Andrew B Schwartz

List of Publications by Year
in descending order

54 papers	10,547 citations	126708 33 h-index	197535 49 g-index
55 all docs	55 docs citations	55 times ranked	5879 citing authors

#	Article	IF	Citations
1	High-performance neuroprosthetic control by an individual with tetraplegia. Lancet, The, 2013, 381, 557-564.	6.3	1,550
2	Direct Cortical Control of 3D Neuroprosthetic Devices. Science, 2002, 296, 1829-1832.	6.0	1,534
3	Cortical control of a prosthetic arm for self-feeding. Nature, 2008, 453, 1098-1101.	13.7	1,468
4	Motor Cortical Representation of Speed and Direction During Reaching. Journal of Neurophysiology, 1999, 82, 2676-2692.	0.9	694
5	Brain-Controlled Interfaces: Movement Restoration with Neural Prosthetics. Neuron, 2006, 52, 205-220.	3.8	691
6	Intracortical microstimulation of human somatosensory cortex. Science Translational Medicine, 2016, 8, 361ra141.	5.8	547
7	CORTICAL NEURAL PROSTHETICS. Annual Review of Neuroscience, 2004, 27, 487-507.	5.0	505
8	Direct cortical representation of drawing. Science, 1994, 265, 540-542.	6.0	320
9	An Electrocorticographic Brain Interface in an Individual with Tetraplegia. PLoS ONE, 2013, 8, e55344.	1.1	319
10	Functional network reorganization during learning in a brain-computer interface paradigm. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 19486-19491.	3.3	248
11	Motor Cortical Activity During Drawing Movements: Population Representation During Lemniscate Tracing. Journal of Neurophysiology, 1999, 82, 2705-2718.	0.9	206
12	Neural Interface Technology for Rehabilitation: Exploiting and Promoting Neuroplasticity. Physical Medicine and Rehabilitation Clinics of North America, 2010, 21, 157-178.	0.7	175
13	Control of a brainâ€“computer interface without spike sorting. Journal of Neural Engineering, 2009, 6, 055004.	1.8	148
14	Motor Cortical Activity During Drawing Movements: Population Representation During Spiral Tracing. Journal of Neurophysiology, 1999, 82, 2693-2704.	0.9	146
15	Information conveyed through brain-control: cursor versus robot. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2003, 11, 195-199.	2.7	133
16	Extraction algorithms for cortical control of arm prosthetics. Current Opinion in Neurobiology, 2001, 11, 701-708.	2.0	131
17	Comparison of brainâ€“computer interface decoding algorithms in open-loop and closed-loop control. Journal of Computational Neuroscience, 2010, 29, 73-87.	0.6	127
18	Recording from the same neurons chronically in motor cortex. Journal of Neurophysiology, 2012, 107, 1970-1978.	0.9	125

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19	On the Relationship Between Joint Angular Velocity and Motor Cortical Discharge During Reaching. Journal of Neurophysiology, 2001, 85, 2576-2589.	0.9	121
20	Differential Representation of Perception and Action in the Frontal Cortex. Science, 2004, 303, 380-383.	6.0	114
21	Bias, optimal linear estimation, and the differences between open-loop simulation and closed-loop performance of spiking-based brainâ€“computer interface algorithms. Neural Networks, 2009, 22, 1203-1213.	3.3	114
22	Behavioral and neural correlates of visuomotor adaptation observed through a brain-computer interface in primary motor cortex. Journal of Neurophysiology, 2012, 108, 624-644.	0.9	106
23	A Reward-Modulated Hebbian Learning Rule Can Explain Experimentally Observed Network Reorganization in a Brain Control Task. Journal of Neuroscience, 2010, 30, 8400-8410.	1.7	104
24	Intracortical recording stability in human brainâ€“computer interface users. Journal of Neural Engineering, 2018, 15, 046016.	1.8	100
25	Movement: How the Brain Communicates with the World. Cell, 2016, 164, 1122-1135.	13.5	92
26	Blending of brain-machine interface and vision-guided autonomous robotics improves neuroprosthetic arm performance during grasping. Journal of NeuroEngineering and Rehabilitation, 2016, 13, 28.	2.4	78
27	Autonomy infused teleoperation with application to brain computer interface controlled manipulation. Autonomous Robots, 2017, 41, 1401-1422.	3.2	64
28	Arm trajectory and representation of movement processing in motor cortical activity. European Journal of Neuroscience, 2000, 12, 1851-1856.	1.2	62
29	Distributed motor processing in cerebral cortex. Current Opinion in Neurobiology, 1994, 4, 840-846.	2.0	57
30	Collaborative Approach in the Development of Highâ€Performance Brainâ€“Computer Interfaces for a Neuroprosthetic Arm: Translation from Animal Models to Human Control. Clinical and Translational Science, 2014, 7, 52-59.	1.5	55
31	Motor cortical control of movement speed with implications for brain-machine interface control. Journal of Neurophysiology, 2014, 112, 411-429.	0.9	52
32	Motor Cortical Correlates of Arm Resting in the Context of a Reaching Task and Implications for Prosthetic Control. Journal of Neuroscience, 2014, 34, 6011-6022.	1.7	50
33	Useful signals from motor cortex. Journal of Physiology, 2007, 579, 581-601.	1.3	47
34	Progress towards restoring upper limb movement and sensation through intracortical brain-computer interfaces. Current Opinion in Biomedical Engineering, 2018, 8, 84-92.	1.8	35
35	Decoding arm speed during reaching. Nature Communications, 2018, 9, 5243.	5.8	34
36	Population vector code: a geometric universal as actuator. Biological Cybernetics, 2008, 98, 509-518.	0.6	32

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37	Latent Inputs Improve Estimates of Neural Encoding in Motor Cortex. Journal of Neuroscience, 2010, 30, 13873-13882.	1.7	28
38	One motor cortex, two different views. Nature Neuroscience, 2000, 3, 963-963.	7.1	22
39	Structural analysis of explanted microelectrode arrays. , 2013, , .		20
40	Biomechanics and neural control of movement, 20Âyears later: what have we learned and what has changed?. Journal of NeuroEngineering and Rehabilitation, 2017, 14, 91.	2.4	18
41	Inference from populations: going beyond models. Progress in Brain Research, 2011, 192, 103-112.	0.9	15
42	Viral-Mediated Optogenetic Stimulation of Peripheral Motor Nerves in Non-human Primates. Frontiers in Neuroscience, 2019, 13, 759.	1.4	11
43	Neuroprosthetic control and tetraplegia â€“ Authors'reply. Lancet, The, 2013, 381, 1900-1901.	6.3	10
44	Activity in Primary Motor Cortex Related to Visual Feedback. Cell Reports, 2019, 29, 3872-3884.e4.	2.9	6
45	Bayesian learning in assisted brain-computer interface tasks. , 2012, 2012, 2740-3.		5
46	Distributed processing of movement signaling. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 26266-26273.	3.3	5
47	Idle state classification using spiking activity and local field potentials in a brain computer interface. , 2016, 2016, 1572-1575.		4
48	<title>Cortical control for prosthetic devices</title>. , 1996, , .		3
49	Stiffness as a control factor for object manipulation. Journal of Neurophysiology, 2019, 122, 707-720.	0.9	3
50	A MULTIVARIATE GAUSSIAN PROCESS FACTOR MODEL FOR HAND SHAPE DURING REACH-TO-GRASP MOVEMENTS. Statistica Sinica, 2015, 25, 5-24.	0.2	3
51	Functional network reorganization in motor cortex can be explained by reward-modulated Hebbian learning. Advances in Neural Information Processing Systems, 2009, 2009, 1105-1113.	2.8	2
52	Progress toward a high-performance neural prosthetic. , 2013, , .		1
53	Automatic scan test for detection of functional connectivity between cortex and muscles. Journal of Neurophysiology, 2014, 112, 490-499.	0.9	1
54	Beyond synergies. Physics of Life Reviews, 2016, 17, 50-53.	1.5	1