Naoshige Uchida

List of Publications by Year
in descending order

62 papers	12,799 citations	53660 45 h-index	118652 62 g-index
86 all docs	86 docs citations	86 times ranked	10874 citing authors

#	Article	IF	Citations
1	The role of state uncertainty in the dynamics of dopamine. Current Biology, 2022, 32, 1077-1087.e9.	1.8	29
2	A gradual temporal shift of dopamine responses mirrors the progression of temporal difference error in machine learning. Nature Neuroscience, 2022, 25, 1082-1092.	7.1	32
3	Dopamine signals as temporal difference errors: recent advances. Current Opinion in Neurobiology, 2021, 67, 95-105.	2.0	26
4	Distributional Reinforcement Learning in the Brain. Trends in Neurosciences, 2020, 43, 980-997.	4.2	44
5	A Unified Framework for Dopamine Signals across Timescales. Cell, 2020, 183, 1600-1616.e25.	13.5	161
6	A distributional code for value in dopamine-based reinforcement learning. Nature, 2020, 577, 671-675.	13.7	262
7	Reinforcement biases subsequent perceptual decisions when confidence is low, a widespread behavioral phenomenon. ELife, 2020, 9, .	2.8	71
8	Distinct temporal difference error signals in dopamine axons in three regions of the striatum in a decision-making task. ELife, 2020, 9, .	2.8	58
9	Believing in dopamine. Nature Reviews Neuroscience, 2019, 20, 703-714.	4.9	156
10	Editorial overview: Neurobiology of behavior. Current Opinion in Neurobiology, 2018, 49, iv-ix.	2.0	2
11	Functional circuit architecture underlying parental behaviour. Nature, 2018, 556, 326-331.	13.7	290
12	The Medial Prefrontal Cortex Shapes Dopamine Reward Prediction Errors under State Uncertainty. Neuron, 2018, 98, 616-629.e6.	3.8	100
13	Multiple Dopamine Systems: Weal and Woe of Dopamine. Cold Spring Harbor Symposia on Quantitative Biology, 2018, 83, 83-95.	2.0	49
14	Dopamine neurons projecting to the posterior striatum reinforce avoidance of threatening stimuli. Nature Neuroscience, 2018, 21, 1421-1430.	7.1	258
15	Belief state representation in the dopamine system. Nature Communications, 2018, 9, 1891.	5.8	75
16	Dopamine reward prediction errors reflect hidden-state inference across time. Nature Neuroscience, 2017, 20, 581-589.	7.1	152
17	Neural Circuitry of Reward Prediction Error. Annual Review of Neuroscience, 2017, 40, 373-394.	5.0	273
18	Somatosensory Cortex Plays an Essential Role in Forelimb Motor Adaptation in Mice. Neuron, 2017, 93, 1493-1503.e6.	3.8	144

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19	A Self-Killing Rabies Virus That Leaves a Trace on the DNA. Trends in Neurosciences, 2017, 40, 589-591.	4.2	1
20	Opposite initialization to novel cues in dopamine signaling in ventral and posterior striatum in mice. ELife, 2017, 6, .	2.8	192
21	Slow motion. ELife, 2017, 6, .	2.8	4
22	Distributed and Mixed Information in Monosynaptic Inputs to Dopamine Neurons. Neuron, 2016, 91, 1374-1389.	3.8	195
23	Dopamine neurons share common response function for reward prediction error. Nature Neuroscience, 2016, 19, 479-486.	7.1	241
24	Demixed principal component analysis of neural population data. ELife, 2016, 5, .	2.8	397
25	Midbrain dopamine neurons signal aversion in a reward-context-dependent manner. ELife, 2016, 5, .	2.8	88
26	Monkeys in a Prisonerâ€™s Dilemma. Cell, 2015, 160, 1046-1048.	13.5	1
27	Habenula Lesions Reveal that Multiple Mechanisms Underlie Dopamine Prediction Errors. Neuron, 2015, 87, 1304-1316.	3.8	143
28	Arithmetic and local circuitry underlying dopamine prediction errors. Nature, 2015, 525, 243-246.	13.7	297
29	Serotonergic neurons signal reward and punishment on multiple timescales. ELife, 2015, 4, .	2.8	282
30	Dopamine neurons projecting to the posterior striatum form an anatomically distinct subclass. ELife, 2015, 4, e10032.	2.8	245
31	An excitatory paraventricular nucleus to AgRP neuron circuit that drives hunger. Nature, 2014, 507, 238-242.	13.7	526
32	Bilingual neurons release glutamate and GABA. Nature Neuroscience, 2014, 17, 1432-1434.	7.1	12
33	Organization of Monosynaptic Inputs to the Serotonin and Dopamine Neuromodulatory Systems. Cell Reports, 2014, 8, 1105-1118.	2.9	213
34	Coding and Transformations in the Olfactory System. Annual Review of Neuroscience, 2014, 37, 363-385.	5.0	134
35	Opening the black box: dopamine, predictions, and learning. Trends in Cognitive Sciences, 2013, 17, 430-431.	4.0	11
36	Division of Labor for Division: Inhibitory Interneurons with Different Spatial Landscapes in the Olfactory System. Neuron, 2013, 80, 1106-1109.	3.8	11

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37	The dorsomedial striatum encodes net expected return, critical for energizing performance vigor. Nature Neuroscience, 2013, 16, 639-647.	7.1	114
38	The Limits of Deliberation in a Perceptual Decision Task. Neuron, 2013, 78, 339-351.	3.8	72
39	Olfactory cortical neurons read out a relative time code in the olfactory bulb. Nature Neuroscience, 2013, 16, 949-957.	7.1	186
40	Illuminating Vertebrate Olfactory Processing. Journal of Neuroscience, 2012, 32, 14102-14108a.	1.7	25
41	Odor Representations in Olfactory Cortex: Distributed Rate Coding and Decorrelated Population Activity. Neuron, 2012, 74, 1087-1098.	3.8	191
42	Neuron-type-specific signals for reward and punishment in the ventral tegmental area. Nature, 2012, 482, 85-88.	13.7	1,101
43	Whole-Brain Mapping of Direct Inputs to Midbrain Dopamine Neurons. Neuron, 2012, 74, 858-873.	3.8	1,044
44	A wireless multi-channel neural amplifier for freely moving animals. Nature Neuroscience, 2011, 14, 263-269.	7.1	161
45	Robust Odor Coding via Inhalation-Coupled Transient Activity in the Mammalian Olfactory Bulb. Neuron, 2010, 68, 570-585.	3.8	256
46	A defined network of fast-spiking interneurons in orbitofrontal cortex: responses to behavioral contingencies and ketamine administration. Frontiers in Systems Neuroscience, 2009, 3, 13.	1.2	65
47	Neural correlates, computation and behavioural impact of decision confidence. Nature, 2008, 455, 227-231.	13.7	720
48	A rate-independent measure of irregularity for event series and its application to neural spiking activity. , 2008, , .		5
49	Odor concentration invariance by chemical ratio coding. Frontiers in Systems Neuroscience, 2008, 1, 3.	1.2	41
50	Rapid and Precise Control of Sniffing During Olfactory Discrimination in Rats. Journal of Neurophysiology, 2007, 98, 205-213.	0.9	187
51	The Sniff as a Unit of Olfactory Processing. Chemical Senses, 2006, 31, 167-179.	1.1	275
52	Representation of Spatial Goals in Rat Orbitofrontal Cortex. Neuron, 2006, 51, 495-507.	3.8	242
53	Sensory-Evoked Intrinsic Optical Signals in the Olfactory Bulb Are Coupled to Glutamate Release and Uptake. Neuron, 2006, 52, 335-345.	3.8	106
54	Seeing at a glance, smelling in a whiff: rapid forms of perceptual decision making. Nature Reviews Neuroscience, 2006, 7, 485-491.	4.9	195

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55	Speed and accuracy of olfactory discrimination in the rat. Nature Neuroscience, 2003, 6, 1224-1229.	7.1	618
56	Odor maps in the mammalian olfactory bulb: domain organization and odorant structural features. Nature Neuroscience, 2000, 3, 1035-1043.	7.1	455
57	Loss of Cadherin-11 Adhesion Receptor Enhances Plastic Changes in Hippocampal Synapses and Modifies Behavioral Responses. Molecular and Cellular Neurosciences, 2000, 15, 534-546.	1.0	151
58	Synchronized Oscillatory Discharges of Mitral/Tufted Cells With Different Molecular Receptive Ranges in the Rabbit Olfactory Bulb. Journal of Neurophysiology, 1999, 82, 1786-1792.	0.9	233
59	Î±-Catenin-Vinculin Interaction Functions to Organize the Apical Junctional Complex in Epithelial Cells. Journal of Cell Biology, 1998, 142, 847-857.	2.3	324
60	The catenin/cadherin adhesion system is localized in synaptic junctions bordering transmitter release zones.. Journal of Cell Biology, 1996, 135, 767-779.	2.3	489
61	Cadherin-11 Expressed in Association with Mesenchymal Morphogenesis in the Head, Somite, and Limb Bud of Early Mouse Embryos. Developmental Biology, 1995, 169, 347-358.	0.9	237
62	Mouse Î±N-Catenin: Two Isoforms, Specific Expression in the Nervous System, and Chromosomal Localization of the Gene. Developmental Biology, 1994, 163, 75-85.	0.9	72