Byron M Yu

List of Publications by Year
in descending order

51 papers	7,084 citations	159585 30 h-index	233421 45 g-index
61 all docs	61 docs citations	61 times ranked	4814 citing authors

#	Article	IF	Citations
1	Stimulus onset quenches neural variability: a widespread cortical phenomenon. Nature Neuroscience, 2010, 13, 369-378.	14.8	907
2	Dimensionality reduction for large-scale neural recordings. Nature Neuroscience, 2014, 17, 1500-1509.	14.8	860
3	A high-performance brainâ€"computer interface. Nature, 2006, 442, 195-198.	27.8	628
4	Neural constraints on learning. Nature, 2014, 512, 423-426.	27.8	535
5	Gaussian-Process Factor Analysis for Low-Dimensional Single-Trial Analysis of Neural Population Activity. Journal of Neurophysiology, 2009, 102, 614-635.	1.8	461
6	A high-performance neural prosthesis enabled by control algorithm design. Nature Neuroscience, 2012, 15, 1752-1757.	14.8	454
7	Neural Variability in Premotor Cortex Provides a Signature of Motor Preparation. Journal of Neuroscience, 2006, 26, 3697-3712.	3.6	369
8	Cortical Areas Interact through a Communication Subspace. Neuron, 2019, 102, 249-259.e4.	8.1	239
9	Single-Trial Neural Correlates of Arm Movement Preparation. Neuron, 2011, 71, 555-564.	8.1	216
10	Learning by neural reassociation. Nature Neuroscience, 2018, 21, 607-616.	14.8	170
11	Single-Neuron Stability during Repeated Reaching in Macaque Premotor Cortex. Journal of Neuroscience, 2007, 27, 10742-10750.	3.6	145
12	New neural activity patterns emerge with long-term learning. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15210-15215.	7.1	145
13	Techniques for extracting single-trial activity patterns from large-scale neural recordings. Current Opinion in Neurobiology, 2007, 17, 609-618.	4.2	141
14	Detecting Neural-State Transitions Using Hidden Markov Models for Motor Cortical Prostheses. Journal of Neurophysiology, 2008, 100, 2441-2452.	1.8	141
15	Mixture of Trajectory Models for Neural Decoding of Goal-Directed Movements. Journal of Neurophysiology, 2007, 97, 3763-3780.	1.8	138
16	Roles of Monkey Premotor Neuron Classes in Movement Preparation and Execution. Journal of Neurophysiology, 2010, 104, 799-810.	1.8	122
17	Stabilization of a brainâ€"computer interface via the alignment of low-dimensional spaces of neural activity. Nature Biomedical Engineering, 2020, 4, 672-685.	22.5	118
18	Reference Frames for Reach Planning in Macaque Dorsal Premotor Cortex. Journal of Neurophysiology, 2007, 98, 966-983.	1.8	106

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19	Factor-Analysis Methods for Higher-Performance Neural Prostheses. Journal of Neurophysiology, 2009, 102, 1315-1330.	1.8	95
20	Brainâ€“computer interfaces for dissecting cognitive processes underlying sensorimotor control. Current Opinion in Neurobiology, 2016, 37, 53-58.	4.2	82
21	Slow Drift of Neural Activity as a Signature of Impulsivity in Macaque Visual and Prefrontal Cortex. Neuron, 2020, 108, 551-567.e8.	8.1	82
22	Scaling Properties of Dimensionality Reduction for Neural Populations and Network Models. PLoS Computational Biology, 2016, 12, e1005141.	3.2	76
23	Principles of Corticocortical Communication: Proposed Schemes and Design Considerations. Trends in Neurosciences, 2020, 43, 725-737.	8.6	67
24	Free-paced high-performance brainâ€“computer interfaces. Journal of Neural Engineering, 2007, 4, 336-347.	3.5	58
25	Constraints on neural redundancy. ELife, 2018, 7, .	6.0	56
26	Motor cortical control of movement speed with implications for brain-machine interface control. Journal of Neurophysiology, 2014, 112, 411-429.	1.8	52
27	Self-recalibrating classifiers for intracortical brainâ€“computer interfaces. Journal of Neural Engineering, 2014, 11, 026001.	3.5	51
28	Bridging large-scale neuronal recordings and large-scale network models using dimensionality reduction. Current Opinion in Neurobiology, 2019, 55, 40-47.	4.2	51
29	Computational Neuroscience: Mathematical and Statistical Perspectives. Annual Review of Statistics and Its Application, 2018, 5, 183-214.	7.0	48
30	Stimulus-Driven Population Activity Patterns in Macaque Primary Visual Cortex. PLoS Computational Biology, 2016, 12, e1005185.	3.2	42
31	Internal models for interpreting neural population activity during sensorimotor control. ELife, 2015, 4, .	6.0	41
32	Statistical methods for dissecting interactions between brain areas. Current Opinion in Neurobiology, 2020, 65, 59-69.	4.2	41
33	DataHigh: graphical user interface for visualizing and interacting with high-dimensional neural activity. Journal of Neural Engineering, 2013, 10, 066012.	3.5	39
34	Learning is shaped by abrupt changes in neural engagement. Nature Neuroscience, 2021, 24, 727-736.	14.8	39
35	Feedforward and feedback interactions between visual cortical areas use different population activity patterns. Nature Communications, 2022, 13, 1099.	12.8	36
36	Extracting Low-Dimensional Latent Structure from Time Series in the Presence of Delays. Neural Computation, 2015, 27, 1825-1856.	2.2	32

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37	Distinct population codes for attention in the absence and presence of visual stimulation. Nature Communications, 2018, 9, 4382.	12.8	30
38	Toward Optimal Target Placement for Neural Prosthetic Devices. Journal of Neurophysiology, 2008, 100, 3445-3457.	1.8	24
39	Bridging neuronal correlations and dimensionality reduction. Neuron, 2021, 109, 2740-2754.e12.	8.1	24
40	Population activity structure of excitatory and inhibitory neurons. PLoS ONE, 2017, 12, e0181773.	2.5	24
41	Cortical Neural Prosthesis Performance Improves When Eye Position Is Monitored. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2008, 16, 24-31.	4.9	23
42	How learning unfolds in the brain: toward an optimization view. Neuron, 2021, 109, 3720-3735.	8.1	19
43	A Stable Population Code for Attention in Prefrontal Cortex Leads a Dynamic Attention Code in Visual Cortex. Journal of Neuroscience, 2021, 41, 9163-9176.	3.6	12
44	Improving neural prosthetic system performance by combining plan and peri-movement activity. , 2004, 2004, 4516-9.		7
45	Expectation Propagation for Inference in Non-Linear Dynamical Models with Poisson Observations. , 2006, , .		6
46	Fault tolerance in the brain. Nature, 2016, 532, 449-450.	27.8	6
47	High-performance neural prosthetic control along nstructed paths. , 2011, , .		2
48	A Path to Understanding How Motor Cortex Influences Muscle Activity. Neuron, 2017, 95, 476-478.	8.1	2
49	Shedding light on learning. Nature Neuroscience, 2014, 17, 746-747.	14.8	1
50	785 The Speed at Which Reach Movement Plans Can Be Decoded from the Cortex and Its Implications for High-performance Neural Prosthetic Arm Systems. Neurosurgery, 2004, 55, 481-481.	1.1	0
51	Optimal Target Placement for Neural Communication Prostheses. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0