

Charles R Gallistel

List of Publications by Year in Descending Order

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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.

158
papers

10,076
citations

47
h-index

98
g-index

166
ext. papers

11,100
ext. citations

5.7
avg, IF

6.49
L-index

#	Paper	IF	Citations
158	The approximate number system represents magnitude precision.. <i>Behavioral and Brain Sciences</i> , 2021 , 44, e187	0.9	1
157	Reconsidering the evidence for learning in single cells. <i>ELife</i> , 2021 , 10,	8.9	18
156	The physical basis of memory. <i>Cognition</i> , 2021 , 213, 104533	3.5	7
155	Where meanings arise and how: Building on Shannon's foundations. <i>Mind and Language</i> , 2020 , 35, 390-401	16	2
154	Locating the engram: Should we look for plastic synapses or information-storing molecules?. <i>Neurobiology of Learning and Memory</i> , 2020 , 169, 107164	3.1	24
153	Number and time in acquisition, extinction and recovery. <i>Journal of the Experimental Analysis of Behavior</i> , 2020 , 113, 15-36	2.1	2
152	Getting Numbers into Brains. <i>Nature Human Behaviour</i> , 2020 , 4, 1222-1223	12.8	1
151	Evidence for a Mixed Timing and Counting Strategy in Mice Performing a Mechner Counting Task. <i>Frontiers in Behavioral Neuroscience</i> , 2019 , 13, 109	3.5	2
150	Our understanding of neural codes rests on Shannon's foundations. <i>Behavioral and Brain Sciences</i> , 2019 , 42, e226	0.9	0
149	Contingency, contiguity, and causality in conditioning: Applying information theory and Weber's Law to the assignment of credit problem. <i>Psychological Review</i> , 2019 , 126, 761-773	6.3	12
148	Time-scale-invariant information-theoretic contingencies in discrimination learning. <i>Journal of Experimental Psychology Animal Learning and Cognition</i> , 2019 , 45, 280-289	1.4	3
147	Navigation: Whence Our Sense of Direction?. <i>Current Biology</i> , 2017 , 27, R108-R110	6.3	8
146	Accurate step-hold tracking of smoothly varying periodic and aperiodic probability. <i>Attention, Perception, and Psychophysics</i> , 2017 , 79, 1480-1494	2	6
145	Numbers and brains. <i>Learning and Behavior</i> , 2017 , 45, 327-328	1.3	1
144	The Coding Question. <i>Trends in Cognitive Sciences</i> , 2017 , 21, 498-508	14	34
143	On the research of time past: the hunt for the substrate of memory. <i>Annals of the New York Academy of Sciences</i> , 2017 , 1396, 108-125	6.5	23
142	Information Theory, Memory, Prediction, and Timing in Associative Learning 2017 , 481-492		4

141	Introduction: The origins of numerical abilities. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2017 , 373,	5.8	18
140	Finding numbers in the brain. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2017 , 373,	5.8	16
139	A Cognitive Neurogenetics Screening System with a Data-Analysis Toolbox 2017 , 507-526		
138	Theoretical implications of quantitative properties of interval timing and probability estimation in mouse and rat. <i>Journal of the Experimental Analysis of Behavior</i> , 2017 , 108, 39-72	2.1	16
137	Bayesian change-point analysis reveals developmental change in a classic theory of mind task. <i>Cognitive Psychology</i> , 2016 , 91, 124-149	3.1	8
136	Time to rethink the neural mechanisms of learning and memory. <i>Neurobiology of Learning and Memory</i> , 2014 , 108, 136-44	3.1	69
135	Reply to Cheung et al.: The cognitive map hypothesis remains the best interpretation of the data in honeybee navigation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, E4398	11.5	18
134	Way-finding in displaced clock-shifted bees proves bees use a cognitive map. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 8949-54	11.5	59
133	Automated, quantitative cognitive/behavioral screening of mice: for genetics, pharmacology, animal cognition and undergraduate instruction. <i>Journal of Visualized Experiments</i> , 2014 , e51047	1.6	6
132	The perception of probability. <i>Psychological Review</i> , 2014 , 121, 96-123	6.3	46
131	Cognitive assessment of mice strains heterozygous for cell-adhesion genes reveals strain-specific alterations in timing. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014 , 369, 20120464	5.8	7
130	Temporal contingency. <i>Behavioural Processes</i> , 2014 , 101, 89-96	1.6	17
129	The neuroscience of learning: beyond the Hebbian synapse. <i>Annual Review of Psychology</i> , 2013 , 64, 169-200	20.1	136
128	It's the information!. <i>Behavioural Processes</i> , 2013 , 95, 3-7	1.6	30
127	Extinction from a rationalist perspective. <i>Behavioural Processes</i> , 2012 , 90, 66-80	1.6	34
126	On the evils of group averaging: commentary on Nevin's "Resistance to extinction and behavioral momentum". <i>Behavioural Processes</i> , 2012 , 90, 98-9; discussion 100	1.6	6
125	On rationalism and optimality: Responses to the Miller and Nevin Commentaries. <i>Behavioural Processes</i> , 2012 , 90, 87-88	1.6	1
124	Conditioned [corrected] stimulus informativeness governs conditioned stimulus-unconditioned stimulus associability. <i>Journal of Experimental Psychology</i> , 2012 , 38, 217-32		32

123	Mice take calculated risks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 8776-9	11.5	43
122	Contingency in Learning 2012 , 802-806		
121	Mental Magnitudes 2011 , 3-12		30
120	Prelinguistic Thought. <i>Language Learning and Development</i> , 2011 , 7, 253-262	1.3	19
119	Time and Associative Learning. <i>Comparative Cognition and Behavior Reviews</i> , 2010 , 5, 1-22		96
118	Screening for Learning and Memory Mutations: A New Approach. <i>Acta Psychologica Sinica</i> , 2010 , 42, 138-158		7
117	Risk assessment in man and mouse. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 2459-63	11.5	84
116	The precision of locomotor odometry in humans. <i>Experimental Brain Research</i> , 2009 , 193, 429-36	2.3	40
115	Acquisition of peak responding: what is learned?. <i>Behavioural Processes</i> , 2009 , 80, 67-75	1.6	50
114	The importance of proving the null. <i>Psychological Review</i> , 2009 , 116, 439-53	6.3	278
113	2009 ,		120
112	The Neural Mechanisms that Underlie Decision Making 2009 , 417-424		1
111	Intact interval timing in circadian CLOCK mutants. <i>Brain Research</i> , 2008 , 1227, 120-7	3.7	26
110	The generative basis of natural number concepts. <i>Trends in Cognitive Sciences</i> , 2008 , 12, 213-8	14	89
109	Interval timing in genetically modified mice: a simple paradigm. <i>Genes, Brain and Behavior</i> , 2008 , 7, 373-84	3.6	45
108	Where Integers Come From 2008 , 109-138		2
107	Commentary on Le Corre & Carey. <i>Cognition</i> , 2007 , 105, 439-445	3.5	21
106	Nonverbal arithmetic in humans: light from noise. <i>Perception & Psychophysics</i> , 2007 , 69, 1185-203		47

105	Is matching innate?. <i>Journal of the Experimental Analysis of Behavior</i> , 2007 , 87, 161-99	2.1	57
104	Time left in the mouse. <i>Behavioural Processes</i> , 2007 , 74, 142-51	1.6	12
103	Dead Reckoning, Cognitive Maps, Animal Navigation and the Representation of Space: An Introduction 2007 , 137-143		
102	Flawed foundations of associationism? Comments on Machado and Silva (2007). <i>American Psychologist</i> , 2007 , 62, 682-5; discussion 689-91	9.5	15
101	Pavlovian contingencies and temporal information. <i>Journal of Experimental Psychology</i> , 2006 , 32, 284-94		25
100	Dopamine and reward: comment on Hernandez et al. (2006). <i>Behavioral Neuroscience</i> , 2006 , 120, 992-4	2.1	4
99	Autoshaped head poking in the mouse: a quantitative analysis of the learning curve. <i>Journal of the Experimental Analysis of Behavior</i> , 2006 , 85, 293-308	2.1	32
98	Cross-domain transfer of quantitative discriminations: is it all a matter of proportion?. <i>Psychonomic Bulletin and Review</i> , 2006 , 13, 636-42	4.1	40
97	Deconstructing the law of effect. <i>Games and Economic Behavior</i> , 2005 , 52, 410-423	1.1	19
96	Shape parameters explain data from spatial transformations: comment on Pearce et al. (2004) and Tommasi & Polli (2004). <i>Journal of Experimental Psychology</i> , 2005 , 31, 254-9; discussion 260-1		68
95	Sources of variability and systematic error in mouse timing behavior. <i>Journal of Experimental Psychology</i> , 2004 , 30, 3-16		75
94	The learning curve: implications of a quantitative analysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 13124-31	11.5	391
93	Temporal landmarks: proximity prevails. <i>Animal Cognition</i> , 2003 , 6, 113-20	3.1	12
92	Conditioning from an information processing perspective. <i>Behavioural Processes</i> , 2003 , 62, 89-101	1.6	41
91	The Principle of Adaptive Specialization as It Applies to Learning and Memory 2003 , 259-280		5
90	A Test of Gibbon's Feedforward Model of Matching. <i>Learning and Motivation</i> , 2002 , 33, 46-62	1.3	1
89	Language and spatial frames of reference in mind and brain. <i>Trends in Cognitive Sciences</i> , 2002 , 6, 321-324		26
88	Conception, perception and the control of action. <i>Trends in Cognitive Sciences</i> , 2002 , 6, 504	14	4

87	Frequency, contingency and the information processing theory of conditioning 2002 , 153-172		8
86	The rat approximates an ideal detector of changes in rates of reward: Implications for the law of effect.. <i>Journal of Experimental Psychology</i> , 2001 , 27, 354-372		109
85	Variability signatures distinguish verbal from nonverbal counting for both large and small numbers. <i>Psychonomic Bulletin and Review</i> , 2001 , 8, 698-707	4.1	294
84	Numerical subtraction in the pigeon: evidence for a linear subjective number scale. <i>Psychological Science</i> , 2001 , 12, 238-43	7.9	156
83	Response to Dehaene. <i>Psychological Science</i> , 2001 , 12, 247-247	7.9	5
82	Computational Versus Associative Models of Simple Conditioning. <i>Current Directions in Psychological Science</i> , 2001 , 10, 146-150	6.5	70
81	Mental Representations, Psychology of 2001 , 9691-9695		9
80	The rat approximates an ideal detector of changes in rates of reward: implications for the law of effect. <i>Journal of Experimental Psychology</i> , 2001 , 27, 354-72		96
79	Behavior, Hierarchical Organization of 2001 , 1069-1072		
78	Time, rate, and conditioning. <i>Psychological Review</i> , 2000 , 107, 289-344	6.3	771
77	Non-verbal numerical cognition: from reals to integers. <i>Trends in Cognitive Sciences</i> , 2000 , 4, 59-65	14	702
76	Coordinate Transformations in the Genesis of Directed Action 1999 , 1-42		2
75	Can a decay process explain the timing of conditioned responses?. <i>Journal of the Experimental Analysis of Behavior</i> , 1999 , 71, 264-71; discussion 293-301	2.1	13
74	Nonverbal Counting in Humans: The Psychophysics of Number Representation. <i>Psychological Science</i> , 1999 , 10, 130-137	7.9	477
73	Self-stimulating rats combine subjective reward magnitude and subjective reward rate multiplicatively.. <i>Journal of Experimental Psychology</i> , 1998 , 24, 265-277		17
72	Medial forebrain bundle lesions fail to structurally and functionally disconnect the ventral tegmental area from many ipsilateral forebrain nuclei: implications for the neural substrate of brain stimulation reward. <i>Journal of Neuroscience</i> , 1998 , 18, 8515-33	6.6	33
71	Self-stimulating rats combine subjective reward magnitude and subjective reward rate multiplicatively. <i>Journal of Experimental Psychology</i> , 1998 , 24, 265-77		14
70	Toward a neurobiology of temporal cognition: advances and challenges. <i>Current Opinion in Neurobiology</i> , 1997 , 7, 170-84	7.6	587

69	Destruction of the medial forebrain bundle caudal to the site of stimulation reduces rewarding efficacy but destruction rostrally does not.. <i>Behavioral Neuroscience</i> , 1996 , 110, 766-790	2.1	22
68	Computations on metric maps in mammals: getting oriented and choosing a multi-destination route.. <i>Journal of Experimental Biology</i> , 1996 , 199, 211-217	3	94
67	Destruction of the medial forebrain bundle caudal to the site of stimulation reduces rewarding efficacy but destruction rostrally does not. <i>Behavioral Neuroscience</i> , 1996 , 110, 766-90	2.1	4
66	Computations on metric maps in mammals: getting oriented and choosing a multi-destination route. <i>Journal of Experimental Biology</i> , 1996 , 199, 211-7	3	77
65	Is Long-Term Potentiation a Plausible Basis for Memory? 1995 , 328-338		7
64	Foraging for brain stimulation: toward a neurobiology of computation. <i>Cognition</i> , 1994 , 50, 151-70	3.5	58
63	Saturation of subjective reward magnitude as a function of current and pulse frequency.. <i>Behavioral Neuroscience</i> , 1994 , 108, 151-160	2.1	46
62	Kinetics of matching.. <i>Journal of Experimental Psychology</i> , 1994 , 20, 79-95		28
61	Kinetics of matching. <i>Journal of Experimental Psychology</i> , 1994 , 20, 79-95		27
60	Space and Time 1994 , 221-253		11
59	Subjective reward magnitude of medial forebrain stimulation as a function of train duration and pulse frequency.. <i>Behavioral Neuroscience</i> , 1993 , 107, 389-401	2.1	25
58	Homeostatic Conditioning: Learning and Physiological Regulation . Barry R. Dworkin. University of Chicago Press, Chicago, 1993. xvi, 215 pp., illus. \$23.95 or £19.25. John D. and Catherine T. MacArthur Foundation Series on Mental Health and Development.. <i>Science</i> , 1993 , 262, 445-445	33.3	
57	Homeostatic Conditioning: Learning and Physiological Regulation . Barry R. Dworkin. University of Chicago Press, Chicago, 1993. xvi, 215 pp., illus. \$23.95 or £19.25. John D. and Catherine T. MacArthur Foundation Series on Mental Health and Development.. <i>Science</i> , 1993 , 262, 445-445	33.3	
56	The function relating the subjective magnitude of brain stimulation reward to stimulation strength varies with site of stimulation. <i>Behavioural Brain Research</i> , 1992 , 52, 183-93	3.4	21
55	Preverbal and verbal counting and computation. <i>Cognition</i> , 1992 , 44, 43-74	3.5	1118
54	Classical conditioning as a nonstationary, multivariate time series analysis: A spreadsheet model. <i>Behavior Research Methods</i> , 1992 , 24, 340-351		4
53	Measuring the subjective magnitude of brain stimulation reward by titration with rate of reward.. <i>Behavioral Neuroscience</i> , 1991 , 105, 913-925	2.1	47
52	Effect of current on the maximum possible reward.. <i>Behavioral Neuroscience</i> , 1991 , 105, 901-912	2.1	19

51	Characteristics of spatiotemporal integration in the priming and rewarding effects of medial forebrain bundle stimulation.. <i>Behavioral Neuroscience</i> , 1991 , 105, 884-900	2.1	10
50	Effect of current on the maximum possible reward. <i>Behavioral Neuroscience</i> , 1991 , 105, 901-12	2.1	4
49	Measuring the subjective magnitude of brain stimulation reward by titration with rate of reward. <i>Behavioral Neuroscience</i> , 1991 , 105, 913-25	2.1	12
48	Animal cognition: the representation of space, time and number. <i>Annual Review of Psychology</i> , 1989 , 40, 155-89	26.1	209
47	Heading in the rat: Determination by environmental shape. <i>Learning and Behavior</i> , 1988 , 16, 404-410		124
46	Counting versus subitizing versus the sense of number. <i>Behavioral and Brain Sciences</i> , 1988 , 11, 585-586	0.9	10
45	Reward saturation in medial forebrain bundle self-stimulation. <i>Physiology and Behavior</i> , 1987 , 41, 585-93	3.5	24
44	Quantitative determination of the effects of catecholaminergic agonists and antagonists on the rewarding efficacy of brain stimulation. <i>Pharmacology Biochemistry and Behavior</i> , 1987 , 26, 731-41	3.9	95
43	The role of the dopaminergic projections in MFB self-stimulation. <i>Behavioural Brain Research</i> , 1986 , 22, 97-105	3.4	14
42	The role of the dopaminergic projections in MFB self-stimulation. <i>Behavioural Brain Research</i> , 1986 , 20, 313-21	3.4	21
41	Does the perception of reward magnitude of self-administered electrical brain stimulation have a circadian rhythm?. <i>Behavioral Neuroscience</i> , 1986 , 100, 888-893	2.1	6
40	A modular sense of place?. <i>Behavioral and Brain Sciences</i> , 1985 , 8, 11-12	0.9	4
39	Forebrain origins and terminations of the medial forebrain bundle metabolically activated by rewarding stimulation or by reward-blocking doses of pimozide. <i>Journal of Neuroscience</i> , 1985 , 5, 1246-61	6.6	102
38	A microcomputer-based method for physiologically interpretable measurement of the rewarding efficacy of brain stimulation. <i>Physiology and Behavior</i> , 1985 , 35, 395-403	3.5	71
37	Pimozide and amphetamine have opposing effects on the reward summation function. <i>Pharmacology Biochemistry and Behavior</i> , 1984 , 20, 73-7	3.9	128
36	Temporal integration in self-stimulation: A paradox.. <i>Behavioral Neuroscience</i> , 1984 , 98, 467-478	2.1	7
35	Unilaterally activated systems in rats self-stimulating at sites in the medial forebrain bundle, medial prefrontal cortex, or locus coeruleus. <i>Brain Research</i> , 1983 , 266, 39-50	3.7	63
34	SELF-STIMULATION 1983 , 269-349		6

33	Affinity for the dopamine D2 receptor predicts neuroleptic potency in blocking the reinforcing effect of MFB stimulation. <i>Pharmacology Biochemistry and Behavior</i> , 1983 , 19, 867-72	3.9	66
32	Does pimozide block the reinforcing effect of brain stimulation?. <i>Pharmacology Biochemistry and Behavior</i> , 1982 , 17, 769-81	3.9	86
31	Pimozide blocks reinforcement but not priming from MFB stimulation in the rat. <i>Pharmacology Biochemistry and Behavior</i> , 1982 , 17, 783-7	3.9	29
30	Effects of reinforcement-blocking doses of pimozide on neural systems driven by rewarding stimulation of the MFB: a ¹⁴ C-2-deoxyglucose analysis. <i>Pharmacology Biochemistry and Behavior</i> , 1982 , 17, 841-5	3.9	28
29	Computer assisted analysis of 2-DG autoradiographs. <i>Neuroscience and Biobehavioral Reviews</i> , 1982 , 6, 409-20	9	88
28	Prüdis of Gallistel's The organization of action: A new synthesis. <i>Behavioral and Brain Sciences</i> , 1981 , 4, 609-619	0.9	79
27	Matters of principle: Hierarchies, representations, and action. <i>Behavioral and Brain Sciences</i> , 1981 , 4, 639-650	0.9	0
26	Bell, Magendie, and the proposals to restrict the use of animals in neurobehavioral research.. <i>American Psychologist</i> , 1981 , 36, 357-360	9.5	17
25	A portrait of the substrate for self-stimulation.. <i>Psychological Review</i> , 1981 , 88, 228-273	6.3	288
24	A portrait of the substrate for self-stimulation. <i>Psychological Review</i> , 1981 , 88, 228-73	6.3	54
23	Subcortical Stimulation for Motivation and Reinforcement 1981 , 141-171		
22	From muscles to motivation. <i>American Scientist</i> , 1980 , 68, 398-409	2.7	9
21	What can one learn from a strength-duration experiment?. <i>Journal of Mathematical Psychology</i> , 1978 , 18, 1-24	1.2	53
20	Self-stimulation in the rat: quantitative characteristics of the reward pathway. <i>Journal of Comparative and Physiological Psychology</i> , 1978 , 92, 977-98		76
19	The irrelevance of past pleasure. <i>Behavioral and Brain Sciences</i> , 1978 , 1, 59-60	0.9	3
18	Reward versus performance in self-stimulation: electrode-specific effects of alpha-methyl-p-tyrosine on reward in the rat. <i>Journal of Comparative and Physiological Psychology</i> , 1977 , 91, 962-74		81
17	[¹⁴ C]2-Deoxyglucose uptake marks systems activated by rewarding brain stimulation. <i>Brain Research Bulletin</i> , 1977 , 2, 149-52	3.9	44
16	Runway performance of rats for brain-stimulation or food reward: effects of hunger and priming. <i>Journal of Comparative and Physiological Psychology</i> , 1975 , 89, 590-9		24

15	On the optimal pulse duration in electrical stimulation of the brain. <i>Physiology and Behavior</i> , 1974 , 12, 749-54	3.5	19
14	Parametric analysis of brain stimulation reward in the rat: III. Effect of performance variables on the reward summation function. <i>Journal of Comparative and Physiological Psychology</i> , 1974 , 87, 876-83		174
13	Parametric analysis of brain stimulation reward in the rat: II. Temporal summation in the reward system. <i>Journal of Comparative and Physiological Psychology</i> , 1974 , 87, 860-9		43
12	Note on temporal summation in the reward system. <i>Journal of Comparative and Physiological Psychology</i> , 1974 , 87, 870-5		36
11	Parametric analysis of brain stimulation reward in the rat: I. The transient process and the memory-containing process. <i>Journal of Comparative and Physiological Psychology</i> , 1974 , 87, 848-59		93
10	Incidence and magnitude of the "priming effect" in self-stimulating rats. <i>Journal of Comparative and Physiological Psychology</i> , 1973 , 82, 286-93		24
9	Specificity of brain stimulation reward in the rat. <i>Journal of Comparative and Physiological Psychology</i> , 1971 , 76, 199-205		34
8	Neuron function inferred from behavioral and electrophysiological estimates of refractory period. <i>Science</i> , 1969 , 166, 1028-30	33.3	53
7	Self-stimulation: failure of pretrial stimulation to affect rats' electrode preference. <i>Journal of Comparative and Physiological Psychology</i> , 1969 , 69, 722-9		10
6	The incentive of brain-stimulation reward. <i>Journal of Comparative and Physiological Psychology</i> , 1969 , 69, 713-21		59
5	Intracranial stimulation and natural reward: Differential effects of trial spacing. <i>Learning and Behavior</i> , 1967 , 9, 167-168		26
4	Motivating effects in self-stimulation. <i>Journal of Comparative and Physiological Psychology</i> , 1966 , 62, 95-101		29
3	ELECTRICAL SELF-STIMULATION AND ITS THEORETICAL IMPLICATIONS. <i>Psychological Bulletin</i> , 1964 , 61, 23-34	19.1	38
2	Quantitative Properties of the Creation and Activation of a Cell-Intrinsic Engram		1
1	The Symbolic Foundations of Conditioned Behavior		30