Mark D Humphries

List of Publications by Year
in descending order

49 papers	3,267 citations	331642 21 h-index	276858 41 g-index
63 all docs	63 docs citations	63 times ranked	4296 citing authors

#	Article	IF	Citations
1	Bayesian Mapping of the Striatal Microcircuit Reveals Robust Asymmetries in the Probabilities and Distances of Connections. Journal of Neuroscience, 2022, 42, 1417-1435.	3.6	0
2	Activity Subspaces in Medial Prefrontal Cortex Distinguish States of the World. Journal of Neuroscience, 2022, 42, 4131-4146.	3.6	5
3	Basal Ganglia: Mechanisms for Action Selection. , 2022, , 410-415.		0
4	Strong and weak principles of neural dimension reduction. Neurons, Behavior, Data Analysis, and Theory, 2021, 5, .	1.2	13
5	Making decisions in the dark basement of the brain: A look back at the GPR model of action selection and the basal ganglia. Biological Cybernetics, 2021, 115, 323-329.	1.3	8
6	Spectral estimation for detecting low-dimensional structure in networks using arbitrary null models. PLoS ONE, 2021, 16, e0254057.	2.5	2
7	Prediction of Choice from Competing Mechanosensory and Choice-Memory Cues during Active Tactile Decision Making. Journal of Neuroscience, 2019, 39, 3921-3933.	3.6	28
8	Maladaptive striatal plasticity and abnormal rewardâ€learning in cervical dystonia. European Journal of Neuroscience, 2019, 50, 3191-3204.	2.6	15
9	Medial prefrontal cortex population activity is plastic irrespective of learning. Journal of Neuroscience, 2019, 39, 1370-17.	3.6	13
10	Insights into Parkinsonâ€™s disease from computational models of the basal ganglia. Journal of Neurology, Neurosurgery and Psychiatry, 2018, 89, 1181-1188.	1.9	54
11	A probabilistic, distributed, recursive mechanism for decision-making in the brain. PLoS Computational Biology, 2018, 14, e1006033.	3.2	14
12	An ensemble code in medial prefrontal cortex links prior events to outcomes during learning. Nature Communications, 2018, 9, 2204.	12.8	15
13	Dynamical networks: Finding, measuring, and tracking neural population activity using network science. Network Neuroscience, 2017, 1, 324-338.	2.6	19
14	A spiral attractor network drives rhythmic locomotion. ELife, 2017, 6, .	6.0	32
15	PO079â€…Cervical dystonia is associated with abnormal reward based reinforcement learning. Journal of Neurology, Neurosurgery and Psychiatry, 2017, 88, A32.2-A32.	1.9	0
16	The Goldilocks zone in neural circuits. ELife, 2016, 5, .	6.0	7
17	A New Framework for Cortico-Striatal Plasticity: Behavioural Theory Meets In Vitro Data at the Reinforcement-Action Interface. PLoS Biology, 2015, 13, e1002034.	5.6	102
18	Modular Deconstruction Reveals the Dynamical and Physical Building Blocks of a Locomotion Motor Program. Neuron, 2015, 86, 304-318.	8.1	57

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19	Finding communities in sparse networks. Scientific Reports, 2015, 5, 8828.	3.3	17
20	Early hypersynchrony in juvenile PINK1Ã¢Ë†â€™/Ã¢Ë†â€™ motor cortex is rescued by antidromic stimulation. Frontiers in Systems Neuroscience, 2014, 8, 95.	2.5	13
21	Dendrites Enhance Both Single Neuron and Network Computation. Springer Series in Computational Neuroscience, 2014, , 365-380.	0.3	3
22	Striatal disorders dissociate mechanisms of enhanced and impaired response selection â€" Evidence from cognitive neurophysiology and computational modelling. NeuroImage: Clinical, 2014, 4, 623-634.	2.7	20
23	Basal Ganglia: Mechanisms for Action Selection. , 2014, , 1-7.		3
24	A difficult classification for neurons without dendrites. , 2013, , .		0
25	Population-wide distributions of neural activity during perceptual decision-making. Progress in Neurobiology, 2013, 103, 156-193.	5.7	71
26	Passive Dendrites Enable Single Neurons to Compute Linearly Non-separable Functions. PLoS Computational Biology, 2013, 9, e1002867.	3.2	68
27	Transient and steady-state selection in the striatal microcircuit. Frontiers in Computational Neuroscience, 2013, 7, 192.	2.1	35
28	Integrating cortico-limbic-basal ganglia architectures for learning model-based and model-free navigation strategies. Frontiers in Behavioral Neuroscience, 2012, 6, 79.	2.0	72
29	Dopaminergic control of the exploration-exploitation trade-off via the basal ganglia. Frontiers in Neuroscience, 2012, 6, 9.	2.8	137
30	Network effects of subthalamic deep brain stimulation drive a unique mixture of responses in basal ganglia output. European Journal of Neuroscience, 2012, 36, 2240-2251.	2.6	46
31	How Degrading Networks Can Increase Cognitive Functions. Lecture Notes in Computer Science, 2012, , 185-192.	1.3	2
32	Onset of pup locomotion coincides with loss of NR2C/D-mediated cortico-striatal EPSCs and dampening of striatal network immature activity. Frontiers in Cellular Neuroscience, 2011, 5, 24.	3.7	49
33	Spike-Train Communities: Finding Groups of Similar Spike Trains. Journal of Neuroscience, 2011, 31, 2321-2336.	3.6	73
34	BRAHMS: Novel middleware for integrated systems computation. Advanced Engineering Informatics, 2010, 24, 49-61.	8.0	21
35	Reconstructing the Three-Dimensional GABAergic Microcircuit of the Striatum. PLoS Computational Biology, 2010, 6, e1001011.	3.2	44
36	The ventral basal ganglia, a selection mechanism at the crossroads of space, strategy, and reward.. Progress in Neurobiology, 2010, 90, 385-417.	5.7	326

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37	Capturing dopaminergic modulation and bimodal membrane behaviour of striatal medium spiny neurons in accurate, reduced models. Frontiers in Computational Neuroscience, 2009, 3, 26.	2.1	59
38	The dual-route hypothesis: evaluating a neurocomputational model of fear conditioning in rats. Connection Science, 2009, 21, 15-37.	3.0	19
39	Dopamine-modulated dynamic cell assemblies generated by the GABAergic striatal microcircuit. Neural Networks, 2009, 22, 1174-1188.	5.9	117
40	Technical integration of hippocampus, basal ganglia and physical models for spatial navigation. Frontiers in Neuroinformatics, 2009, 3, 6.	2.5	8
41	Network â€˜Small-World-Nessâ€™: A Quantitative Method for Determining Canonical Network Equivalence. PLoS ONE, 2008, 3, e0002051.	2.5	1,098
42	Solution Methods for a New Class of Simple Model Neurons. Neural Computation, 2007, 19, 3216-3225.	2.2	13
43	Who dominates who in the dark basements of the brain?. Behavioral and Brain Sciences, 2007, 30, 104-105.	0.7	0
44	A robot model of the basal ganglia: Behavior and intrinsic processing. Neural Networks, 2006, 19, 31-61.	5.9	167
45	A Physiologically Plausible Model of Action Selection and Oscillatory Activity in the Basal Ganglia. Journal of Neuroscience, 2006, 26, 12921-12942.	3.6	317
46	Is There an Integrative Center in the Vertebrate Brain-Stem? A Robotic Evaluation of a Model of the Reticular Formation Viewed as an Action Selection Device. Adaptive Behavior, 2005, 13, 97-113.	1.9	16
47	The Robot Basal Ganglia:. Advances in Behavioral Biology, 2002, , 349-358.	0.2	9
48	A pulsed neural network model of bursting in the basal ganglia. Neural Networks, 2001, 14, 845-863.	5.9	23
49	The medial reticular formation: a brainstem substrate for simple action selection?. , 0, , 300-329.		0