

# Naoshige Uchida

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

65  
papers

9,160  
citations

43  
h-index

86  
g-index

86  
ext. papers

11,408  
ext. citations

17.4  
avg, IF

6.44  
L-index

#	Paper	IF	Citations
65	Neuron-type-specific signals for reward and punishment in the ventral tegmental area. <i>Nature</i> , <b>2012</b> , 482, 85-8	50.4	820
64	Whole-brain mapping of direct inputs to midbrain dopamine neurons. <i>Neuron</i> , <b>2012</b> , 74, 858-73	13.9	768
63	Neural correlates, computation and behavioural impact of decision confidence. <i>Nature</i> , <b>2008</b> , 455, 227-31	30.4	567
62	Speed and accuracy of olfactory discrimination in the rat. <i>Nature Neuroscience</i> , <b>2003</b> , 6, 1224-9	25.5	514
61	The catenin/cadherin adhesion system is localized in synaptic junctions bordering transmitter release zones. <i>Journal of Cell Biology</i> , <b>1996</b> , 135, 767-79	7.3	451
60	Odor maps in the mammalian olfactory bulb: domain organization and odorant structural features. <i>Nature Neuroscience</i> , <b>2000</b> , 3, 1035-43	25.5	418
59	An excitatory paraventricular nucleus to AgRP neuron circuit that drives hunger. <i>Nature</i> , <b>2014</b> , 507, 238-40	30.4	390
58	alpha-Catenin-vinculin interaction functions to organize the apical junctional complex in epithelial cells. <i>Journal of Cell Biology</i> , <b>1998</b> , 142, 847-57	7.3	284
57	The sniff as a unit of olfactory processing. <i>Chemical Senses</i> , <b>2006</b> , 31, 167-79	4.8	224
56	Cadherin-11 expressed in association with mesenchymal morphogenesis in the head, somite, and limb bud of early mouse embryos. <i>Developmental Biology</i> , <b>1995</b> , 169, 347-58	3.1	219
55	Synchronized oscillatory discharges of mitral/tufted cells with different molecular receptive ranges in the rabbit olfactory bulb. <i>Journal of Neurophysiology</i> , <b>1999</b> , 82, 1786-92	3.2	214
54	Demixed principal component analysis of neural population data. <i>ELife</i> , <b>2016</b> , 5,	8.9	212
53	Robust odor coding via inhalation-coupled transient activity in the mammalian olfactory bulb. <i>Neuron</i> , <b>2010</b> , 68, 570-85	13.9	204
52	Serotonergic neurons signal reward and punishment on multiple timescales. <i>ELife</i> , <b>2015</b> , 4,	8.9	198
51	Representation of spatial goals in rat orbitofrontal cortex. <i>Neuron</i> , <b>2006</b> , 51, 495-507	13.9	197
50	Arithmetic and local circuitry underlying dopamine prediction errors. <i>Nature</i> , <b>2015</b> , 525, 243-6	50.4	191
49	Dopamine neurons projecting to the posterior striatum form an anatomically distinct subclass. <i>ELife</i> , <b>2015</b> , 4, e10032	8.9	174

48	Functional circuit architecture underlying parental behaviour. <i>Nature</i> , <b>2018</b> , 556, 326-331	50.4	163
47	Seeing at a glance, smelling in a whiff: rapid forms of perceptual decision making. <i>Nature Reviews Neuroscience</i> , <b>2006</b> , 7, 485-91	13.5	159
46	Organization of monosynaptic inputs to the serotonin and dopamine neuromodulatory systems. <i>Cell Reports</i> , <b>2014</b> , 8, 1105-18	10.6	154
45	Dopamine neurons share common response function for reward prediction error. <i>Nature Neuroscience</i> , <b>2016</b> , 19, 479-86	25.5	149
44	Neural Circuitry of Reward Prediction Error. <i>Annual Review of Neuroscience</i> , <b>2017</b> , 40, 373-394	17	147
43	A wireless multi-channel neural amplifier for freely moving animals. <i>Nature Neuroscience</i> , <b>2011</b> , 14, 263-275	25.5	146
42	Odor representations in olfactory cortex: distributed rate coding and decorrelated population activity. <i>Neuron</i> , <b>2012</b> , 74, 1087-98	13.9	138
41	Loss of cadherin-11 adhesion receptor enhances plastic changes in hippocampal synapses and modifies behavioral responses. <i>Molecular and Cellular Neurosciences</i> , <b>2000</b> , 15, 534-46	4.8	138
40	Rapid and precise control of sniffing during olfactory discrimination in rats. <i>Journal of Neurophysiology</i> , <b>2007</b> , 98, 205-13	3.2	132
39	Dopamine neurons projecting to the posterior striatum reinforce avoidance of threatening stimuli. <i>Nature Neuroscience</i> , <b>2018</b> , 21, 1421-1430	25.5	130
38	Olfactory cortical neurons read out a relative time code in the olfactory bulb. <i>Nature Neuroscience</i> , <b>2013</b> , 16, 949-57	25.5	128
37	Distributed and Mixed Information in Monosynaptic Inputs to Dopamine Neurons. <i>Neuron</i> , <b>2016</b> , 91, 1374-1389	13.9	127
36	A distributional code for value in dopamine-based reinforcement learning. <i>Nature</i> , <b>2020</b> , 577, 671-675	50.4	119
35	Opposite initialization to novel cues in dopamine signaling in ventral and posterior striatum in mice. <i>ELife</i> , <b>2017</b> , 6,	8.9	117
34	Habenula Lesions Reveal that Multiple Mechanisms Underlie Dopamine Prediction Errors. <i>Neuron</i> , <b>2015</b> , 87, 1304-1316	13.9	103
33	Sensory-evoked intrinsic optical signals in the olfactory bulb are coupled to glutamate release and uptake. <i>Neuron</i> , <b>2006</b> , 52, 335-45	13.9	97
32	Dopamine reward prediction errors reflect hidden-state inference across time. <i>Nature Neuroscience</i> , <b>2017</b> , 20, 581-589	25.5	86
31	Coding and transformations in the olfactory system. <i>Annual Review of Neuroscience</i> , <b>2014</b> , 37, 363-85	17	86

30	The dorsomedial striatum encodes net expected return, critical for energizing performance vigor. <i>Nature Neuroscience</i> , <b>2013</b> , 16, 639-47	25.5	84
29	Somatosensory Cortex Plays an Essential Role in Forelimb Motor Adaptation in Mice. <i>Neuron</i> , <b>2017</b> , 93, 1493-1503.e6	13.9	80
28	Believing in dopamine. <i>Nature Reviews Neuroscience</i> , <b>2019</b> , 20, 703-714	13.5	71
27	Mouse alpha N-catenin: two isoforms, specific expression in the nervous system, and chromosomal localization of the gene. <i>Developmental Biology</i> , <b>1994</b> , 163, 75-85	3.1	64
26	Midbrain dopamine neurons signal aversion in a reward-context-dependent manner. <i>ELife</i> , <b>2016</b> , 5,	8.9	59
25	The Medial Prefrontal Cortex Shapes Dopamine Reward Prediction Errors under State Uncertainty. <i>Neuron</i> , <b>2018</b> , 98, 616-629.e6	13.9	56
24	The limits of deliberation in a perceptual decision task. <i>Neuron</i> , <b>2013</b> , 78, 339-51	13.9	49
23	Belief state representation in the dopamine system. <i>Nature Communications</i> , <b>2018</b> , 9, 1891	17.4	48
22	A Unified Framework for Dopamine Signals across Timescales. <i>Cell</i> , <b>2020</b> , 183, 1600-1616.e25	56.2	43
21	A defined network of fast-spiking interneurons in orbitofrontal cortex: responses to behavioral contingencies and ketamine administration. <i>Frontiers in Systems Neuroscience</i> , <b>2009</b> , 3, 13	3.5	42
20	Odor concentration invariance by chemical ratio coding. <i>Frontiers in Systems Neuroscience</i> , <b>2007</b> , 1, 3	3.5	36
19	Reinforcement biases subsequent perceptual decisions when confidence is low, a widespread behavioral phenomenon. <i>ELife</i> , <b>2020</b> , 9,	8.9	31
18	Multiple Dopamine Systems: Weal and Woe of Dopamine. <i>Cold Spring Harbor Symposia on Quantitative Biology</i> , <b>2018</b> , 83, 83-95	3.9	21
17	Illuminating vertebrate olfactory processing. <i>Journal of Neuroscience</i> , <b>2012</b> , 32, 14102-8	6.6	20
16	A unified framework for dopamine signals across timescales		13
15	Distinct temporal difference error signals in dopamine axons in three regions of the striatum in a decision-making task. <i>ELife</i> , <b>2020</b> , 9,	8.9	12
14	Division of labor for division: inhibitory interneurons with different spatial landscapes in the olfactory system. <i>Neuron</i> , <b>2013</b> , 80, 1106-9	13.9	10
13	Distributional Reinforcement Learning in the Brain. <i>Trends in Neurosciences</i> , <b>2020</b> , 43, 980-997	13.3	10

12	Bilingual neurons release glutamate and GABA. <i>Nature Neuroscience</i> , <b>2014</b> , 17, 1432-4	25.5	8
11	Opening the black box: dopamine, predictions, and learning. <i>Trends in Cognitive Sciences</i> , <b>2013</b> , 17, 430-114		6
10	Dopamine signals as temporal difference errors: recent advances. <i>Current Opinion in Neurobiology</i> , <b>2021</b> , 67, 95-105	7.6	5
9	A rate-independent measure of irregularity for event series and its application to neural spiking activity <b>2008</b> ,		4
8	Slow motion. <i>ELife</i> , <b>2017</b> , 6,	8.9	4
7	The Role of State Uncertainty in the Dynamics of Dopamine		4
6	The role of state uncertainty in the dynamics of dopamine.. <i>Current Biology</i> , <b>2022</b> ,	6.3	2
5	Author response: Dopamine neurons projecting to the posterior striatum form an anatomically distinct subclass <b>2015</b> ,		2
4	Distinct temporal difference error signals in dopamine axons in three regions of the striatum in a decision-making task		2
3	A gradual backward shift of dopamine responses during associative learning		2
2	A Self-Killing Rabies Virus That Leaves a Trace on the DNA. <i>Trends in Neurosciences</i> , <b>2017</b> , 40, 589-591	13.3	1
1	Monkeys in a prisoner's dilemma. <i>Cell</i> , <b>2015</b> , 160, 1046-8	56.2	1