Randall C O reilly

List of Publications by Citations

97 papers	15,893 citations	52 h-index	118 g-index
118 ext. papers	17,826 ext. citations	5.7 avg, IF	6.86 L-index

#	Paper	IF	Citations
97	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	6.3	3699
96	By carrot or by stick: cognitive reinforcement learning in parkinsonism. *Science*, **2004**, 306, 1940-3	33.3	1442
95	Modeling hippocampal and neocortical contributions to recognition memory: a complementary-learning-systems approach. *Psychological Review*, **2003**, 110, 611-46	6.3	888
94	Hippocampal conjunctive encoding, storage, and recall: avoiding a trade-off. *Hippocampus*, **1994**, 4, 661-82	3.5	685
93	Conjunctive representations in learning and memory: principles of cortical and hippocampal function. *Psychological Review*, **2001**, 108, 311-45	6.3	683
92	Making working memory work: a computational model of learning in the prefrontal cortex and basal ganglia. *Neural Computation*, **2006**, 18, 283-328	2.9	673
91	A unified framework for inhibitory control. *Trends in Cognitive Sciences*, **2011**, 15, 453-9	14	395
90	Computational Explorations in Cognitive Neuroscience **2000**,		360
89	A mechanistic account of striatal dopamine function in human cognition: psychopharmacological studies with cabergoline and haloperidol. *Behavioral Neuroscience*, **2006**, 120, 497-517	2.1	337
88	Hippocampal and neocortical contributions to memory: advances in the complementary learning systems framework. *Trends in Cognitive Sciences*, **2002**, 6, 505-510	14	337
87	Dissociated overt and covert recognition as an emergent property of a lesioned neural network. *Psychological Review*, **1993**, 100, 571-88	6.3	330
86	Biologically based computational models of high-level cognition. *Science*, **2006**, 314, 91-4	33.3	324
85	Prefrontal cortex and flexible cognitive control: rules without symbols. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 7338-43	11.5	302
84	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, 1601-13	5.8	285
83	Anorexia nervosa and obesity are associated with opposite brain reward response. *Neuropsychopharmacology*, **2012**, 37, 2031-46	8.7	239
82	Biologically Plausible Error-Driven Learning Using Local Activation Differences: The Generalized Recirculation Algorithm. *Neural Computation*, **1996**, 8, 895-938	2.9	232
81	Six principles for biologically based computational models of cortical cognition. *Trends in Cognitive Sciences*, **1998**, 2, 455-62	14	222

80	Contextual fear conditioning, conjunctive representations, pattern completion, and the hippocampus.. *Behavioral Neuroscience*, **1999**, 113, 867-880	2.1	217
79	Hippocampal formation supports conditioning to memory of a context.. *Behavioral Neuroscience*, **2002**, 116, 530-538	2.1	211
78	Separate neural substrates for skill learning and performance in the ventral and dorsal striatum. *Nature Neuroscience*, **2007**, 10, 126-31	25.5	199
77	The What and How of prefrontal cortical organization. *Trends in Neurosciences*, **2010**, 33, 355-61	13.3	180
76	Testing computational models of dopamine and noradrenaline dysfunction in attention deficit/hyperactivity disorder. *Neuropsychopharmacology*, **2007**, 32, 1583-99	8.7	161
75	Prefrontal cortex and dynamic categorization tasks: representational organization and neuromodulatory control. *Cerebral Cortex*, **2002**, 12, 246-57	5.1	159
74	Hippocampus, cortex, and basal ganglia: insights from computational models of complementary learning systems. *Neurobiology of Learning and Memory*, **2004**, 82, 253-67	3.1	142
73	Transitivity, flexibility, conjunctive representations, and the hippocampus. II. A computational analysis. *Hippocampus*, **2003**, 13, 341-54	3.5	128
72	Computational principles of learning in the neocortex and hippocampus. *Hippocampus*, **2000**, 10, 389-97	3.5	127
71	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, 1907-12	11.5	125
70	When memory fails, intuition reigns: midazolam enhances implicit inference in humans. *Psychological Science*, **2006**, 17, 700-7	7.9	116
69	Hippocampal formation supports conditioning to memory of a context. *Behavioral Neuroscience*, **2002**, 116, 530-8	2.1	109
68	Complementary learning systems. *Cognitive Science*, **2014**, 38, 1229-48	2.2	104
67	Memory for context is impaired by injecting anisomycin into dorsal hippocampus following context exploration. *Behavioural Brain Research*, **2002**, 134, 299-306	3.4	104
66	A Biologically Based Computational Model of Working Memory **1999**, 375-411		101
65	Contextual fear conditioning, conjunctive representations, pattern completion, and the hippocampus. *Behavioral Neuroscience*, **1999**, 113, 867-80	2.1	101
64	Neural mechanisms of cognitive control: an integrative model of stroop task performance and FMRI data. *Journal of Cognitive Neuroscience*, **2006**, 18, 22-32	3.1	91
63	The limits of feedforward vision: recurrent processing promotes robust object recognition when objects are degraded. *Journal of Cognitive Neuroscience*, **2012**, 24, 2248-61	3.1	90

62	SAL: an explicitly pluralistic cognitive architecture. *Journal of Experimental and Theoretical Artificial Intelligence*, **2008**, 20, 197-218	2	90
61	When logic fails: implicit transitive inference in humans. *Memory and Cognition*, **2005**, 33, 742-50	2.2	89
60	Figure-ground organization and object recognition processes: An interactive account.. *Journal of Experimental Psychology: Human Perception and Performance*, **1998**, 24, 441-462	2.6	86
59	Altered temporal difference learning in bulimia nervosa. *Biological Psychiatry*, **2011**, 70, 728-735	7.9	85
58	Neural mechanisms of acquired phasic dopamine responses in learning. *Neuroscience and Biobehavioral Reviews*, **2010**, 34, 701-20	9	83
57	PVLV: the primary value and learned value Pavlovian learning algorithm. *Behavioral Neuroscience*, **2007**, 121, 31-49	2.1	81
56	Recurrent Processing during Object Recognition. *Frontiers in Psychology*, **2013**, 4, 124	3.4	77
55	A neural network model of individual differences in task switching abilities. *Neuropsychologia*, **2014**, 62, 375-89	3.2	74
54	Transitivity, flexibility, conjunctive representations, and the hippocampus. I. An empirical analysis. *Hippocampus*, **2003**, 13, 334-40	3.5	73
53	Generalization in interactive networks: the benefits of inhibitory competition and Hebbian learning. *Neural Computation*, **2001**, 13, 1199-241	2.9	73
52	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, 16390-5	11.5	72
51	Computational models of cognitive control. *Current Opinion in Neurobiology*, **2010**, 20, 257-61	7.6	69
50	Thalamic pathways underlying prefrontal cortex-medial temporal lobe oscillatory interactions. *Trends in Neurosciences*, **2015**, 38, 3-12	13.3	68
49	Neural inhibition enables selection during language processing. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 16483-8	11.5	65
48	Object Recognition and Sensitive Periods: A Computational Analysis of Visual Imprinting. *Neural Computation*, **1994**, 6, 357-389	2.9	58
47	Prefrontal cortex and the organization of recent and remote memories: an alternative view. *Learning and Memory*, **2005**, 12, 445-6	2.8	55
46	SIMULATION AND EXPLANATION IN NEUROPSYCHOLOGY AND BEYOND. *Cognitive Neuropsychology*, **1999**, 16, 49-72	2.3	53
45	Early recurrent feedback facilitates visual object recognition under challenging conditions. *Frontiers in Psychology*, **2014**, 5, 674	3.4	52

44	The function and organization of lateral prefrontal cortex: a test of competing hypotheses. *PLoS ONE*, **2012**, 7, e30284	3.7	50
43	Developing PFC representations using reinforcement learning. *Cognition*, **2009**, 113, 281-292	3.5	50
42	Persistence and accommodation in short-term priming and other perceptual paradigms: temporal segregation through synaptic depression. *Cognitive Science*, **2003**, 27, 403-430	2.2	49
41	Visual representation in the wild: how rhesus monkeys parse objects. *Journal of Cognitive Neuroscience*, **2001**, 13, 44-58	3.1	47
40	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, 611-28	3.5	42
39	Figure-ground organization and object recognition processes: an interactive account. *Journal of Experimental Psychology: Human Perception and Performance*, **1998**, 24, 441-62	2.6	40
38	Inhibiting PKMreveals dorsal lateral and dorsal medial striatum store the different memories needed to support adaptive behavior. *Learning and Memory*, **2012**, 19, 307-14	2.8	39
37	Theta coordinated error-driven learning in the hippocampus. *PLoS Computational Biology*, **2013**, 9, e1003067	3	35
36	Learning representations in a gated prefrontal cortex model of dynamic task switching. *Cognitive Science*, **2002**, 26, 503-520	2.2	30
35	Prediction error and somatosensory insula activation in women recovered from anorexia nervosa. *Journal of Psychiatry and Neuroscience*, **2016**, 41, 304-11	4.5	30
34	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, 1389-416	2.6	29
33	Attentional control of associative learning--a possible role of the central cholinergic system. *Brain Research*, **2008**, 1202, 43-53	3.7	26
32	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, 351-66	3.1	22
31	Graded effects in hierarchical figure-ground organization: Reply to Peterson (1999).. *Journal of Experimental Psychology: Human Perception and Performance*, **2000**, 26, 1221-1231	2.6	22
30	Receptive field characteristics that allow parietal lobe neurons to encode spatial properties of visual input: a computational analysis. *Journal of Cognitive Neuroscience*, **1990**, 2, 141-55	3.1	16
29	The Role of Competitive Inhibition and Top-Down Feedback in Binding during Object Recognition. *Frontiers in Psychology*, **2012**, 3, 182	3.4	15
28	Assembling old tricks for new tasks: a neural model of instructional learning and control. *Journal of Cognitive Neuroscience*, **2013**, 25, 843-51	3.1	15
27	A continuous-time neural model for sequential action. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2014**, 369,	5.8	12

26	Serial visual search from a parallel model. *Vision Research*, **2005**, 45, 2987-92	2.1	12
25	Strategic cognitive sequencing: a computational cognitive neuroscience approach. *Computational Intelligence and Neuroscience*, **2013**, 2013, 149329	3	11
24	Persistence and accommodation in short-term priming and other perceptual paradigms: temporal segregation through synaptic depression **2003**, 27, 403		11
23	The role of the dorsal striatum and dorsal hippocampus in probabilistic and deterministic odor discrimination tasks. *Learning and Memory*, **2008**, 15, 294-8	2.8	10
22	Learning representations in a gated prefrontal cortex model of dynamic task switching **2002**, 26, 503		10
21	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, 3788-92	11.5	9
20	Unraveling the Mysteries of Motivation. *Trends in Cognitive Sciences*, **2020**, 24, 425-434	14	7
19	A systems-neuroscience model of phasic dopamine. *Psychological Review*, **2020**, 127, 972-1021	6.3	6
18	The Leabra Cognitive Architecture **2015**,		5
17	How Limited Systematicity Emerges **2014**, 191-226		5
16	Deep Predictive Learning in Neocortex and Pulvinar. *Journal of Cognitive Neuroscience*, **2021**, 33, 1158-1196	3.1	5
15	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	3.5	4
14	How Sequential Interactive Processing Within Frontostriatal Loops Supports a Continuum of Habitual to Controlled Processing. *Frontiers in Psychology*, **2020**, 11, 380	3.4	3
13	Individual differences in cognitive flexibility. *Biological Psychiatry*, **2013**, 74, 78-9	7.9	3
12	The Leabra architecture: Specialization without modularity. *Behavioral and Brain Sciences*, **2010**, 33, 286-287	28	3
11	The Neural Correlates of Cued Reward Omission. *Frontiers in Human Neuroscience*, **2021**, 15, 615313	3.3	2
10	Computational models of motivated frontal function. *Handbook of Clinical Neurology / Edited By P J Vinken and G W Bruyn*, **2019**, 163, 317-332	3	1
9	A model of proactive and reactive cognitive control with anterior cingulate cortex and the neuromodulatory system. *Biologically Inspired Cognitive Architectures*, **2014**, 10, 61-67		1

8	Integrating theories of motor sequencing in the SAL hybrid architecture. *Biologically Inspired Cognitive Architectures*, **2014**, 8, 100-108		1
7	Beyond red states and blue states in cognitive science. *Journal of Experimental and Theoretical Artificial Intelligence*, **2008**, 20, 265-268	2	1
6	Psychological Function in Computational Models of Neural Networks637		1
5	The Structure of Systematicity in the Brain. *Current Directions in Psychological Science*, **2022**, 31, 124-130	6.5	1
4	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	1.4	0
3	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	11.5	
2	Complementary Structure-Learning Neural Networks for Relational Reasoning **2021**, 2021, 1560-1566		
1	Object Recognition and Sensitive Periods: A Computational Analysis of Visual Imprinting392-413		