John D Murray

List of Publications by Year
in descending order

59 papers	7,455 citations	126907 33 h-index	144013 57 g-index
93 all docs	93 docs citations	93 times ranked	8227 citing authors

#	Article	IF	Citations
1	Computational Modeling of Electroencephalography and Functional Magnetic Resonance Imaging Paradigms Indicates a Consistent Loss of Pyramidal Cell Synaptic Gain in Schizophrenia. Biological Psychiatry, 2022, 91, 202-215.	1.3	40
2	Transient neuronal suppression for exploitation of new sensory evidence. Nature Communications, 2022, 13, 23.	12.8	4
3	Effects of Altered Excitation-Inhibition Balance on Decision Making in a Cortical Circuit Model. Journal of Neuroscience, 2022, 42, 1035-1053.	3.6	33
4	Reward and loss incentives improve spatial working memory by shaping trial-by-trial posterior frontoparietal signals. NeuroImage, 2022, 254, 119139.	4.2	4
5	Illness Phase as a Key Assessment and Intervention Window for Psychosis. Biological Psychiatry Global Open Science, 2022, , .	2.2	0
6	Quantum computing at the frontiers of biological sciences. Nature Methods, 2021, 18, 701-709.	19.0	64
7	Excitatory-inhibitory tone shapes decision strategies in a hierarchical neural network model of multi-attribute choice. PLoS Computational Biology, 2021, 17, e1008791.	3.2	18
8	Mapping brain-behavior space relationships along the psychosis spectrum. ELife, 2021, 10, .	6.0	21
9	Transcriptomics-informed large-scale cortical model captures topography of pharmacological neuroimaging effects of LSD. ELife, 2021, 10, .	6.0	22
10	Trial-to-Trial Variability of Spiking Delay Activity in Prefrontal Cortex Constrains Burst-Coding Models of Working Memory. Journal of Neuroscience, 2021, 41, 8928-8945.	3.6	8
11	Timescales of cognition in the brain. Current Opinion in Behavioral Sciences, 2021, 41, 30-37.	3.9	28
12	PsychRNN: An Accessible and Flexible Python Package for Training Recurrent Neural Network Models on Cognitive Tasks. ENeuro, 2021, 8, ENEURO.0427-20.2020.	1.9	10
13	Sensory-motor cortices shape functional connectivity dynamics in the human brain. Nature Communications, 2021, 12, 6373.	12.8	48
14	Confluence of Timing and Reward Biases in Perceptual Decision-Making Dynamics. Journal of Neuroscience, 2020, 40, 7326-7342.	3.6	16
15	Generative modeling of brain maps with spatial autocorrelation. NeuroImage, 2020, 220, 117038.	4.2	250
16	Psilocybin Induces Time-Dependent Changes in Global Functional Connectivity. Biological Psychiatry, 2020, 88, 197-207.	1.3	104
17	A circuit mechanism for decision-making biases and NMDA receptor hypofunction. ELife, 2020, 9, .	6.0	14
18	A flexible framework for simulating and fitting generalized drift-diffusion models. ELife, 2020, 9, .	6.0	61

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19	Refining the Empirical Constraints on Computational Models of Spatial Working Memory in Schizophrenia. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 2020, 5, 913-922.	1.5	4
20	Structural Covariance Reveals Alterations in Control and Salience Network Integrity in Chronic Schizophrenia. Cerebral Cortex, 2019, 29, 5269-5284.	2.9	29
21	Hierarchical Heterogeneity across Human Cortex Shapes Large-Scale Neural Dynamics. Neuron, 2019, 101, 1181-1194.e13.	8.1	271
22	Multimodal gradients across mouse cortex. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4689-4695.	7.1	186
23	Cortical Circuit Models in Psychiatry. , 2018, , 3-25.		6
24	Changes in global and thalamic brain connectivity in LSD-induced altered states of consciousness are attributable to the 5-HT2A receptor. ELife, 2018, 7, .	6.0	244
25	Meeting Emerging Challenges and Opportunities in Psychiatry Through Computational Neuroscience. , 2018, , xiii-xxxi.		0
26	Hierarchy of transcriptomic specialization across human cortex captured by structural neuroimaging topography. Nature Neuroscience, 2018, 21, 1251-1259.	14.8	459
27	Biophysical Modeling of Large-Scale Brain Dynamics and Applications for ComputationalÂPsychiatry. Biological Psychiatry: Cognitive Neuroscience and Neuroimaging, 2018, 3, 777-787.	1.5	35
28	Persistent Spiking Activity Underlies Working Memory. Journal of Neuroscience, 2018, 38, 7020-7028.	3.6	229
29	Effects of reward on spatial working memory in schizophrenia.. Journal of Abnormal Psychology, 2018, 127, 695-709.	1.9	9
30	Altered Global Signal Topography in Schizophrenia. Cerebral Cortex, 2017, 27, 5156-5169.	2.9	61
31	Impaired Tuning of Neural Ensembles and the Pathophysiology of Schizophrenia: A Translational and Computational Neuroscience Perspective. Biological Psychiatry, 2017, 81, 874-885.	1.3	151
32	Rebalancing Altered Computations: Considering the Role of Neural Excitation and Inhibition Balance Across the Psychiatric Spectrum. Biological Psychiatry, 2017, 81, 816-817.	1.3	15
33	Computational Psychiatry and the Challenge of Schizophrenia. Schizophrenia Bulletin, 2017, 43, 473-475.	4.3	38
34	Searching for Cross-Diagnostic Convergence: Neural Mechanisms Governing Excitation and Inhibition Balance in Schizophrenia and Autism Spectrum Disorders. Biological Psychiatry, 2017, 81, 848-861.	1.3	217
35	Stable population coding for working memory coexists with heterogeneous neural dynamics in prefrontal cortex. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 394-399.	7.1	289
36	Working Memory and Decision-Making in a Frontoparietal Circuit Model. Journal of Neuroscience, 2017, 37, 12167-12186.	3.6	121

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37	Toward understanding thalamocortical dysfunction in schizophrenia through computational models of neural circuit dynamics. Schizophrenia Research, 2017, 180, 70-77.	2.0	47
38	Schizophrenia is associated with a pattern of spatial working memory deficits consistent with cortical disinhibition. Schizophrenia Research, 2017, 181, 107-116.	2.0	53
39	Ketamineâ€™s Antidepressant Actions: Potential Mechanisms in the Primate Medial Prefrontal Circuits That Represent Aversive Experience. Biological Psychiatry, 2016, 79, 713-715.	1.3	4
40	25th Annual Computational Neuroscience Meeting: CNS-2016. BMC Neuroscience, 2016, 17, 54.	1.9	81
41	Feedforward and feedback frequency-dependent interactions in a large-scale laminar network of the primate cortex. Science Advances, 2016, 2, e1601335.	10.3	158
42	A dendritic disinhibitory circuit mechanism for pathway-specific gating. Nature Communications, 2016, 7, 12815.	12.8	118
43	Functional hierarchy underlies preferential connectivity disturbances in schizophrenia. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E219-28.	7.1	115
44	Functional connectivity change as shared signal dynamics. Journal of Neuroscience Methods, 2016, 259, 22-39.	2.5	58
45	Simulating Cortical Feedback Modulation as Changes in Excitation and Inhibition in a Cortical Circuit Model. ENeuro, 2016, 3, ENEURO.0208-16.2016.	1.9	11
46	Early-Course Unmedicated Schizophrenia Patients Exhibit Elevated Prefrontal Connectivity Associated with Longitudinal Change. Journal of Neuroscience, 2015, 35, 267-286.	3.6	153
47	N-Methyl-D-Aspartate Receptor Antagonist Effects on Prefrontal Cortical Connectivity Better Model Early Than Chronic Schizophrenia. Biological Psychiatry, 2015, 77, 569-580.	1.3	144
48	Bridging Levels of Understanding in Schizophrenia Through Computational Modeling. Clinical Psychological Science, 2015, 3, 433-459.	4.0	50
49	Association of Thalamic Dysconnectivity and Conversion to Psychosis in Youth and Young Adults at Elevated Clinical Risk. JAMA Psychiatry, 2015, 72, 882.	11.0	284
50	Linking Microcircuit Dysfunction to Cognitive Impairment: Effects of Disinhibition Associated with Schizophrenia in a Cortical Working Memory Model. Cerebral Cortex, 2014, 24, 859-872.	2.9	213
51	Characterizing Thalamo-Cortical Disturbances in Schizophrenia and Bipolar Illness. Cerebral Cortex, 2014, 24, 3116-3130.	2.9	415
52	Mediodorsal and Visual Thalamic Connectivity Differ in Schizophrenia and Bipolar Disorder With and Without Psychosis History. Schizophrenia Bulletin, 2014, 40, 1227-1243.	4.3	84
53	Altered global brain signal in schizophrenia. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7438-7443.	7.1	347
54	A hierarchy of intrinsic timescales across primate cortex. Nature Neuroscience, 2014, 17, 1661-1663.	14.8	734

#	ARTICLE	IF	CITATIONS
55	Connectivity, Pharmacology, and Computation: Toward a Mechanistic Understanding of Neural System Dysfunction in Schizophrenia. Frontiers in Psychiatry, 2013, 4, 169.	2.6	68
56	NMDA receptor function in large-scale anticorrelated neural systems with implications for cognition and schizophrenia. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16720-16725.	7.1	226
57	The role of default network deactivation in cognition and disease. Trends in Cognitive Sciences, 2012, 16, 584-592.	7.8	805
58	What Can Tracking Fluctuations in Dozens of Sensory Neurons Tell about Selective Attention?. Frontiers in Systems Neuroscience, 2011, 5, 35.	2.5	1
59	Enhancing single-molecule photostability by optical feedback from quantum jump detection. Applied Physics Letters, 2008, 93, .	3.3	14