Nathaniel D Daw

List of Publications by Year
in descending order

104 papers	20,750 citations	23567 58 h-index	30922 102 g-index
136 all docs	136 docs citations	136 times ranked	11425 citing authors

#	Article	IF	Citations
1	Restrictive eating across a spectrum from healthy to unhealthy: behavioral and neural mechanisms. Psychological Medicine, 2022, 52, 1755-1764.	4.5	27
2	The temporal dynamics of opportunity costs: A normative account of cognitive fatigue and boredom.. Psychological Review, 2022, 129, 564-585.	3.8	30
3	Increased and biased deliberation in social anxiety. Nature Human Behaviour, 2022, 6, 146-154.	12.0	21
4	Rat Anterior Cingulate Cortex Continuously Signals Decision Variables in a Patch Foraging Task. Journal of Neuroscience, 2022, 42, 5730-5744.	3.6	10
5	Deficient Goal-Directed Control in a Population Characterized by Extreme Goal Pursuit. Journal of Cognitive Neuroscience, 2021, 33, 463-481.	2.3	25
6	Changes in brain and behavior during food-based decision-making following treatment of anorexia nervosa. Journal of Eating Disorders, 2021, 9, 48.	2.7	10
7	Experience replay is associated with efficient nonlocal learning. Science, 2021, 372, .	12.6	83
8	Formalizing planning and information search in naturalistic decision-making. Nature Neuroscience, 2021, 24, 1051-1064.	14.8	40
9	Linear reinforcement learning in planning, grid fields, and cognitive control. Nature Communications, 2021, 12, 4942.	12.8	36
10	Context-sensitive valuation and learning. Current Opinion in Behavioral Sciences, 2021, 41, 122-127.	3.9	20
11	A model for learning based on the joint estimation of stochasticity and volatility. Nature Communications, 2021, 12, 6587.	12.8	45
12	In for a penny, in for a pound: examining motivated memory through the lens of retrieved context models. Learning and Memory, 2021, 28, 445-456.	1.3	7
13	Comparison of the Association Between Goal-Directed Planning and Self-reported Compulsivity vs Obsessive-Compulsive Disorder Diagnosis. JAMA Psychiatry, 2020, 77, 77.	11.0	54
14	Biased belief updating and suboptimal choice in foraging decisions. Nature Communications, 2020, 11, 3417.	12.8	22
15	Beyond the Average View of Dopamine. Trends in Cognitive Sciences, 2020, 24, 499-501.	7.8	6
16	Anxiety, Avoidance, and Sequential Evaluation. Computational Psychiatry, 2020, 4, 1.	2.0	34
17	A simple model for learning in volatile environments. PLoS Computational Biology, 2020, 16, e1007963.	3.2	39
18	Sympathetic involvement in time-constrained sequential foraging. Cognitive, Affective and Behavioral Neuroscience, 2020, 20, 730-745.	2.0	7

#	Article	IF	Citations
19	The opportunity cost of time modulates cognitive effort. Neuropsychologia, 2019, 123, 92-105.	1.6	80
20	Hierarchical Bayesian inference for concurrent model fitting and comparison for group studies. PLoS Computational Biology, 2019, 15, e1007043.	3.2	63
21	Specialized coding of sensory, motor and cognitive variables in VTA dopamine neurons. Nature, 2019, 570, 509-513.	27.8	361
22	Slow escape decisions are swayed by trait anxiety. Nature Human Behaviour, 2019, 3, 702-708.	12.0	60
23	A distinct inferential mechanism for delusions in schizophrenia. Brain, 2019, 142, 1797-1812.	7.6	67
24	Hippocampal Contributions to Model-Based Planning and Spatial Memory. Neuron, 2019, 102, 683-693.e4.	8.1	119
25	Role of Human Ventromedial Prefrontal Cortex in Learning and Recall of Enhanced Extinction. Journal of Neuroscience, 2019, 39, 3264-3276.	3.6	58
26	Reduced model-based decision-making in gambling disorder. Scientific Reports, 2019, 9, 19625.	3.3	36
27	A retrieved context model of the emotional modulation of memory.. Psychological Review, 2019, 126, 455-485.	3.8	63
28	A particle filtering account of selective attention during learning. , 2019, , .		4
29	Reward prediction error does not explain movement selectivity in DMS-projecting dopamine neurons. ELife, 2019, 8, .	6.0	45
30	Rats exhibit similar biases in foraging and intertemporal choice tasks. ELife, 2019, 8, .	6.0	20
31	How cognitive and reactive fear circuits optimize escape decisions in humans. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3186-3191.	7.1	102
32	More Than the Sum of Its Parts: A Role for the Hippocampus in Configural Reinforcement Learning. Neuron, 2018, 98, 645-657.e6.	8.1	49
33	A Perceptual Inference Mechanism for Hallucinations Linked to Striatal Dopamine. Current Biology, 2018, 28, 503-514.e4.	3.9	120
34	Surviving threats: neural circuit and computational implications of a new taxonomy of defensive behaviour. Nature Reviews Neuroscience, 2018, 19, 269-282.	10.2	235
35	Neural mediators of changes of mind about perceptual decisions. Nature Neuroscience, 2018, 21, 617-624.	14.8	122
36	Prioritized memory access explains planning and hippocampal replay. Nature Neuroscience, 2018, 21, 1609-1617.	14.8	221

#	Article	IF	Citations
37	Are we of two minds?. Nature Neuroscience, 2018, 21, 1497-1499.	14.8	43
38	Offline replay supports planning in human reinforcement learning. ELife, 2018, 7, .	6.0	91
39	Self-evaluation of decision-making: A general Bayesian framework for metacognitive computation.. Psychological Review, 2017, 124, 91-114.	3.8	338
40	Computational approaches to fMRI analysis. Nature Neuroscience, 2017, 20, 304-313.	14.8	185
41	Chronic and Acute Stress Promote Overexploitation in Serial Decision Making. Journal of Neuroscience, 2017, 37, 5681-5689.	3.6	63
42	Low lifetime stress exposure is associated with reduced stimulusâ€"response memory. Learning and Memory, 2017, 24, 162-168.	1.3	21
43	Independent Neural Computation of Value from Other People's Confidence. Journal of Neuroscience, 2017, 37, 673-684.	3.6	44
44	Increased locus coeruleus tonic activity causes disengagement from a patch-foraging task. Cognitive, Affective and Behavioral Neuroscience, 2017, 17, 1073-1083.	2.0	73
45	The successor representation in human reinforcement learning. Nature Human Behaviour, 2017, 1, 680-692.	12.0	250
46	Reminders of past choices bias decisions for reward in humans. Nature Communications, 2017, 8, 15958.	12.8	155
47	Reinforcement Learning and Episodic Memory in Humans and Animals: An Integrative Framework. Annual Review of Psychology, 2017, 68, 101-128.	17.7	280
48	Suboptimal Criterion Learning in Static and Dynamic Environments. PLoS Computational Biology, 2017, 13, e1005304.	3.2	30
49	Predictive representations can link model-based reinforcement learning to model-free mechanisms. PLoS Computational Biology, 2017, 13, e1005768.	3.2	203
50	Characterizing a psychiatric symptom dimension related to deficits in goal-directed control. ELife, 2016, 5, .	6.0	365
51	Taking Psychiatry Research Online. Neuron, 2016, 91, 19-23.	8.1	79
52	From Creatures of Habit to Goal-Directed Learners. Psychological Science, 2016, 27, 848-858.	3.3	194
53	Motivational Context Modulates Prediction Error Response in Schizophrenia. Schizophrenia Bulletin, 2016, 42, 1467-1475.	4.3	37
54	Fronto-striatal organization: Defining functional and microstructural substrates of behavioural flexibility. Cortex, 2016, 74, 118-133.	2.4	155

#	Article	IF	Citations
55	Reward and choice encoding in terminals of midbrain dopamine neurons depends on striatal target. Nature Neuroscience, 2016, 19, 845-854.	14.8	273
56	Reduced model-based decision-making in schizophrenia.. Journal of Abnormal Psychology, 2016, 125, 777-787.	1.9	85
57	Variability in Dopamine Genes Dissociates Model-Based and Model-Free Reinforcement Learning. Journal of Neuroscience, 2016, 36, 1211-1222.	3.6	95
58	Valence-dependent influence of serotonin depletion on model-based choice strategy. Molecular Psychiatry, 2016, 21, 624-629.	7.9	64
59	Dopamine selectively remediates â€˜model-basedâ€™ reward learning: a computational approach. Brain, 2016, 139, 355-364.	7.6	111
60	Instructed knowledge shapes feedback-driven aversive learning in striatum and orbitofrontal cortex, but not the amygdala. ELife, 2016, 5, .	6.0	75
61	The expanding role of dopamine. ELife, 2016, 5, e15963.	6.0	12
62	Depression: A Decision-Theoretic Analysis. Annual Review of Neuroscience, 2015, 38, 1-23.	10.7	150
63	Human representation of visuo-motor uncertainty as mixtures of orthogonal basis distributions. Nature Neuroscience, 2015, 18, 1152-1158.	14.8	32
64	Model-based choices involve prospective neural activity. Nature Neuroscience, 2015, 18, 767-772.	14.8	225
65	Model-based learning protects against forming habits. Cognitive, Affective and Behavioral Neuroscience, 2015, 15, 523-536.	2.0	232
66	Learning the opportunity cost of time in a patch-foraging task. Cognitive, Affective and Behavioral Neuroscience, 2015, 15, 837-853.	2.0	141
67	Of goals and habits. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13749-13750.	7.1	17
68	Deciding How To Decide: Self-Control and Meta-Decision Making. Trends in Cognitive Sciences, 2015, 19, 700-710.	7.8	127
69	Rethinking Extinction. Neuron, 2015, 88, 47-63.	8.1	227
70	Integrating memories to guide decisions. Current Opinion in Behavioral Sciences, 2015, 5, 85-90.	3.9	97
71	Cognitive Control Predicts Use of Model-based Reinforcement Learning. Journal of Cognitive Neuroscience, 2015, 27, 319-333.	2.3	169
72	Multiple memory systems as substrates for multiple decision systems. Neurobiology of Learning and Memory, 2015, 117, 4-13.	1.9	78

#	Article	IF	Citations
73	Disorders of compulsivity: a common bias towards learning habits. Molecular Psychiatry, 2015, 20, 345-352.	7.9	523
74	The algorithmic anatomy of model-based evaluation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130478.	4.0	144
75	Episodic Memory Encoding Interferes with Reward Learning and Decreases Striatal Prediction Errors. Journal of Neuroscience, 2014, 34, 14901-14912.	3.6	109
76	Cortical and Hippocampal Correlates of Deliberation during Model-Based Decisions for Rewards in Humans. PLoS Computational Biology, 2013, 9, e1003387.	3.2	71
77	The Curse of Planning. Psychological Science, 2013, 24, 751-761.	3.3	308
78	The Irrationality of Categorical Perception. Journal of Neuroscience, 2013, 33, 19060-19070.	3.6	33
79	Working-memory capacity protects model-based learning from stress. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20941-20946.	7.1	393
80	The ubiquity of model-based reinforcement learning. Current Opinion in Neurobiology, 2012, 22, 1075-1081.	4.2	290
81	Dissociating hippocampal and striatal contributions to sequential prediction learning. European Journal of Neuroscience, 2012, 35, 1011-1023.	2.6	98
82	Surprise! Neural correlates of Pearceâ€"Hall and Rescorlaâ€"Wagner coexist within the brain. European Journal of Neuroscience, 2012, 35, 1190-1200.	2.6	157
83	Differential roles of human striatum and amygdala in associative learning. Nature Neuroscience, 2011, 14, 1250-1252.	14.8	300
84	Serotonin and Dopamine: Unifying Affective, Activational, and Decision Functions. Neuropsychopharmacology, 2011, 36, 98-113.	5.4	382
85	Model-Based Influences on Humans' Choices and Striatal Prediction Errors. Neuron, 2011, 69, 1204-1215.	8.1	1,388
86	Multiplicity of control in the basal ganglia: computational roles of striatal subregions. Current Opinion in Neurobiology, 2011, 21, 374-380.	4.2	89
87	Neural Correlates of Forward Planning in a Spatial Decision Task in Humans. Journal of Neuroscience, 2011, 31, 5526-5539.	3.6	157
88	Signals in Human Striatum Are Appropriate for Policy Update Rather than Value Prediction. Journal of Neuroscience, 2011, 31, 5504-5511.	3.6	132
89	Grid Cells, Place Cells, and Geodesic Generalization for Spatial Reinforcement Learning. PLoS Computational Biology, 2011, 7, e1002235.	3.2	50
90	Trial-by-trial data analysis using computational models. , 2011, , 3-38.		230

#	Article	IF	Citations
91	States versus Rewards: Dissociable Neural Prediction Error Signals Underlying Model-Based and Model-Free Reinforcement Learning. Neuron, 2010, 66, 585-595.	8.1	935
92	Human Reinforcement Learning Subdivides Structured Action Spaces by Learning Effector-Specific Values. Journal of Neuroscience, 2009, 29, 13524-13531.	3.6	112
93	Reinforcement learning and higher level cognition: Introduction to special issue. Cognition, 2009, 113, 259-261.	2.2	22
94	Decision theory, reinforcement learning, and the brain. Cognitive, Affective and Behavioral Neuroscience, 2008, 8, 429-453.	2.0	427
95	Tonic dopamine: opportunity costs and the control of response vigor. Psychopharmacology, 2007, 191, 507-520.	3.1	969
96	Bayesian theories of conditioning in a changing world. Trends in Cognitive Sciences, 2006, 10, 294-300.	7.8	456
97	Cortical substrates for exploratory decisions in humans. Nature, 2006, 441, 876-879.	27.8	1,790
98	The misbehavior of value and the discipline of the will. Neural Networks, 2006, 19, 1153-1160.	5.9	310
99	The computational neurobiology of learning and reward. Current Opinion in Neurobiology, 2006, 16, 199-204.	4.2	466
100	Representation and Timing in Theories of the Dopamine System. Neural Computation, 2006, 18, 1637-1677.	2.2	170
101	Uncertainty-based competition between prefrontal and dorsolateral striatal systems for behavioral control. Nature Neuroscience, 2005, 8, 1704-1711.	14.8	2,108
102	NEUROSCIENCE: Enhanced: Matchmaking. Science, 2004, 304, 1753-1754.	12.6	7
103	Long-Term Reward Prediction in TD Models of the Dopamine System. Neural Computation, 2002, 14, 2567-2583.	2.2	54
104	Opponent interactions between serotonin and dopamine. Neural Networks, 2002, 15, 603-616.	5.9	744