Marc H Schieber

List of Publications by Year
in descending order

77 papers	4,019 citations	136950 32 h-index	123424 61 g-index
79 all docs	79 docs citations	79 times ranked	2969 citing authors

#	Article	IF	Citations
1	Constraints on Somatotopic Organization in the Primary Motor Cortex. Journal of Neurophysiology, 2001, 86, 2125-2143.	1.8	489
2	Quantifying the Independence of Human Finger Movements: Comparisons of Digits, Hands, and Movement Frequencies. Journal of Neuroscience, 2000, 20, 8542-8550.	3.6	343
3	Hand function: peripheral and central constraints on performance. Journal of Applied Physiology, 2004, 96, 2293-2300.	2.5	340
4	Differential Impairment of Individuated Finger Movements in Humans After Damage to the Motor Cortex or the Corticospinal Tract. Journal of Neurophysiology, 2003, 90, 1160-1170.	1.8	193
5	Human Finger Independence: Limitations due to Passive Mechanical Coupling Versus Active Neuromuscular Control. Journal of Neurophysiology, 2004, 92, 2802-2810.	1.8	173
6	Reduced Muscle Selectivity During Individuated Finger Movements in Humans After Damage to the Motor Cortex or Corticospinal Tract. Journal of Neurophysiology, 2004, 91, 1722-1733.	1.8	151
7	Persistent hand motor commands in the amputees' brain. Brain, 2006, 129, 2211-2223.	7.6	147
8	How might the motor cortex individuate movements?. Trends in Neurosciences, 1990, 13, 440-445.	8.6	136
9	Partial Inactivation of the Primary Motor Cortex Hand Area: Effects on Individuated Finger Movements. Journal of Neuroscience, 1998, 18, 9038-9054.	3.6	132
10	State-based decoding of hand and finger kinematics using neuronal ensemble and LFP activity during dexterous reach-to-grasp movements. Journal of Neurophysiology, 2013, 109, 3067-3081.	1.8	132
11	Bilateral Spike-Triggered Average Effects in Arm and Shoulder Muscles from the Monkey Pontomedullary Reticular Formation. Journal of Neuroscience, 2007, 27, 8053-8058.	3.6	123
12	Somatotopic gradients in the distributed organization of the human primary motor cortex hand area: evidence from small infarcts. Experimental Brain Research, 1999, 128, 139-148.	1.5	96
13	Asynchronous Decoding of Dexterous Finger Movements Using M1 Neurons. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2008, 16, 3-14.	4.9	87
14	Limited Functional Grouping of Neurons in the Motor Cortex Hand Area During Individuated Finger Movements: A Cluster Analysis. Journal of Neurophysiology, 1999, 82, 3488-3505.	1.8	80
15	Incomplete Functional Subdivision of the Human Multitendoned Finger Muscle Flexor Digitorum Profundus: An Electromyographic Study. Journal of Neurophysiology, 2003, 90, 2560-2570.	1.8	77
16	Neural coding of finger and wrist movements. Journal of Computational Neuroscience, 1999, 6, 279-288.	1.0	74
17	Decoding Individuated Finger Movements Using Volume-Constrained Neuronal Ensembles in the M1 Hand Area. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2008, 16, 15-23.	4.9	64
18	Spatiotemporal Variation of Multiple Neurophysiological Signals in the Primary Motor Cortex during Dexterous Reach-to-Grasp Movements. Journal of Neuroscience, 2011, 31, 15531-15543.	3.6	64

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19	Selective Activation of Human Finger Muscles after Stroke or Amputation. Advances in Experimental Medicine and Biology, 2009, 629, 559-575.	1.6	58
20	Dissociating motor cortex from the motor. Journal of Physiology, 2011, 589, 5613-5624.	2.9	58
21	Rapid Changes in Throughput from Single Motor Cortex Neurons to Muscle Activity. Science, 2007, 318, 1934-1937.	12.6	52
22	Chapter 2 Comparative anatomy and physiology of the corticospinal system. Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn, 2007, 82, 15-37.	1.8	50
23	Tension Distribution of Single Motor Units in Multitendoned Muscles: Comparison of a Homologous Digit Muscle in Cats and Monkeys. Journal of Neuroscience, 1997, 17, 1734-1747.	3.6	49
24	Activity of muscle spindles, motor cortex and cerebellar nuclei during action tremor. Brain Research, 1984, 323, 330-334.	2.2	47
25	Partial Reconstruction of Muscle Activity From a Pruned Network of Diverse Motor Cortex Neurons. Journal of Neurophysiology, 2007, 97, 70-82.	1.8	47
26	Inactivation of the ventral premotor cortex biases the laterality of motoric choices. Experimental Brain Research, 2000, 130, 497-507.	1.5	45
27	Neural Decoding of Finger Movements Using Skellam-Based Maximum-Likelihood Decoding. IEEE Transactions on Biomedical Engineering, 2010, 57, 754-760.	4.2	45
28	Short-Term Synchronization Between Motor Units in Different Functional Subdivisions of the Human Flexor Digitorum Profundus Muscle. Journal of Neurophysiology, 2004, 92, 734-742.	1.8	42
29	A Spectrum From Pure Post-Spike Effects to Synchrony Effects in Spike-Triggered Averages of Electromyographic Activity During Skilled Finger Movements. Journal of Neurophysiology, 2005, 94, 3325-3341.	1.8	40
30	Training and Synchrony in the Motor System. Journal of Neuroscience, 2002, 22, 5277-5281.	3.6	39
31	Tension Distribution to the Five Digits of the Hand by Neuromuscular Compartments in the Macaque Flexor Digitorum Profundus. Journal of Neuroscience, 2001, 21, 2150-2158.	3.6	38
32	Mirror Neuron Populations Represent Sequences of Behavioral Epochs During Both Execution and Observation. Journal of Neuroscience, 2018, 38, 4441-4455.	3.6	37
33	Principal components of hand kinematics and neurophysiological signals in motor cortex during reach to grasp movements. Journal of Neurophysiology, 2014, 112, 1857-1870.	1.8	36
34	Spatiotemporal Distribution of Location and Object Effects in Primary Motor Cortex Neurons during Reach-to-Grasp. Journal of Neuroscience, 2016, 36, 10640-10653.	3.6	32
35	Rapid acquisition of novel interface control by small ensembles of arbitrarily selected primary motor cortex neurons. Journal of Neurophysiology, 2014, 112, 1528-1548.	1.8	31
36	Condition-Dependent Neural Dimensions Progressively Shift during Reach to Grasp. Cell Reports, 2018, 25, 3158-3168.e3.	6.4	30

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37	High Precision Neural Decoding of Complex Movement Trajectories Using Recursive Bayesian Estimation With Dynamic Movement Primitives. IEEE Robotics and Automation Letters, 2016, 1, 676-683.	5.1	23
38	Injecting Instructions into Premotor Cortex. Neuron, 2017, 96, 1282-1289.e4.	8.1	23
39	Motor Control: Basic Units of Cortical Output?. Current Biology, 2004, 14, R353-R354.	3.9	22
40	Multiple fragment statistical analysis of post-spike effects in spike-triggered averages of rectified EMG. Journal of Neuroscience Methods, 1998, 79, 143-150.	2.5	21
41	Comparing effects in spike-triggered averages of rectified EMG across different behaviors. Journal of Neuroscience Methods, 2007, 163, 283-294.	2.5	19
42	Primary Motor Cortex Neurons during Individuated Finger and Wrist Movements: Correlation of Spike Firing Rates with the Motion of Individual Digits versus Their Principal Components. Frontiers in Neurology, 2014, 5, 70.	2.4	19
43	Electromyographic evidence of two functional subdivisions in the rhesus monkey's flexor digitorum profundus. Experimental Brain Research, 1993, 95, 251-60.	1.5	17
44	Advancing brain-machine interfaces: moving beyond linear state space models. Frontiers in Systems Neuroscience, 2015, 9, 108.	2.5	15
45	Spatiotemporal distribution of location and object effects in reach-to-grasp kinematics. Journal of Neurophysiology, 2015, 114, 3268-3282.	1.8	15
46	Task-Independent Cognitive State Transition Detection From Cortical Neurons During 3-D Reach-to-Grasp Movements. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2015, 23, 676-682.	4.9	15
47	Aggregate Input-Output Models of Neuronal Populations. IEEE Transactions on Biomedical Engineering, 2012, 59, 2030-2039.	4.2	13
48	Structure of Population Activity in Primary Motor Cortex for Single Finger Flexion and Extension. Journal of Neuroscience, 2020, 40, 9210-9223.	3.6	13
49	Handedness and index finger movements performed on a small touchscreen. Journal of Neurophysiology, 2016, 115, 858-867.	1.8	11
50	Mirror neurons precede non-mirror neurons during action execution. Journal of Neurophysiology, 2019, 122, 2630-2635.	1.8	11
51	Designing closed-loop brain-machine interfaces using optimal receding horizon control. , 2013, , .		9
52	New Views of the Primary Motor Cortex. Neuroscientist, 2000, 6, 380-389.	3.5	8
53	Interactions between lateralized choices of hand and target. Experimental Brain Research, 2006, 170, 149-159.	1.5	7
54	Selectivity of voluntary finger flexion during ischemic nerve block of the hand. Experimental Brain Research, 2008, 188, 385-397.	1.5	7

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55	Spatiotemporal distribution of location and object effects in the electromyographic activity of upper extremity muscles during reach-to-grasp. Journal of Neurophysiology, 2016, 115, 3238-3248.	1.8	7
56	How is electrical stimulation of the brain experienced, and how can we tell? Selected considerations on sensorimotor function and speech. Cognitive Neuropsychology, 2019, 36, 103-116.	1.1	7
57	The impact of head direction on lateralized choices of target and hand. Experimental Brain Research, 2010, 201, 821-835.	1.5	6
58	Injecting Information into the Mammalian Cortex: Progress, Challenges, and Promise. Neuroscientist, 2021, 27, 129-142.	3.5	6
59	Modern coordinates for the motor homunculus. Journal of Physiology, 2020, 598, 5305-5306.	2.9	5
60	Serial correlation in lateralized choices of hand and target. Experimental Brain Research, 2006, 174, 499-509.	1.5	4
61	Mirror Neurons: Reflecting on the Motor Cortex and Spinal Cord. Current Biology, 2013, 23, R151-R152.	3.9	4
62	A systematic approach to selecting task relevant neurons. Journal of Neuroscience Methods, 2015, 245, 156-168.	2.5	4
63	Neuronal Activity Distributed in Multiple Cortical Areas during Voluntary Control of the Native Arm or a Brain-Computer Interface. ENeuro, 2020, 7, ENEURO.0376-20.2020.	1.9	4
64	Optimal parameter estimation of the Izhikevich single neuron model using experimental inter-spike interval (ISI) data. , 2010, , .		3
65	Wireless micro-ECoG recording in primates during reach-to-grasp movements. , 2011, , .		3
66	Neuron selection by relative importance for neural decoding of dexterous finger prosthesis control application. Biomedical Signal Processing and Control, 2012, 7, 632-639.	5.7	3
67	Cyclic, Condition-Independent Activity in Primary Motor Cortex Predicts Corrective Movement Behavior. ENeuro, 2022, 9, ENEURO.0354-21.2022.	1.9	3
68	An optimal control problem in closed-loop neuroprostheses. , 2011, , .		2
69	Neuro-prosthetic interplay. Physics of Life Reviews, 2016, 17, 47-49.	2.8	2
70	Temporal and kinematic consistency predict sequence awareness. Experimental Brain Research, 2016, 234, 3025-3036.	1.5	2
71	Neuronal Activity Distributed in Multiple Cortical Areas during Voluntary Control of the Native Arm or a Brain-Computer Interface. ENeuro, 2020, 7, .	1.9	2
72	Correction to "Asynchronous Decoding of Dexterous Finger Movements Using M1 Neurons" [Feb 08 3-14]. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2008, 16, 421-421.	4.9	1

#	Article	IF	Citations
73	Single and multi-finger movements are correlated in neuronal population activities as well as in natural behaviors. , 2011, , .		1
74	Coordinates for the somatosensory homunculus. Journal of Physiology, 2018, 596, 759-760.	2.9	1
75	M1 neural decoding of finger movements using a priori neural activities before movements. , 2011, , .		0
76	Modeling task-specific neuronal ensembles improves decoding of grasp. Journal of Neural Engineering, 2018, 15, 036006.	3.5	0
77	Stimulating Cerebellar Outflow Reveals Temporal Control of Motor Cortical Activity. Cell Reports, 2019, 27, 2525-2526.	6.4	0