Stuart Baker

List of Publications by Year
in descending order

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115 papers	6,138 citations	76294 40 h-index	82499 72 g-index
121 all docs	121 docs citations	121 times ranked	4678 citing authors

#	Article	IF	Citations
1	Oscillatory interactions between sensorimotor cortex and the periphery. Current Opinion in Neurobiology, 2007, 17, 649-655.	2.0	443
2	Human Cortical Muscle Coherence Is Directly Related to Specific Motor Parameters. Journal of Neuroscience, 2000, 20, 8838-8845.	1.7	361
3	Changes in descending motor pathway connectivity after corticospinal tract lesion in macaque monkey. Brain, 2012, 135, 2277-2289.	3.7	285
4	Direct and Indirect Connections with Upper Limb Motoneurons from the Primate Reticulospinal Tract. Journal of Neuroscience, 2009, 29, 4993-4999.	1.7	247
5	The primate reticulospinal tract, hand function and functional recovery. Journal of Physiology, 2011, 589, 5603-5612.	1.3	243
6	Synchronization in Monkey Motor Cortex During a Precision Grip Task. II. Effect of Oscillatory Activity on Corticospinal Output. Journal of Neurophysiology, 2003, 89, 1941-1953.	0.9	195
7	Contributions of descending and ascending pathways to corticomuscular coherence in humans. Journal of Physiology, 2011, 589, 3789-3800.	1.3	192
8	Manipulation of peripheral neural feedback loops alters human corticomuscular coherence. Journal of Physiology, 2005, 566, 625-639.	1.3	149
9	Cortico-Cerebellar Coherence During a Precision Grip Task in the Monkey. Journal of Neurophysiology, 2006, 95, 1194-1206.	0.9	148
10	The effect of diazepam on motor cortical oscillations and corticomuscular coherence studied in man. Journal of Physiology, 2003, 546, 931-942.	1.3	146
11	Precise Spatiotemporal Repeating Patterns in Monkey Primary and Supplementary Motor Areas Occur at Chance Levels. Journal of Neurophysiology, 2000, 84, 1770-1780.	0.9	138
12	Learning a Novel Myoelectric-Controlled Interface Task. Journal of Neurophysiology, 2008, 100, 2397-2408.	0.9	132
13	EEG oscillations at 600 Hz are macroscopic markers for cortical spike bursts. Journal of Physiology, 2003, 550, 529-534.	1.3	128
14	Afferent Encoding of Central Oscillations in the Monkey Arm. Journal of Neurophysiology, 2006, 95, 3904-3910.	0.9	126
15	Convergence of Pyramidal and Medial Brain Stem Descending Pathways Onto Macaque Cervical Spinal Interneurons. Journal of Neurophysiology, 2010, 103, 2821-2832.	0.9	117
16	Beta-band intermuscular coherence: a novel biomarker of upper motor neuron dysfunction in motor neuron disease. Brain, 2012, 135, 2849-2864.	3.7	110
17	Synchrony between Neurons with Similar Muscle Fields in Monkey Motor Cortex. Neuron, 2003, 38, 115-125.	3.8	109
18	Lack of Evidence for Direct Corticospinal Contributions to Control of the Ipsilateral Forelimb in Monkey. Journal of Neuroscience, 2011, 31, 11208-11219.	1.7	99

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19	Reticulospinal Contributions to Gross Hand Function after Human Spinal Cord Injury. Journal of Neuroscience, 2017, 37, 9778-9784.	1.7	94
20	Cells in the monkey pontoâ€medullary reticular formation modulate their activity with slow finger movements. Journal of Physiology, 2012, 590, 4011-4027.	1.3	92
21	Cells in somatosensory areas show synchrony with beta oscillations in monkey motor cortex. European Journal of Neuroscience, 2007, 26, 2677-2686.	1.2	91
22	The sinusoidal probe: a new approach to improve electrode longevity. Frontiers in Neuroengineering, 2014, 7, 10.	4.8	87
23	Measurement of Time-Dependent Changes in the Irregularity of Neural Spiking. Journal of Neurophysiology, 2006, 96, 906-918.	0.9	86
24	Reticular formation responses to magnetic brain stimulation of primary motor cortex. Journal of Physiology, 2012, 590, 4045-4060.	1.3	83
25	Renshaw Cell Recurrent Inhibition Improves Physiological Tremor by Reducing Corticomuscular Coupling at 10 Hz. Journal of Neuroscience, 2009, 29, 6616-6624.	1.7	79
26	Pathways mediating functional recovery. Progress in Brain Research, 2015, 218, 389-412.	0.9	79
27	Task-dependent intermanual coupling of 8-Hz discontinuities during slow finger movements. European Journal of Neuroscience, 2003, 18, 453-456.	1.2	71
28	Digit displacement, not object compliance, underlies task dependent modulations in human corticomuscular coherence. NeuroImage, 2006, 33, 618-627.	2.1	70
29	Spinal interneuron circuits reduce approximately 10-Hz movement discontinuities by phase cancellation. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 11098-11103.	3.3	68
30	Network oscillations and intrinsic spiking rhythmicity do not covary in monkey sensorimotor areas. Journal of Physiology, 2007, 580, 801-814.	1.3	60
31	Corticospinal Inputs to Primate Motoneurons Innervating the Forelimb from Two Divisions of Primary Motor Cortex and Area 3a. Journal of Neuroscience, 2016, 36, 2605-2616.	1.7	59
32	An Accurate Measure of the Instantaneous Discharge Probability, with Application to Unitary Joint-Event Analysis. Neural Computation, 2000, 12, 647-669.	1.3	57
33	Mechanical Flexibility Reduces the Foreign Body Response to Long-Term Implanted Microelectrodes in Rabbit Cortex. PLoS ONE, 2016, 11, e0165606.	1.1	55
34	Corticomuscular coherence between motor cortex, somatosensory areas and forearm muscles in the monkey. Frontiers in Systems Neuroscience, 2010, 4, .	1.2	54
35	The Relationship Between Enhanced Reticulospinal Outflow and Upper Limb Function in Chronic Stroke Patients. Neurorehabilitation and Neural Repair, 2019, 33, 375-383.	1.4	53
36	Corticospinal activation confounds cerebellar effects of posterior fossa stimuli. Clinical Neurophysiology, 2009, 120, 2109-2113.	0.7	51

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37	Determination of Response Latency and Its Application to Normalization of Cross-Correlation Measures. Neural Computation, 2001, 13, 1351-1377.	1.3	46
38	Muscle responses to transcranial stimulation in man depend on background oscillatory activity. Journal of Physiology, 2007, 583, 567-579.	1.3	46
39	Circuits Generating Corticomuscular Coherence Investigated Using a Biophysically Based Computational Model. I. Descending Systems. Journal of Neurophysiology, 2009, 101, 31-41.	0.9	46
40	Different contributions of primary motor cortex, reticular formation, and spinal cord to fractionated muscle activation. Journal of Neurophysiology, 2018, 119, 235-250.	0.9	43
41	Emergent oscillations in a realistic network: the role of inhibition and the effect of the spatiotemporal distribution of the input. Journal of Computational Neuroscience, 1999, 6, 27-48.	0.6	41
42	Central nervous system dysfunction in primary biliary cirrhosis and its relationship to symptoms. Journal of Hepatology, 2010, 53, 1095-1100.	1.8	41
43	High-frequency EEG covaries with spike burst patterns detected in cortical neurons. Journal of Neurophysiology, 2011, 105, 2951-2959.	0.9	41
44	Coherence Between Motor Cortical Activity and Peripheral Discontinuities During Slow Finger Movements. Journal of Neurophysiology, 2009, 102, 1296-1309.	0.9	39
45	Extensive Cortical Convergence to Primate Reticulospinal Pathways. Journal of Neuroscience, 2021, 41, 1005-1018.	1.7	39
46	Bilateral representation in the deep cerebellar nuclei. Journal of Physiology, 2008, 586, 1117-1136.	1.3	37
47	Cortical, Corticospinal, and Reticulospinal Contributions to Strength Training. Journal of Neuroscience, 2020, 40, 5820-5832.	1.7	36
48	Improvements to the Sensitivity of Gravitational Clustering for Multiple Neuron Recordings. Neural Computation, 2000, 12, 2597-2620.	1.3	35
49	Intermuscular Coherence in Normal Adults: Variability and Changes with Age. PLoS ONE, 2016, 11, e0149029.	1.1	35
50	Postural control of arm and fingers through integration of movement commands. ELife, 2020, 9, .	2.8	34
51	The effect of carbamazepine on human corticomuscular coherence. NeuroImage, 2004, 22, 333-340.	2.1	33
52	Post-spike distance-to-threshold trajectories of neurones in monkey motor cortex. Journal of Physiology, 2004, 555, 831-850.	1.3	29
53	Correlates of a single cortical action potential in the epidural EEG. NeuroImage, 2015, 109, 357-367.	2.1	29
54	Classification of Neurons in the Primate Reticular Formation and Changes after Recovery from Pyramidal Tract Lesion. Journal of Neuroscience, 2018, 38, 6190-6206.	1.7	28

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55	Spike Timing-Dependent Plasticity in the Long-Latency Stretch Reflex Following Paired Stimulation from a Wearable Electronic Device. Journal of Neuroscience, 2016, 36, 10823-10830.	1.7	27
56	Fractionation of muscle activity in rapid responses to startling cues. Journal of Neurophysiology, 2017, 117, 1713-1719.	0.9	27
57	Epidural and transcutaneous spinal cord stimulation facilitates descending inputs to upper-limb motoneurons in monkeys. Journal of Neural Engineering, 2021, 18, 046011.	1.8	27
58	Both Corticospinal and Reticulospinal Tracts Control Force of Contraction. Journal of Neuroscience, 2022, 42, 3150-3164.	1.7	27
59	Modulation and transmission of peripheral inputs in monkey cuneate and external cuneate nuclei. Journal of Neurophysiology, 2011, 106, 2764-2775.	0.9	26
60	Spinal Commissural Connections to Motoneurons Controlling the Primate Hand and Wrist. Journal of Neuroscience, 2013, 33, 9614-9625.	1.7	26
61	Degraded EEG decoding of wrist movements in absence of kinaesthetic feedback. Human Brain Mapping, 2015, 36, 643-654.	1.9	26
62	Only the Fastest Corticospinal Fibers Contribute to Î² Corticomuscular Coherence. Journal of Neuroscience, 2021, 41, 4867-4879.	1.7	26
63	Different Contributions of the Corpus Callosum and Cerebellum to Motor Coordination in Monkey. Journal of Neurophysiology, 2007, 98, 2962-2973.	0.9	24
64	Slow orthostatic tremor in multiple sclerosis. Movement Disorders, 2009, 24, 1550-1553.	2.2	24
65	The Corticospinal Discrepancy: Where are all the Slow Pyramidal Tract Neurons?. Cerebral Cortex, 2019, 29, 3977-3981.	1.6	24
66	Corticomuscular coherence during bilateral isometric arm voluntary activity in healthy humans. Journal of Neurophysiology, 2012, 107, 2154-2162.	0.9	23
67	Differences between Han Chinese and Caucasians in transcranial magnetic stimulation parameters. Experimental Brain Research, 2014, 232, 545-553.	0.7	22
68	Non-invasive vagus nerve stimulation improves clinical and molecular biomarkers of Parkinsonâ€™s disease in patients with freezing of gait. Npj Parkinson's Disease, 2021, 7, 46.	2.5	22
69	Different phase delays of peripheral input to primate motor cortex and spinal cord promote cancellation at physiological tremor frequencies. Journal of Neurophysiology, 2014, 111, 2001-2016.	0.9	21
70	Multimodal stimuli modulate rapid visual responses during reaching. Journal of Neurophysiology, 2019, 122, 1894-1908.	0.9	21
71	Precise Burst Synchrony in the Superior Colliculus of the Awake Cat during Moving Stimulus Presentation. Journal of Neuroscience, 2001, 21, 615-627.	1.7	20
72	Classification of Cortical Neurons by Spike Shape and the Identification of Pyramidal Neurons. Cerebral Cortex, 2021, 31, 5131-5138.	1.6	19

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73	â€˜Pooled coherenceâ€™ can overestimate the significance of coupling in the presence of inter-experiment variability. Journal of Neuroscience Methods, 2000, 96, 171-172.	1.3	18
74	A multiple regression model of normal central and peripheral motor conduction times. Muscle and Nerve, 2015, 51, 706-712.	1.0	17
75	Beta-Adrenergic Modulation of Tremor and Corticomuscular Coherence in Humans. PLoS ONE, 2012, 7, e49088.	1.1	17
76	Long-latency Responses to a Mechanical Perturbation of the Index Finger Have a Spinal Component. Journal of Neuroscience, 2020, 40, 3933-3948.	1.7	16
77	Quantifying Neural Coding of Event Timing. Journal of Neurophysiology, 2009, 101, 402-417.	0.9	15
78	Nonâ€invasive assessment of superficial and deep layer circuits in human motor cortex. Journal of Physiology, 2019, 597, 2975-2991.	1.3	15
79	Slow orthostatic tremor can persist when walking backward. Movement Disorders, 2010, 25, 795-797.	2.2	14
80	Spasms after spinal cord injury show low-frequency intermuscular coherence. Journal of Neurophysiology, 2018, 120, 1765-1771.	0.9	14
81	Evidence for Subcortical Plasticity after Paired Stimulation from a Wearable Device. Journal of Neuroscience, 2021, 41, 1418-1428.	1.7	14
82	Ipsilateral Motor Evoked Potentials as a Measure of the Reticulospinal Tract in Age-Related Strength Changes. Frontiers in Aging Neuroscience, 2021, 13, 612352.	1.7	14
83	Blocking central pathways in the primate motor system using high-frequency sinusoidal current. Journal of Neurophysiology, 2015, 113, 1670-1680.	0.9	13
84	Convergent Spinal Circuits Facilitating Human Wrist Flexors. Journal of Neuroscience, 2018, 38, 3929-3938.	1.7	13
85	A hierarchy of corticospinal plasticity in human hand and forearm muscles. Journal of Physiology, 2019, 597, 2729-2739.	1.3	13
86	Aging and Strength Training Influence Knee Extensor Intermuscular Coherence During Low- and High-Force Isometric Contractions. Frontiers in Physiology, 2018, 9, 1933.	1.3	13
87	Induction of plasticity in the human motor system by motor imagery and transcranial magnetic stimulation. Journal of Physiology, 2020, 598, 2385-2396.	1.3	13
88	Suppression of Enhanced Physiological Tremor via Stochastic Noise: Initial Observations. PLoS ONE, 2014, 9, e112782.	1.1	11
89	Abnormal Blink Reflex and Intermuscular Coherence in Writer's Cramp. Frontiers in Neurology, 2018, 9, 517.	1.1	11
90	A Novel Wearable Device for Motor Recovery of Hand Function in Chronic Stroke Survivors. Neurorehabilitation and Neural Repair, 2020, 34, 600-608.	1.4	11

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91	Coding of digit displacement by cell spiking and network oscillations in the monkey sensorimotor cortex. Journal of Neurophysiology, 2012, 108, 3342-3352.	0.9	9
92	The man who could not walk backward: An unusual presentation of neuroferritinopathy. Movement Disorders, 2011, 26, 362-364.	2.2	8
93	Design and Microfabrication Considerations for Reliable Flexible Intracortical Implants. Frontiers in Mechanical Engineering, 2016, 2, .	0.8	8
94	Slowed Movement Stopping in Parkinsonâ€™s Disease and Focal Dystonia is Improved by Standard Treatment. Scientific Reports, 2019, 9, 19504.	1.6	8
95	Startling stimuli increase maximal motor unit discharge rate and rate of force development in humans. Journal of Neurophysiology, 2022, 128, 455-469.	0.9	8
96	Plastic Changes in Human Motor Cortical Output Induced by Random but not Closed-Loop Peripheral Stimulation: the Curse of Causality. Frontiers in Human Neuroscience, 2016, 10, 590.	1.0	7
97	In vitro characterization of intrinsic properties and local synaptic inputs to pyramidal neurons in macaque primary motor cortex. European Journal of Neuroscience, 2018, 48, 2071-2083.	1.2	7
98	Family visitation policies, facilities, and support in Australia and New Zealand intensive care units: A multicentre, registry-linked survey. Australian Critical Care, 2022, 35, 375-382.	0.6	7
99	Effect of central lesions on a spinal circuit facilitating human wrist flexors. Scientific Reports, 2018, 8, 14821.	1.6	6
100	Descending Inputs to Spinal Circuits Facilitating and Inhibiting Human Wrist Flexors. Frontiers in Human Neuroscience, 2018, 12, 147.	1.0	5
101	Stop Signal Reaction Time measured with a portable device validates optimum STN-DBS programming. Brain Stimulation, 2020, 13, 1609-1611.	0.7	5
102	Deafferented controllers: a fundamental failure mechanism in cortical neuroprosthetic systems. Frontiers in Behavioral Neuroscience, 2015, 9, 186.	1.0	4
103	Plastic changes in primate motor cortex following paired peripheral nerve stimulation. Journal of Neurophysiology, 2021, 125, 458-475.	0.9	4
104	Electrical cross-sectional imaging of human motor units in vivo. Clinical Neurophysiology, 2022, 136, 82-92.	0.7	4
105	Standard intensities of transcranial alternating current stimulation over the motor cortex do not entrain corticospinal inputs to motor neurons. Journal of Physiology, 2023, 601, 3187-3199.	1.3	4
106	Comparing Stop Signal Reaction Times in Alzheimerâ€™s and Parkinsonâ€™s Disease. Canadian Journal of Neurological Sciences, 2021, , 1-10.	0.3	3
107	Information theoretic analysis of proprioceptive encoding during finger flexion in the monkey sensorimotor system. Journal of Neurophysiology, 2015, 113, 295-306.	0.9	3
108	Spatial and Temporal Arrangement of Recurrent Inhibition in the Primate Upper Limb. Journal of Neuroscience, 2021, 41, 1443-1454.	1.7	3

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109	Reply from C. L. Witham and S. N. Baker. Journal of Physiology, 2012, 590, 2531-2533.	1.3	2
110	Timing Intervals Using Population Synchrony and Spike Timing Dependent Plasticity. Frontiers in Computational Neuroscience, 2016, 10, 123.	1.2	2
111	Effects of Diazepam on Reaction Times to Stop and Go. Frontiers in Human Neuroscience, 2020, 14, 567177.	1.0	2
112	Pre-Synaptic Inhibition of Afferent Feedback in the Macaque Spinal Cord Does Not Modulate with Cycles of Peripheral Oscillations Around 10 Hz. Frontiers in Neural Circuits, 2015, 9, 76.	1.4	1
113	A Re-evaluation of Whether Non-monosynaptic Homonymous H Reflex Facilitation Tests Propriospinal Circuits. Frontiers in Systems Neuroscience, 2021, 15, 641816.	1.2	1
114	Bridging scales: from cortical single-neuron bursting to macroscopic high-frequency EEG. BMC Neuroscience, 2009, 10, .	0.8	0
115	Influence of alphaxalone on motor somatosensory evoked potentials in a female rhesus macaque (Macaca mulatta). Laboratory Animals, 2021, 55, 363-366.	0.5	0