <i>International Journal of Geriatric Psychiatry</i> , 2022, 37, .	2.7	2
138	Generalisation between opposing visuomotor rotations when each is associated with visual targets and movements of different amplitude. <i>Brain Research</i> , 2008, 1219, 46-58.	2.2	1
139	Interlimb transfer and generalisation of learning in the context of persistent failure to accomplish a visuomotor task. <i>Experimental Brain Research</i> , 2019, 237, 1077-1092.	1.5	1
140	Celebrating fifty years of psychology at Trinity College Dublin. <i>Irish Journal of Psychology</i> , 2012, 33, 63-64.	0.2	0