Randall C O'reilly

List of Publications by Year
in descending order

97 papers	19,496 citations	30070 54 h-index	46799 89 g-index
118 all docs	118 docs citations	118 times ranked	12818 citing authors

#	Article	IF	Citations
1	Why there are complementary learning systems in the hippocampus and neocortex: Insights from the successes and failures of connectionist models of learning and memory.. Psychological Review, 1995, 102, 419-457.	3.8	4,586
2	By Carrot or by Stick: Cognitive Reinforcement Learning in Parkinsonism. Science, 2004, 306, 1940-1943.	12.6	1,734
3	Modeling hippocampal and neocortical contributions to recognition memory: A complementary-learning-systems approach.. Psychological Review, 2003, 110, 611-646.	3.8	1,091
4	Making Working Memory Work: A Computational Model of Learning in the Prefrontal Cortex and Basal Ganglia. Neural Computation, 2006, 18, 283-328.	2.2	839
5	Hippocampal conjunctive encoding, storage, and recall: Avoiding a trade-off. Hippocampus, 1994, 4, 661-682.	1.9	819
6	Conjunctive representations in learning and memory: Principles of cortical and hippocampal function.. Psychological Review, 2001, 108, 311-345.	3.8	786
7	A unified framework for inhibitory control. Trends in Cognitive Sciences, 2011, 15, 453-459.	7.8	489
8	A mechanistic account of striatal dopamine function in human cognition: Psychopharmacological studies with cabergoline and haloperidol.. Behavioral Neuroscience, 2006, 120, 497-517.	1.2	411
9	Biologically Based Computational Models of High-Level Cognition. Science, 2006, 314, 91-94.	12.6	395
10	Hippocampal and neocortical contributions to memory: advances in the complementary learning systems framework. Trends in Cognitive Sciences, 2002, 6, 505-510.	7.8	382
11	Prefrontal cortex and flexible cognitive control: Rules without symbols. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 7338-7343.	7.1	367
12	Towards an executive without a homunculus: computational models of the prefrontal cortex/basal ganglia system. Philosophical Transactions of the Royal Society B: Biological Sciences, 2007, 362, 1601-1613.	4.0	355
13	Dissociated overt and covert recognition as an emergent property of a lesioned neural network.. Psychological Review, 1993, 100, 571-588.	3.8	339
14	Biologically Plausible Error-Driven Learning Using Local Activation Differences: The Generalized Recirculation Algorithm. Neural Computation, 1996, 8, 895-938.	2.2	298
15	Six principles for biologically based computational models of cortical cognition. Trends in Cognitive Sciences, 1998, 2, 455-462.	7.8	274
16	Anorexia Nervosa and Obesity are Associated with Opposite Brain Reward Response. Neuropsychopharmacology, 2012, 37, 2031-2046.	5.4	269
17	Contextual fear conditioning, conjunctive representations, pattern completion, and the hippocampus.. Behavioral Neuroscience, 1999, 113, 867-880.	1.2	240
18	The What and How of prefrontal cortical organization. Trends in Neurosciences, 2010, 33, 355-361.	8.6	229

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19	Hippocampal formation supports conditioning to memory of a context.. Behavioral Neuroscience, 2002, 116, 530-538.	1.2	227
20	Separate neural substrates for skill learning and performance in the ventral and dorsal striatum. Nature Neuroscience, 2007, 10, 126-131.	14.8	222
21	Testing Computational Models of Dopamine and Noradrenaline Dysfunction in Attention Deficit/Hyperactivity Disorder. Neuropsychopharmacology, 2007, 32, 1583-1599.	5.4	200
22	Prefrontal Cortex and Dynamic Categorization Tasks: Representational Organization and Neuromodulatory Control. Cerebral Cortex, 2002, 12, 246-257.	2.9	197
23	Regional specialization within the human striatum for diverse psychological functions. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1907-1912.	7.1	188
24	A Biologically Based Computational Model of Working Memory. , 1999, , 375-411.		170
25	Hippocampus, cortex, and basal ganglia: Insights from computational models of complementary learning systems. Neurobiology of Learning and Memory, 2004, 82, 253-267.	1.9	165
26	Complementary Learning Systems. Cognitive Science, 2014, 38, 1229-1248.	1.7	161
27	Computational principles of learning in the neocortex and hippocampus. Hippocampus, 2000, 10, 389-397.	1.9	159
28	Transitivity, flexibility, conjunctive representations, and the hippocampus. II. A computational analysis. Hippocampus, 2003, 13, 341-354.	1.9	136
29	When Memory Fails, Intuition Reigns. Psychological Science, 2006, 17, 700-707.	3.3	133
30	Contextual fear conditioning, conjunctive representations, pattern completion, and the hippocampus.. Behavioral Neuroscience, 1999, 113, 867-880.	1.2	130
31	Hippocampal formation supports conditioning to memory of a context.. Behavioral Neuroscience, 2002, 116, 530-538.	1.2	130
32	Memory for context is impaired by injecting anisomycin into dorsal hippocampus following context exploration. Behavioural Brain Research, 2002, 134, 299-306.	2.2	118
33	Transitivity, flexibility, conjunctive representations, and the hippocampus. I. An empirical analysis. Hippocampus, 2003, 13, 334-340.	1.9	118
34	Neural Mechanisms of Cognitive Control: An Integrative Model of Stroop Task Performance and fMRI Data. Journal of Cognitive Neuroscience, 2006, 18, 22-32.	2.3	117
35	The Limits of Feedforward Vision: Recurrent Processing Promotes Robust Object Recognition when Objects Are Degraded. Journal of Cognitive Neuroscience, 2012, 24, 2248-2261.	2.3	110
36	SAL: an explicitly pluralistic cognitive architecture. Journal of Experimental and Theoretical Artificial Intelligence, 2008, 20, 197-218.	2.8	108

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37	Recurrent Processing during Object Recognition. Frontiers in Psychology, 2013, 4, 124.	2.1	106
38	PVLV: The Primary Value and Learned Value Pavlovian Learning Algorithm.. Behavioral Neuroscience, 2007, 121, 31-49.	1.2	103
39	Altered Temporal Difference Learning in Bulimia Nervosa. Biological Psychiatry, 2011, 70, 728-735.	1.3	103
40	Thalamic pathways underlying prefrontal cortexâ€“medial temporal lobe oscillatory interactions. Trends in Neurosciences, 2015, 38, 3-12.	8.6	101
41	When logic fails: Implicit transitive inference in humans. Memory and Cognition, 2005, 33, 742-750.	1.6	100
42	Indirection and symbol-like processing in the prefrontal cortex and basal ganglia. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 16390-16395.	7.1	99
43	Figure-ground organization and object recognition processes: An interactive account.. Journal of Experimental Psychology: Human Perception and Performance, 1998, 24, 441-462.	0.9	97
44	A neural network model of individual differences in task switching abilities. Neuropsychologia, 2014, 62, 375-389.	1.6	96
45	Generalization in Interactive Networks: The Benefits of Inhibitory Competition and Hebbian Learning. Neural Computation, 2001, 13, 1199-1241.	2.2	92
46	Neural mechanisms of acquired phasic dopamine responses in learning. Neuroscience and Biobehavioral Reviews, 2010, 34, 701-720.	6.1	87
47	Early recurrent feedback facilitates visual object recognition under challenging conditions. Frontiers in Psychology, 2014, 5, 674.	2.1	83
48	Object Recognition and Sensitive Periods: A Computational Analysis of Visual Imprinting. Neural Computation, 1994, 6, 357-389.	2.2	82
49	Computational models of cognitive control. Current Opinion in Neurobiology, 2010, 20, 257-261.	4.2	79
50	Neural inhibition enables selection during language processing. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16483-16488.	7.1	78
51	Persistence and accommodation in short-term priming and other perceptual paradigms: temporal segregation through synaptic depression. Cognitive Science, 2003, 27, 403-430.	1.7	77
52	Figure-ground organization and object recognition processes: An interactive account.. Journal of Experimental Psychology: Human Perception and Performance, 1998, 24, 441-462.	0.9	77
53	The Function and Organization of Lateral Prefrontal Cortex: A Test of Competing Hypotheses. PLoS ONE, 2012, 7, e30284.	2.5	62
54	SIMULATION AND EXPLANATION IN NEUROPSYCHOLOGY AND BEYOND. Cognitive Neuropsychology, 1999, 16, 49-72.	1.1	59

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55	Prefrontal cortex and the organization of recent and remote memories: An alternative view. Learning and Memory, 2005, 12, 445-446.	1.3	58
56	Visual Representation in the Wild: How Rhesus Monkeys Parse Objects. Journal of Cognitive Neuroscience, 2001, 13, 44-58.	2.3	55
57	Developing PFC representations using reinforcement learning. Cognition, 2009, 113, 281-292.	2.2	53
58	Theta Coordinated Error-Driven Learning in the Hippocampus. PLoS Computational Biology, 2013, 9, e1003067.	3.2	53
59	Distinct contributions of the caudate nucleus, rostral prefrontal cortex, and parietal cortex to the execution of instructed tasks. Cognitive, Affective and Behavioral Neuroscience, 2012, 12, 611-628.	2.0	49
60	Inhibiting PKMÎ¶ reveals dorsal lateral and dorsal medial striatum store the different memories needed to support adaptive behavior. Learning and Memory, 2012, 19, 307-314.	1.3	43
61	Learning representations in a gated prefrontal cortex model of dynamic task switching. Cognitive Science, 2002, 26, 503-520.	1.7	41
62	Attentional control of associative learningâ€"A possible role of the central cholinergic system. Brain Research, 2008, 1202, 43-53.	2.2	39
63	Prediction error and somatosensory insula activation in women recovered from anorexia nervosa. Journal of Psychiatry and Neuroscience, 2016, 41, 304-311.	2.4	36
64	The dynamics of integration and separation: ERP, MEG, and neural network studies of immediate repetition effects.. Journal of Experimental Psychology: Human Perception and Performance, 2008, 34, 1389-1416.	0.9	33
65	Expectancy, Ambiguity, and Behavioral Flexibility: Separable and Complementary Roles of the Orbital Frontal Cortex and Amygdala in Processing Reward Expectancies. Journal of Cognitive Neuroscience, 2012, 24, 351-366.	2.3	25
66	Unraveling the Mysteries of Motivation. Trends in Cognitive Sciences, 2020, 24, 425-434.	7.8	23
67	Receptive Field Characteristics That Allow Parietal Lobe Neurons to Encode Spatial Properties of Visual Input: A Computational Analysis. Journal of Cognitive Neuroscience, 1990, 2, 141-155.	2.3	22
68	Graded effects in hierarchical figure-ground organization: Reply to Peterson (1999).. Journal of Experimental Psychology: Human Perception and Performance, 2000, 26, 1221-1231.	0.9	22
69	Assembling Old Tricks for New Tasks: A Neural Model of Instructional Learning and Control. Journal of Cognitive Neuroscience, 2013, 25, 843-851.	2.3	20
70	The Role of Competitive Inhibition and Top-Down Feedback in Binding during Object Recognition. Frontiers in Psychology, 2012, 3, 182.	2.1	19
71	Deep Predictive Learning in Neocortex and Pulvinar. Journal of Cognitive Neuroscience, 2021, 33, 1158-1196.	2.3	19
72	A continuous-time neural model for sequential action. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130623.	4.0	15

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73	Strategic Cognitive Sequencing: A Computational Cognitive Neuroscience Approach. Computational Intelligence and Neuroscience, 2013, 2013, 1-18.	1.7	14
74	A systems-neuroscience model of phasic dopamine.. Psychological Review, 2020, 127, 972-1021.	3.8	14
75	Persistence and accommodation in short-term priming and other perceptual paradigms: temporal segregation through synaptic depression. Cognitive Science, 2003, 27, 403-430.	1.7	13
76	Serial visual search from a parallel model. Vision Research, 2005, 45, 2987-2992.	1.4	12
77	Latent structure in random sequences drives neural learning toward a rational bias. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3788-3792.	7.1	12
78	Learning representations in a gated prefrontal cortex model of dynamic task switching. Cognitive Science, 2002, 26, 503-520.	1.7	11
79	The Structure of Systematicity in the Brain. Current Directions in Psychological Science, 2022, 31, 124-130.	5.3	11
80	The role of the dorsal striatum and dorsal hippocampus in probabilistic and deterministic odor discrimination tasks. Learning and Memory, 2008, 15, 294-298.	1.3	10
81	The Neural Correlates of Cued Reward Omission. Frontiers in Human Neuroscience, 2021, 15, 615313.	2.0	8
82	How Limited Systematicity Emerges. , 2014, , 191-226.		8
83	Midazolam, hippocampal function, and transitive inference: Reply to Greene. Behavioral and Brain Functions, 2008, 4, 5.	3.3	7
84	The Leabra Cognitive Architecture. , 2015, , .		7
85	How Sequential Interactive Processing Within Frontostriatal Loops Supports a Continuum of Habitual to Controlled Processing. Frontiers in Psychology, 2020, 11, 380.	2.1	7
86	The Leabra architecture: Specialization without modularity. Behavioral and Brain Sciences, 2010, 33, 286-287.	0.7	5
87	How the credit assignment problems in motor control could be solved after the cerebellum predicts increases in error. Frontiers in Computational Neuroscience, 2015, 9, 39.	2.1	5
88	Effects of retrieval practice on tested and untested information: Cortico-hippocampal interactions and error-driven learning. Psychology of Learning and Motivation - Advances in Research and Theory, 2021, , 125-155.	1.1	4
89	Individual Differences in Cognitive Flexibility. Biological Psychiatry, 2013, 74, 78-79.	1.3	3
90	Computational models of motivated frontal function. Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn, 2019, 163, 317-332.	1.8	3

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91	Developmental and Computational Approaches to Variation in Working Memory. , 2008, , 162-193.		3
92	Complementary Structure-Learning Neural Networks for Relational Reasoning. , 2021, 2021, 1560-1566.		2
93	Beyond red states and blue states in cognitive science. Journal of Experimental and Theoretical Artificial Intelligence, 2008, 20, 265-268.	2.8	1
94	A model of proactive and reactive cognitive control with anterior cingulate cortex and the neuromodulatory system. Biologically Inspired Cognitive Architectures, 2014, 10, 61-67.	0.9	1
95	Integrating theories of motor sequencing in the SAL hybrid architecture. Biologically Inspired Cognitive Architectures, 2014, 8, 100-108.	0.9	1
96	Reply to Aksentijevic: It is a matter of what is countable and how neurons learn. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E3160-E3160.	7.1	0
97	Object Recognition and Sensitive Periods: A Computational Analysis of Visual Imprinting. , 0, , 392-413.		0