Christopher Summerfield

List of Publications by Year
in descending order

61 papers	7,150 citations	147801 31 h-index	128289 60 g-index
71 all docs	71 docs citations	71 times ranked	6278 citing authors

#	Article	IF	Citations
1	Neuroscience-Inspired Artificial Intelligence. Neuron, 2017, 95, 245-258.	8.1	934
2	Hybrid computing using a neural network with dynamic external memory. Nature, 2016, 538, 471-476.	27.8	799
3	Expectation (and attention) in visual cognition. Trends in Cognitive Sciences, 2009, 13, 403-409.	7.8	749
4	Neural repetition suppression reflects fulfilled perceptual expectations. Nature Neuroscience, 2008, 11, 1004-1006.	14.8	664
5	Expectation in perceptual decision making: neural and computational mechanisms. Nature Reviews Neuroscience, 2014, 15, 745-756.	10.2	595
6	Expectation and Surprise Determine Neural Population Responses in the Ventral Visual Stream. Journal of Neuroscience, 2010, 30, 16601-16608.	3.6	368
7	Perceptual Decision Making in Rodents, Monkeys, and Humans. Neuron, 2017, 93, 15-31.	8.1	261
8	If deep learning is the answer, what is the question?. Nature Reviews Neuroscience, 2021, 22, 55-67.	10.2	185
9	Adaptive Gain Control during Human Perceptual Choice. Neuron, 2014, 81, 1429-1441.	8.1	147
10	Robust averaging during perceptual judgment. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13341-13346.	7.1	144
11	Causal Inference in the Multisensory Brain. Neuron, 2019, 102, 1076-1087.e8.	8.1	134
12	Building Bridges between Perceptual and Economic Decision-Making: Neural and Computational Mechanisms. Frontiers in Neuroscience, 2012, 6, 70.	2.8	129
13	Neural Mechanisms of Hierarchical Planning in a Virtual Subway Network. Neuron, 2016, 90, 893-903.	8.1	128
14	Human Scalp Electroencephalography Reveals that Repetition Suppression Varies with Expectation. Frontiers in Human Neuroscience, 2011, 5, 67.	2.0	113
15	Attention Sharpens the Distinction between Expected and Unexpected Percepts in the Visual Brain. Journal of Neuroscience, 2013, 33, 18438-18447.	3.6	111
16	Do humans make good decisions?. Trends in Cognitive Sciences, 2015, 19, 27-34.	7.8	109
17	Economic irrationality is optimal during noisy decision making. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3102-3107.	7.1	102
18	Encoding of Stimulus Probability in Macaque Inferior Temporal Cortex. Current Biology, 2016, 26, 2280-2290.	3.9	86

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19	Confidence matching in group decision-making. Nature Human Behaviour, 2017, 1, .	12.0	83
20	Concurrent Repetition Enhancement and Suppression Responses in Extrastriate Visual Cortex. Cerebral Cortex, 2013, 23, 2235-2244.	2.9	78
21	Orthogonal representations for robust context-dependent task performance in brains and neural networks. Neuron, 2022, 110, 1258-1270.e11.	8.1	77
22	Comparing continual task learning in minds and machines. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E10313-E10322.	7.1	76
23	Where Does Value Come From?. Trends in Cognitive Sciences, 2019, 23, 836-850.	7.8	73
24	Perceptual Classification in a Rapidly Changing Environment. Neuron, 2011, 71, 725-736.	8.1	70
25	Economic Value Biases Uncertain Perceptual Choices in the Parietal and Prefrontal Cortices. Frontiers in Human Neuroscience, 2010, 4, 208.	2.0	67
26	Neural Mechanisms of Human Perceptual Choice Under Focused and Divided Attention. Journal of Neuroscience, 2015, 35, 3485-3498.	3.6	65
27	Feature-Based Attention and Feature-Based Expectation. Trends in Cognitive Sciences, 2016, 20, 401-404.	7.8	61
28	Structure learning and the posterior parietal cortex. Progress in Neurobiology, 2020, 184, 101717.	5.7	57
29	Selective overweighting of larger magnitudes during noisy numerical comparison. Nature Human Behaviour, 2017, 1, 145.	12.0	54
30	Neural structure mapping in human probabilistic reward learning. ELife, 2019, 8, .	6.0	53
31	Priming by the variability of visual information. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7873-7878.	7.1	49
32	Robust averaging protects decisions from noise in neural computations. PLoS Computational Biology, 2017, 13, e1005723.	3.2	41
33	Gain control explains the effect of distraction in human perceptual, cognitive, and economic decision making. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8825-E8834.	7.1	38
34	Ventromedial Prefrontal Cortex Encodes a Latent Estimate of Cumulative Reward. Neuron, 2017, 93, 705-714.e4.	8.1	35
35	Neural state space alignment for magnitude generalization in humans and recurrent networks. Neuron, 2021, 109, 1214-1226.e8.	8.1	35
36	A Network for Computing Value Equilibrium in the Human Medial Prefrontal Cortex. Neuron, 2019, 101, 977-987.e3.	8.1	30

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37	Hippocampal place cells encode global location but not connectivity in a complex space. Current Biology, 2021, 31, 1221-1233.e9.	3.9	30
38	Unreliable Evidence: 2 Sources of Uncertainty During Perceptual Choice. Cerebral Cortex, 2015, 25, 937-947.	2.9	28
39	A map of decoy influence in human multialternative choice. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 25169-25178.	7.1	28
40	Rhythmic gain control during supramodal integration of approximate number. NeuroImage, 2016, 129, 470-479.	4.2	27
41	Robust sampling of decision information during perceptual choice. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2771-2776.	7.1	23
42	Optimal utility and probability functions for agents with finite computational precision. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	23
43	Visual Prediction Error Spreads Across Object Features in Human Visual Cortex. Journal of Neuroscience, 2016, 36, 12746-12763.	3.6	22
44	Human-centred mechanism design with Democratic AI. Nature Human Behaviour, 2022, 6, 1398-1407.	12.0	22
45	Human noise blindness drives suboptimal cognitive inference. Nature Communications, 2019, 10, 1719.	12.8	19
46	How Can Neuroscientists Respond to the Climate Emergency?. Neuron, 2020, 106, 17-20.	8.1	18
47	A Normative Account of Confirmation Bias During Reinforcement Learning. Neural Computation, 2022, 34, 307-337.	2.2	17
48	Selective Integration during Sequential Sampling in Posterior Neural Signals. Cerebral Cortex, 2020, 30, 4454-4464.	2.9	11
49	Normative Principles for Decision-Making in Natural Environments. Annual Review of Psychology, 2022, 73, 53-77.	17.7	8
50	Neural mechanisms of economic commitment in the human medial prefrontal cortex. ELife, 2014, 3, .	6.0	8
51	Reply to Davis-Stober et al.: Violations of rationality in a psychophysical task are not aggregation artifacts. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E4764-6.	7.1	5
52	Perceptual suboptimality: Bug or feature?. Behavioral and Brain Sciences, 2018, 41, e245.	0.7	5
53	Oh, rats! Post-error behavioral adjustment in creatures great and small. Nature Neuroscience, 2013, 16, 1715-1716.	14.8	4
54	Task relevance differentially shapes ventral visual stream sensitivity to visible and invisible faces. Neuroscience of Consciousness, 2016, 2016, niw021.	2.6	3

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55	Human optional stopping in a heteroscedastic world.. Psychological Review, 2023, 130, 1-22.	3.8	3
56	A practical guide for studying human behavior in the lab. Behavior Research Methods, 2022, , 1.	4.0	3
57	Model Sharing in the Human Medial Temporal Lobe. Journal of Neuroscience, 2022, 42, 5410-5426.	3.6	3
58	The P300 as a build-to-threshold variable (Commentary on Twomeyet al.). European Journal of Neuroscience, 2015, 42, 1635-1635.	2.6	2
59	Neural Circuits Trained with Standard Reinforcement Learning Can Accumulate Probabilistic Information during Decision Making. Neural Computation, 2017, 29, 368-393.	2.2	2
60	Ghosts in the Decision Machine. Neuron, 2015, 86, 861-863.	8.1	1
61	How does value distract?. Nature Human Behaviour, 2020, 4, 564-564.	12.0	0