Andrew B Schwartz

List of Publications by Citations

55 papers	8,466 citations	33 h-index	55 g-index
55 ext. papers	9,755 ext. citations	10.4 avg, IF	6.18 L-index

#	Paper	IF	Citations
55	Direct cortical control of 3D neuroprosthetic devices. *Science*, **2002**, 296, 1829-32	33.3	1338
54	Cortical control of a prosthetic arm for self-feeding. *Nature*, **2008**, 453, 1098-101	50.4	1203
53	High-performance neuroprosthetic control by an individual with tetraplegia. *Lancet, The*, **2013**, 381, 557-64	45	1146
52	Motor cortical representation of speed and direction during reaching. *Journal of Neurophysiology*, **1999**, 82, 2676-92	3.2	588
51	Brain-controlled interfaces: movement restoration with neural prosthetics. *Neuron*, **2006**, 52, 205-20	13.9	569
50	Cortical neural prosthetics. *Annual Review of Neuroscience*, **2004**, 27, 487-507	17	445
49	Intracortical microstimulation of human somatosensory cortex. *Science Translational Medicine*, **2016**, 8, 361ra141	17.5	361
48	An electrocorticographic brain interface in an individual with tetraplegia. *PLoS ONE*, **2013**, 8, e55344	3.7	263
47	Direct cortical representation of drawing. *Science*, **1994**, 265, 540-2	33.3	249
46	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, 19486-91	11.5	212
45	Motor cortical activity during drawing movements: population representation during spiral tracing. *Journal of Neurophysiology*, **1999**, 82, 2693-704	3.2	141
44	Neural interface technology for rehabilitation: exploiting and promoting neuroplasticity. *Physical Medicine and Rehabilitation Clinics of North America*, **2010**, 21, 157-78	2.3	139
43	Control of a brain-computer interface without spike sorting. *Journal of Neural Engineering*, **2009**, 6, 055004	3	121
42	Information conveyed through brain-control: cursor versus robot. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, **2003**, 11, 195-9	4.8	117
41	Motor cortical activity during drawing movements: population representation during lemniscate tracing. *Journal of Neurophysiology*, **1999**, 82, 2705-18	3.2	116
40	Comparison of brain-computer interface decoding algorithms in open-loop and closed-loop control. *Journal of Computational Neuroscience*, **2010**, 29, 73-87	1.4	110
39	Extraction algorithms for cortical control of arm prosthetics. *Current Opinion in Neurobiology*, **2001**, 11, 701-7	7.6	108

38	On the relationship between joint angular velocity and motor cortical discharge during reaching. *Journal of Neurophysiology*, **2001**, 85, 2576-89	3.2	108
37	Differential representation of perception and action in the frontal cortex. *Science*, **2004**, 303, 380-3	33.3	107
36	Bias, optimal linear estimation, and the differences between open-loop simulation and closed-loop performance of spiking-based brain-computer interface algorithms. *Neural Networks*, **2009**, 22, 1203-13	9.1	98
35	Recording from the same neurons chronically in motor cortex. *Journal of Neurophysiology*, **2012**, 107, 1970-8	3.2	90
34	Behavioral and neural correlates of visuomotor adaptation observed through a brain-computer interface in primary motor cortex. *Journal of Neurophysiology*, **2012**, 108, 624-44	3.2	90
33	A reward-modulated hebbian learning rule can explain experimentally observed network reorganization in a brain control task. *Journal of Neuroscience*, **2010**, 30, 8400-10	6.6	82
32	Movement: How the Brain Communicates with the World. *Cell*, **2016**, 164, 1122-1135	56.2	58
31	Blending of brain-machine interface and vision-guided autonomous robotics improves neuroprosthetic arm performance during grasping. *Journal of NeuroEngineering and Rehabilitation*, **2016**, 13, 28	5.3	57
30	Distributed motor processing in cerebral cortex. *Current Opinion in Neurobiology*, **1994**, 4, 840-6	7.6	57
29	Arm trajectory and representation of movement processing in motor cortical activity. *European Journal of Neuroscience*, **2000**, 12, 1851-6	3.5	56
28	Intracortical recording stability in human brain-computer interface users. *Journal of Neural Engineering*, **2018**, 15, 046016	5	53
27	Motor cortical correlates of arm resting in the context of a reaching task and implications for prosthetic control. *Journal of Neuroscience*, **2014**, 34, 6011-22	6.6	42
26	Autonomy infused teleoperation with application to brain computer interface controlled manipulation. *Autonomous Robots*, **2017**, 41, 1401-1422	3	40
25	Motor cortical control of movement speed with implications for brain-machine interface control. *Journal of Neurophysiology*, **2014**, 112, 411-29	3.2	40
24	Collaborative approach in the development of high-performance brain-computer interfaces for a neuroprosthetic arm: translation from animal models to human control. *Clinical and Translational Science*, **2014**, 7, 52-9	4.9	39
23	Useful signals from motor cortex. *Journal of Physiology*, **2007**, 579, 581-601	3.9	39
22	Population vector code: a geometric universal as actuator. *Biological Cybernetics*, **2008**, 98, 509-18	2.8	26
21	Latent inputs improve estimates of neural encoding in motor cortex. *Journal of Neuroscience*, **2010**, 30, 13873-82	6.6	25

20	One motor cortex, two different views. *Nature Neuroscience*, **2000**, 3, 963; author reply 963-5	25.5	20
19	Structural analysis of explanted microelectrode arrays **2013**,		16
18	Progress towards restoring upper limb movement and sensation through intracortical brain-computer interfaces. *Current Opinion in Biomedical Engineering*, **2018**, 8, 84-92	4.4	15
17	Inference from populations: going beyond models. *Progress in Brain Research*, **2011**, 192, 103-12	2.9	14
16	Decoding arm speed during reaching. *Nature Communications*, **2018**, 9, 5243	17.4	13
15	Biomechanics and neural control of movement, 20 years later: what have we learned and what has changed?. *Journal of NeuroEngineering and Rehabilitation*, **2017**, 14, 91	5.3	10
14	Neuroprosthetic control and tetraplegia--authorsreply. *Lancet, The*, **2013**, 381, 1900-1	40	9
13	Viral-Mediated Optogenetic Stimulation of Peripheral Motor Nerves in Non-human Primates. *Frontiers in Neuroscience*, **2019**, 13, 759	5.1	8
12	Bayesian learning in assisted brain-computer interface tasks. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 2740-3	0.9	4
11	Idle state classification using spiking activity and local field potentials in a brain computer interface. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2016**, 2016, 1572-1575	0.9	3
10	Cortical control for prosthetic devices **1996**,		3
9	A MULTIVARIATE GAUSSIAN PROCESS FACTOR MODEL FOR HAND SHAPE DURING REACH-TO-GRASP MOVEMENTS. *Statistica Sinica*, **2015**, 25, 5-24	0.7	3
8	Viral-mediated optogenetic stimulation of peripheral motor nerves in non-human primates		3
7	Distributed processing of movement signaling. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**,	11.5	3
6	Activity in Primary Motor Cortex Related to Visual Feedback. *Cell Reports*, **2019**, 29, 3872-3884.e4	10.6	3
5	Functional network reorganization in motor cortex can be explained by reward-modulated Hebbian learning. *Advances in Neural Information Processing Systems*, **2009**, 2009, 1105-1113	2.2	2
4	Stiffness as a control factor for object manipulation. *Journal of Neurophysiology*, **2019**, 122, 707-720	3.2	1
3	Automatic scan test for detection of functional connectivity between cortex and muscles. *Journal of Neurophysiology*, **2014**, 112, 490-9	3.2	1

2	Progress toward a high-performance neural prosthetic **2013**,		1
1	Beyond synergies: Comment on "Hand synergies: Integration of robotics and neuroscience for understanding the control of biological and artificial hands" by Marco Santello et al. *Physics of Life Reviews*, **2016**, 17, 50-3	2.1	1