

Thomas L Griffiths

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.

112 papers	10,002 citations	37 h-index	99 g-index
125 ext. papers	12,320 ext. citations	7 avg, IF	6.85 L-index

#	Paper	IF	Citations
112	Finding scientific topics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101 Suppl 1, 5228-35	11.5	3137
111	How to grow a mind: statistics, structure, and abstraction. <i>Science</i> , 2011 , 331, 1279-85	33.3	899
110	Topics in semantic representation. <i>Psychological Review</i> , 2007 , 114, 211-44	6.3	682
109	Natural speech reveals the semantic maps that tile human cerebral cortex. <i>Nature</i> , 2016 , 532, 453-8	50.4	630
108	Generalization, similarity, and Bayesian inference. <i>Behavioral and Brain Sciences</i> , 2001 , 24, 629-40; discussion 652-791	0.9	439
107	Probabilistic models of cognition: exploring representations and inductive biases. <i>Trends in Cognitive Sciences</i> , 2010 , 14, 357-64	14	432
106	Toward a Rational and Mechanistic Account of Mental Effort. <i>Annual Review of Neuroscience</i> , 2017 , 40, 99-124	17	361
105	Structure and strength in causal induction. <i>Cognitive Psychology</i> , 2005 , 51, 334-84	3.1	317
104	Theory-based causal induction. <i>Psychological Review</i> , 2009 , 116, 661-716	6.3	269
103	One and done? Optimal decisions from very few samples. <i>Cognitive Science</i> , 2014 , 38, 599-637	2.2	154
102	Rational use of cognitive resources: levels of analysis between the computational and the algorithmic. <i>Topics in Cognitive Science</i> , 2015 , 7, 217-29	2.5	129
101	A rational account of pedagogical reasoning: teaching by, and learning from, examples. <i>Cognitive Psychology</i> , 2014 , 71, 55-89	3.1	117
100	Changes in cognitive flexibility and hypothesis search across human life history from childhood to adolescence to adulthood. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 7892-7899	11.5	115
99	Resource-rational analysis: Understanding human cognition as the optimal use of limited computational resources. <i>Behavioral and Brain Sciences</i> , 2019 , 43, e1	0.9	112
98	The Hierarchical Cortical Organization of Human Speech Processing. <i>Journal of Neuroscience</i> , 2017 , 37, 6539-6557	6.6	111
97	Google and the mind: predicting fluency with PageRank. <i>Psychological Science</i> , 2007 , 18, 1069-76	7.9	108
96	Reconciling intuitive physics and Newtonian mechanics for colliding objects. <i>Psychological Review</i> , 2013 , 120, 411-37	6.3	106

95	A role for the developing lexicon in phonetic category acquisition. <i>Psychological Review</i> , 2013 , 120, 751-783	78.3	104
94	When children are better (or at least more open-minded) learners than adults: developmental differences in learning the forms of causal relationships. <i>Cognition</i> , 2014 , 131, 284-99	3.5	83
93	When Younger Learners Can Be Better (or at Least More Open-Minded) Than Older Ones. <i>Current Directions in Psychological Science</i> , 2015 , 24, 87-92	6.5	82
92	Probabilistic models, learning algorithms, and response variability: sampling in cognitive development. <i>Trends in Cognitive Sciences</i> , 2014 , 18, 497-500	14	78
91	How the Bayesians got their beliefs (and what those beliefs actually are): comment on Bowers and Davis (2012). <i>Psychological Bulletin</i> , 2012 , 138, 415-22	19.1	74
90	Review. Theoretical and empirical evidence for the impact of inductive biases on cultural evolution. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2008 , 363, 3503-14	5.8	72
89	Random walks on semantic networks can resemble optimal foraging. <i>Psychological Review</i> , 2015 , 122, 558-69	6.3	68
88	Strategy selection as rational metareasoning. <i>Psychological Review</i> , 2017 , 124, 762-794	6.3	53
87	The anchoring bias reflects rational use of cognitive resources. <i>Psychonomic Bulletin and Review</i> , 2018 , 25, 322-349	4.1	51
86	Bayes and blinkets: effects of knowledge on causal induction in children and adults. <i>Cognitive Science</i> , 2011 , 35, 1407-55	2.2	51
85	Win-Stay, Lose-Sample: a simple sequential algorithm for approximating Bayesian inference. <i>Cognitive Psychology</i> , 2014 , 74, 35-65	3.1	50
84	The Sapir-Whorf Hypothesis and Probabilistic Inference: Evidence from the Domain of Color. <i>PLoS ONE</i> , 2016 , 11, e0158725	3.7	50
83	Manifesto for a new (computational) cognitive revolution. <i>Cognition</i> , 2015 , 135, 21-3	3.5	46
82	Formalizing Neurath's ship: Approximate algorithms for online causal learning. <i>Psychological Review</i> , 2017 , 124, 301-338	6.3	46
81	Overrepresentation of extreme events in decision making reflects rational use of cognitive resources. <i>Psychological Review</i> , 2018 , 125, 1-32	6.3	44
80	A rational model of function learning. <i>Psychonomic Bulletin and Review</i> , 2015 , 22, 1193-215	4.1	41
79	Rational metareasoning and the plasticity of cognitive control. <i>PLoS Computational Biology</i> , 2018 , 14, e1006043	5	41
78	Using category structures to test iterated learning as a method for identifying inductive biases. <i>Cognitive Science</i> , 2008 , 32, 68-107	2.2	41

77	Evaluating (and Improving) the Correspondence Between Deep Neural Networks and Human Representations. <i>Cognitive Science</i> , 2018 , 42, 2648-2669	2.2	41
76	Sources of developmental change in the efficiency of information search. <i>Developmental Psychology</i> , 2016 , 52, 2159-2173	3.7	39
75	Predicting the future as Bayesian inference: people combine prior knowledge with observations when estimating duration and extent. <i>Journal of Experimental Psychology: General</i> , 2011 , 140, 725-43	4.7	36
74	The child as econometrician: a rational model of preference understanding in children. <i>PLoS ONE</i> , 2014 , 9, e92160	3.7	35
73	Integrating explanation and prediction in computational social science. <i>Nature</i> , 2021 , 595, 181-188	50.4	29
72	Reconciling novelty and complexity through a rational analysis of curiosity. <i>Psychological Review</i> , 2020 , 127, 455-476	6.3	27
71	Focal colors across languages are representative members of color categories. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 11178-11183	11.5	26
70	Infant-directed speech is consistent with teaching. <i>Psychological Review</i> , 2016 , 123, 758-771	6.3	25
69	Inferring mass in complex scenes by mental simulation. <i>Cognition</i> , 2016 , 157, 61-76	3.5	25
68	Finding the traces of behavioral and cognitive processes in big data and naturally occurring datasets. <i>Behavior Research Methods</i> , 2017 , 49, 1630-1638	6.1	24
67	Inferring action structure and causal relationships in continuous sequences of human action. <i>Cognitive Psychology</i> , 2015 , 76, 30-77	3.1	22
66	The imaginary fundamentalists: The unshocking truth about Bayesian cognitive science. <i>Behavioral and Brain Sciences</i> , 2011 , 34, 194-196	0.9	21
65	Faster Teaching via POMDP Planning. <i>Cognitive Science</i> , 2016 , 40, 1290-332	2.2	20
64	Doing more with less: meta-reasoning and meta-learning in humans and machines. <i>Current Opinion in Behavioral Sciences</i> , 2019 , 29, 24-30	4	19
63	A nonparametric Bayesian framework for constructing flexible feature representations. <i>Psychological Review</i> , 2013 , 120, 817-51	6.3	19
62	Seeking Confirmation Is Rational for Deterministic Hypotheses. <i>Cognitive Science</i> , 2011 , 35, 499-526	2.2	19
61	Fixation patterns in simple choice reflect optimal information sampling. <i>PLoS Computational Biology</i> , 2021 , 17, e1008863	5	18
60	Evolution in Mind: Evolutionary Dynamics, Cognitive Processes, and Bayesian Inference. <i>Trends in Cognitive Sciences</i> , 2017 , 21, 522-530	14	17

59	Relevant and robust: a response to Marcus and Davis (2013). <i>Psychological Science</i> , 2015 , 26, 539-41	7.9	17
58	Sensitivity to Shared Information in Social Learning. <i>Cognitive Science</i> , 2018 , 42, 168-187	2.2	17
57	Children's causal inferences from conflicting testimony and observations. <i>Developmental Psychology</i> , 2016 , 52, 9-18	3.7	16
56	Capturing human categorization of natural images by combining deep networks and cognitive models. <i>Nature Communications</i> , 2020 , 11, 5418	17.4	16
55	A rational model of the Dunning-Kruger effect supports insensitivity to evidence in low performers. <i>Nature Human Behaviour</i> , 2021 , 5, 756-763	12.8	15
54	Empirical evidence for resource-rational anchoring and adjustment. <i>Psychonomic Bulletin and Review</i> , 2018 , 25, 775-784	4.1	14
53	nbgrader: A Tool for Creating and Grading Assignments in the Jupyter Notebook. <i>The Journal of Open Source Education</i> , 2019 , 2, 32	1.2	14
52	Identifying expectations about the strength of causal relationships. <i>Cognitive Psychology</i> , 2015 , 76, 1-29	3.1	13
51	Tracing the roots of syntax with Bayesian phylogenetics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 13576-81	11.5	13
50	Using large-scale experiments and machine learning to discover theories of human decision-making. <i>Science</i> , 2021 , 372, 1209-1214	33.3	13
49	Rethinking language: how probabilities shape the words we use. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 3825-6	11.5	11
48	Revealing human inductive biases for category learning by simulating cultural transmission. <i>Psychonomic Bulletin and Review</i> , 2014 , 21, 785-93	4.1	10
47	Some specifics about generalization. <i>Behavioral and Brain Sciences</i> , 2001 , 24, 762-778	0.9	10
46	When Absence of Evidence Is Evidence of Absence: Rational Inferences From Absent Data. <i>Cognitive Science</i> , 2017 , 41 Suppl 5, 1155-1167	2.2	9
45	Scaling up psychology via Scientific Regret Minimization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 8825-8835	11.5	9
44	Subjective randomness as statistical inference. <i>Cognitive Psychology</i> , 2018 , 103, 85-109	3.1	9
43	ITERATED LEARNING OF MULTIPLE LANGUAGES FROM MULTIPLE TEACHERS 2010 ,		8
42	Revealing ontological commitments by magic. <i>Cognition</i> , 2015 , 136, 43-8	3.5	7

41	Learning How to Generalize. <i>Cognitive Science</i> , 2019 , 43, e12777	2.2	7
40	Greater learnability is not sufficient to produce cultural universals. <i>Cognition</i> , 2013 , 129, 70-87	3.5	7
39	The effects of cultural transmission are modulated by the amount of information transmitted. <i>Cognitive Science</i> , 2013 , 37, 953-67	2.2	7
38	Understanding Human Intelligence through Human Limitations. <i>Trends in Cognitive Sciences</i> , 2020 , 24, 873-883	14	7
37	Bayesian collective learning emerges from heuristic social learning. <i>Cognition</i> , 2021 , 212, 104469	3.5	7
36	The value of abstraction. <i>Current Opinion in Behavioral Sciences</i> , 2019 , 29, 111-116	4	6
35	Human biases limit cumulative innovation. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2021 , 288, 20202752	4.4	6
34	Experimental evolutionary simulations of learning, memory and life history. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2020 , 375, 20190504	5.8	5
33	Sampling Assumptions Affect Use of Indirect Negative Evidence in Language Learning. <i>PLoS ONE</i> , 2016 , 11, e0156597	3.7	5
32	Adding population structure to models of language evolution by iterated learning. <i>Journal of Mathematical Psychology</i> , 2017 , 76, 1-6	1.2	4
31	What the Baldwin Effect affects depends on the nature of plasticity. <i>Cognition</i> , 2020 , 197, 104165	3.5	4
30	Cognitive prostheses for goal achievement. <i>Nature Human Behaviour</i> , 2019 , 3, 1096-1106	12.8	4
29	Optimally designing games for behavioural research. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2014 , 470, 20130828	2.4	4
28	Analyzing the rate at which languages lose the influence of a common ancestor. <i>Cognitive Science</i> , 2014 , 38, 1406-31	2.2	4
27	From convolutional neural networks to models of higher-level cognition (and back again). <i>Annals of the New York Academy of Sciences</i> , 2021 ,	6.5	4
26	Pragmatic-Pedagogic Value Alignment. <i>Springer Proceedings in Advanced Robotics</i> , 2020 , 49-57	0.6	3
25	Advancing rational analysis to the algorithmic level. <i>Behavioral and Brain Sciences</i> , 2020 , 43, e27	0.9	3
24	Parallelograms revisited: Exploring the limitations of vector space models for simple analogies. <i>Cognition</i> , 2020 , 205, 104440	3.5	3

23	Exploring Human Cognition Using Large Image Databases. <i>Topics in Cognitive Science</i> , 2016 , 8, 569-88	2.5	3
22	Serial reproduction reveals the geometry of visuospatial representations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	3
21	Identifying category representations for complex stimuli using discrete Markov chain Monte Carlo with people. <i>Behavior Research Methods</i> , 2019 , 51, 1706-1716	6.1	2
20	The strengths of and some of the challenges for Bayesian models of cognition. <i>Behavioral and Brain Sciences</i> , 2009 , 32, 89-90	0.9	2
19	Intuitions about magic track the development of intuitive physics. <i>Cognition</i> , 2021 , 214, 104762	3.5	2
18	A rational model of people's inferences about others' preferences based on response times. <i>Cognition</i> , 2021 , 217, 104885	3.5	2
17	A rational reinterpretation of dual-process theories. <i>Cognition</i> , 2021 , 217, 104881	3.5	2
16	Complex cognitive algorithms preserved by selective social learning in experimental populations.. <i>Science</i> , 2022 , 376, 95-98	33.3	2
15	Shades of confusion: Lexical uncertainty modulates ad hoc coordination in an interactive communication task. <i>Cognition</i> , 2022 , 225, 105152	3.5	2
14	Assessing Mathematics Misunderstandings via Bayesian Inverse Planning. <i>Cognitive Science</i> , 2020 , 44, e12900	2.2	1
13	How to Be Helpful to Multiple People at Once. <i>Cognitive Science</i> , 2020 , 44, e12841	2.2	1
12	Memory transmission in small groups and large networks: An empirical study. <i>Psychonomic Bulletin and Review</i> , 2021 , 1	4.1	1
11	Evaluating models of robust word recognition with serial reproduction. <i>Cognition</i> , 2021 , 210, 104553	3.5	1
10	The Challenges of Large-Scale, Web-Based Language Datasets: Word Length and Predictability Revisited. <i>Cognitive Science</i> , 2021 , 45, e12983	2.2	1
9	Globally Inaccurate Stereotypes Can Result From Locally Adaptive Exploration.. <i>Psychological Science</i> , 2022 , 9567976211045929	7.9	1
8	Leveraging artificial intelligence to improve people's planning strategies.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2117432119	11.5	0
7	Deep models of superficial face judgments.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2115228119	11.5	0
6	Clustering and the efficient use of cognitive resources. <i>Journal of Mathematical Psychology</i> , 2022 , 109, 102675	1.2	0

- 5 Learning to Be (In)variant: Combining Prior Knowledge and Experience to Infer Orientation Invariance in Object Recognition. *Cognitive Science*, **2017**, 41 Suppl 5, 1183-1201 2.2
- 4 Sampling from object and scene representations using deep feature spaces. *Journal of Vision*, **2018**, 18, 403 0.4
- 3 A learned generative model of faces for experiments on human identity. *Journal of Vision*, **2018**, 18, 352 0.4
- 2 Learning to generalize like humans using basic-level object labels. *Journal of Vision*, **2019**, 19, 60a 0.4
- 1 Learning to calibrate age estimates. *Journal of Vision*, **2019**, 19, 188b 0.4